

SECTION 8 - ENVIRONMENTAL RESOURCES

8.1 Goals

- > To protect, promote, and enhance Rockland's natural resources and environmental assets.

8.2 Summary of Existing Conditions

The Town of Rockland is rich in environmental resources. Environmental resources include both natural resources and environmental assets. *Natural resources* are defined as materials or substances such as minerals, forests, water, and fertile land that occur in nature and can be used for economic gain; whereas *environmental assets* cover a broader range, inclusive of natural resources and incorporating scenic, aesthetic, recreational, and ecological values. While not focused primarily on economic gain, environmental assets typically have many indirect economic benefits.

The abundance of Rockland's environmental resources can be attributed in large part to the rural nature of the Town. At 41.5 persons per square mile, the Town's population density is comparatively sparse, especially when factoring in the higher concentrations of people in the hamlets of Livingston Manor and Roscoe. Rockland is characterized by widespread mature forests within a mix of public and private lands, providing for ample recreational pursuits and timber harvesting opportunities. The area's geology also supports bluestone quarrying and extraction of gravel products. The northern section of the Town is the most mountainous and contains the county's highest point, Beech Hill (3118'). This area comprises large portions of the Beaver Kill and Willowemoc Creek watersheds, whose high water quality and scenic beauty contribute to the Town's prominence as a world-class trout-fishing destination. The Town's hydrologic resources also support its drinking water supply system, which is protected in part through aquifer protection districts in the zoning law.

A large number of public access opportunities provide a wide variety of outdoor recreation activities in a natural setting. Activities include hiking, camping, hunting, fishing, horseback riding, snowmobiling, cycling, boating, and birding. The Catskill Forest Preserve, which comprises some 16 percent of the Town's area, includes two state-run campgrounds with facilities and programs for outdoor enthusiasts of all ages. These opportunities are complemented by the Town's parks, which are concentrated in and around the two major hamlets.

Collectively, Rockland's exceptional environmental resources contribute to the Town's quality of life, attracting second homeowners and full-time residents, as well as tourists and outdoor enthusiasts. Lodging establishments, restaurants, realtors, private campgrounds, outfitters and other businesses in the Town benefit directly from the rural, scenic character of the Town, while forestry related businesses are supported by the Town's abundant woodlands.

8.2.1 Streams

Several large streams and numerous brooks flow through Rockland with the two principal streams being



Waneta Lake



Beaver Kill

the Beaver Kill and Willowemoc Creek. Of the ten towns that have area within the Beaver Kill Watershed, only Rockland has its entire area within this watershed. The Beaver Kill's largest tributary, Willowemoc Creek, drains the majority of land area in the Town. Major tributaries of the Willowemoc include Sprague Brook, Mongaup Creek, Hunter Brook, and Cattail Brook. Numerous public fishing areas are located along the Willowemoc and are directly accessible from public roads. Willowemoc Creek runs westerly through Livingston Manor and joins the Beaver Kill at Roscoe.

The Beaver Kill runs roughly along the Town's northwestern boundary and, from south to north, is accompanied by State Route 206, Craigie Clair Road, and Beaverkill Road (County Route 152). The Beaver Kill bisects the state campground bearing its name. Public fishing areas are located near Roscoe, Craigie Clair, and Beaverkill Campground. Upstream of the campground, access to the Beaverkill is primarily from private lands. Major tributaries of the Beaver Kill are Berry Brook, Shin Creek, Voorhees Brook, Gee Brook, Jersey Brook, and Huggins Hollow Brook

8.2.3 Lakes

As shown in Figure 8.1, Surface Hydrology, Rockland has numerous ponds and small lakes, especially as compared to interior portions of the Catskill Park lying just to the north. Several of these small water bodies are public and are within the Willowemoc Wild Forest: Mongaup Pond; Quick Lake; Hodge Pond; Frick Pond; and Long Pond. Waneta Lake, also public and held by New York State, is directly accessible from Route 151.

Private lakes include Amber Lake, Edgewood Lakes, Orchard Lake, Lake Uncas, Forest Lake, Knickerbocker Pond, White Roe Lake, Trojan Lake, Hunter Lake, North Pond, Clear Lake, Maple Lake, and Mud Pond.

8.2.4 Wetlands

The Town contains, in whole or in part, more than 30 state regulated wetlands, which are 12.4 acres or larger. Additionally, the National Wetlands Inventory (a series of layers on New York State's Environmental Resource Mapper www.dec.ny.gov/gis/erm/), depicts numerous Freshwater Forested/Shrub Wetlands, Riverine Wetlands, and Freshwater Emergent Wetlands (Figure 8-1, Surface Hydrology).

Figure 8-1



8.2.5 Soils

The soils of the Town of Rockland fall into two general soil groups according to the Sullivan County Soil Survey issued in 1989. The survey further provides detailed soil maps and descriptions of soil types. The predominant general group, covering the majority of the Town, is the Willowemoc-Mongaup-Lewbeach group, which is characterized as nearly level to very steep, moderately deep and very deep, moderately well drained and well drained, medium textured soils; on uplands in the area of the Catskill Mountains. The Chesire-Tunkhannock group, which is found in a broad swath paralleling Willowemoc Creek, is described as nearly level to very steep, very deep, well drained and somewhat excessively drained, medium textured soils; in valleys and on valley sides (see also Figure 8-2, Hydric Soils).

8.2.5 Topography

The Town's topography consists of steep mountainous areas with stream valleys at their base and areas of relatively flat lands and gentle rolling hills (see Figure 3-1, Location Map, page 3.2). The hamlets of Livingston Manor and Roscoe sit at elevations of 1400 and 1300 feet respectively, while mountaintop portions of the town reach 2000 to over 3000 feet in elevation. As shown in Figure 8-3, Steep Slopes, most of the mountainous areas have steep slopes of 20% and up. Steep slopes of 20% or more present environmental concerns and constraints to development. Careless development to sloped areas can cause significant negative effects such as soil erosion and increased sediment runoff and flooding to downstream waterways. Disturbance to these areas can also mar scenic views and disrupt unique ecosystems.

8.2.6 Geology

The Town of Rockland is located along the north-eastern edge of the Allegheny Plateau formed from sedimentary deposits due to the erosion of the Acadian Mountains to the east. They washed into what was an ancient inland ocean, resulting in the formation of the "Catskill Delta."

Bedrock found in the Town of Rockland was created during the late Devonian period that extended from 410 to 360 million years ago. It consists of conglomerate and sandstone interspersed with shale. The coarse-grained layers of bedrock have proved to be very erosion resistant, leaving in place many of the



Mountains, forested lands, and gently rolling hills (view from Foxwillow Farm)

Figure 8-2
Hydric Soils
 Town of Rockland
 Sullivan County, NY

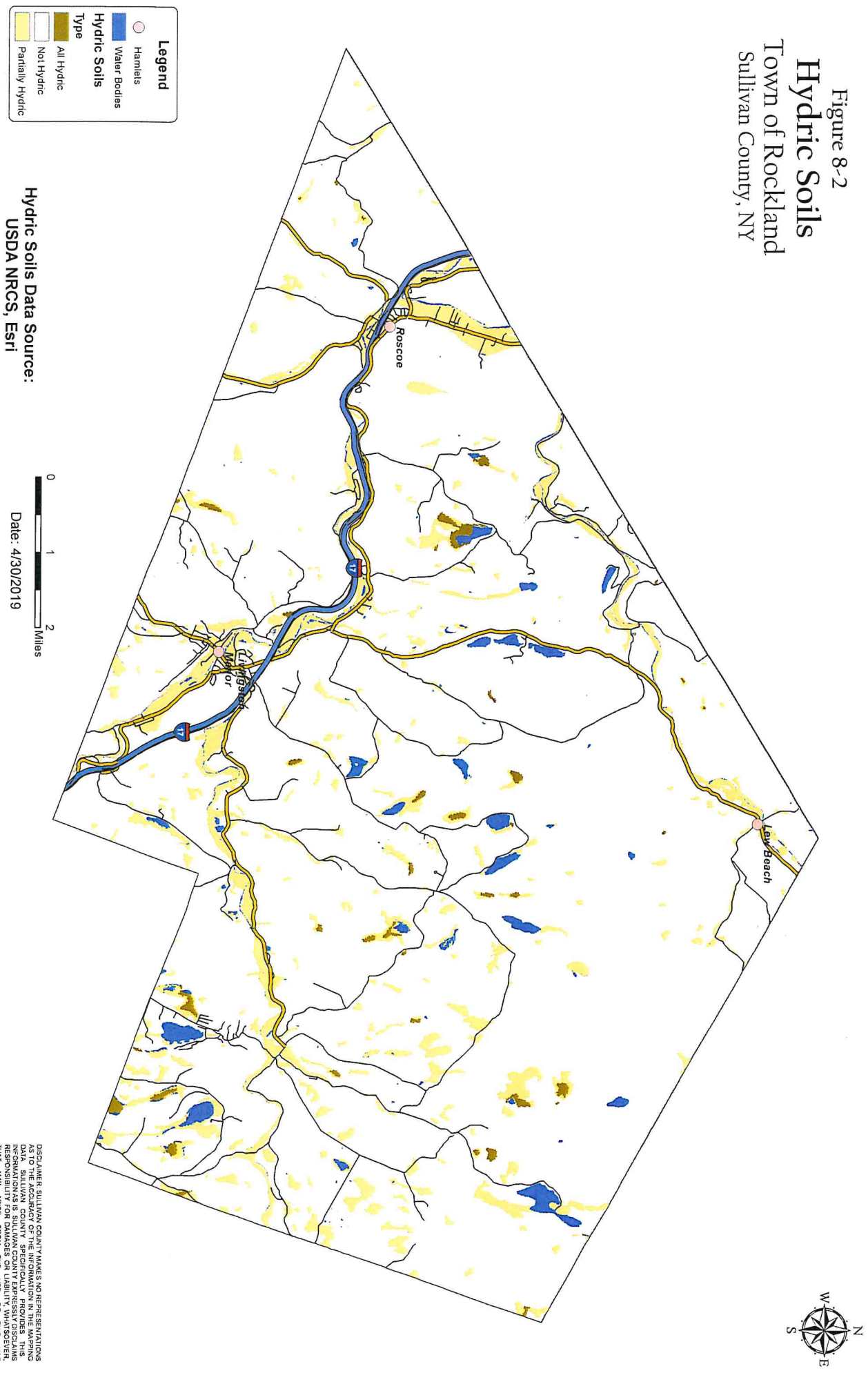
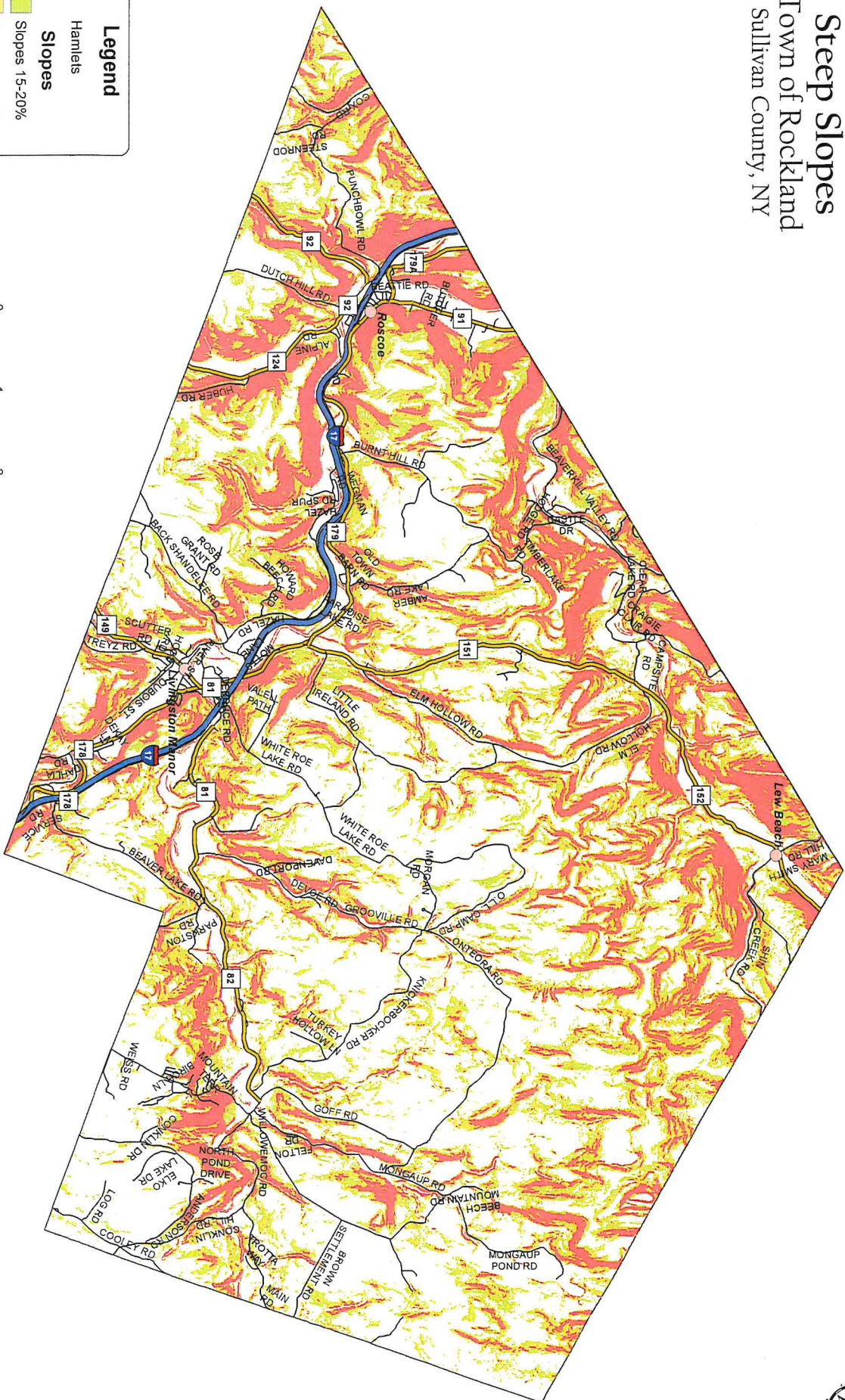
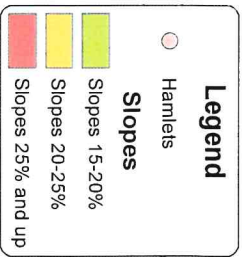


Figure 8-3
Steep Slopes
 Town of Rockland
 Sullivan County, NY



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ridges that define the character of the area. This bedrock has also been uplifted over the eons by tectonic forces and shaped by glaciers and erosion to produce the current mountainous landscape. It tends to yield good supplies of water, but it is often found near the surface, thereby limiting building development and agricultural potential. The Catskill Center for Conservation and Development describes area surface geology as follows:

“The majority of the surficial geology of the Catskills was determined during the last 1.6 million years. Four ice ages inundated this area, most recently the Wisconsin advance. The Wisconsin glaciers finished retreating from this area only approximately 14,000 years ago. The majority of the region is composed of glacial till. Till (material deposited by a glacier) is unstratified, unsorted, and is made up of a wide range of sizes. For this reason, glacial till generally acts as an aquifer, holding large amounts of groundwater. The high peak regions are entirely comprised of bedrock. These sandstone and conglomerate mountaintops were scoured and scraped by glaciers moving around and over their summits, leaving virtually no loose material.”



Eatable wild ramps



Spike horn buck

8.2.7 Wildlife

The extensive range of habitats in the Town provides for a remarkable variety in the types of mammals, birds, fish, reptiles, and amphibians. These habitats include contiguous woodlands, open fields, stream corridors, and interspersed human settlement. The nearly 15,000-acre Willowemoc Wild Forest, the majority of which is in Rockland, is managed by NYSDEC. As such, the DEC must prepare a unit management plan (UMP) to outline future guidelines and actions for these state resources. In 1991, the UMP was completed for the Willowemoc – Long Pond Wild Forest. Although the plan also covers some areas adjacent to the Town, the inventory component provides a good representation of the wildlife in the Town.

Wildlife contributes to the enjoyment of the Town for residents and visitors alike. Sightings of bald eagles and bear are fairly common, for example, while a glimpse of a bobcat or a snowshoe hare is a rarer occurrence. Both casual and seasoned birders revel in the diversity of species that can be found in the Town. Anglers appreciate the abundance of both wild and stocked species. Rockland is also renowned for its hunting, a sporting activity that has positive effects on the town's economy from lodging and restaurants to outfitters and taxidermists.

8.2.8 Flora

The richness and diversity of plant life in the Catskills is well represented in the Town. Large expanses of undeveloped land enable study and appreciation of Rockland's vegetative cover at the local and regional levels. The complexity of the topic being well beyond the scope of this summary, the reader is encouraged to explore other resources, including *The Catskill Forest: A History*, by Michael Kudish.¹ Although this study covers only the northern portions of the Town, it provides a comprehensive analysis of the region's forested lands, including forest evolution and succession, human impact–agriculture, industry, and recreation. One chapter is devoted to the Beaverkill Range.

New York State's Nature Explorer website (www.dec.ny.gov/animals/57844.html) provides valuable information on rare plants and animals through biodiversity resource mapping at the county, town, watershed, or user-defined levels. A search for the Town of Rockland yields results for the presence of the rare flowering plant Jacob's Ladder (*Polemonium vanbruntiae*), occurring in wetland areas in the Beaverkill Valley. A second flowering plant, Northern Blue Monkshood (*Aconitum noveboracense*) is listed as "extirpated," as it is believed to no longer occur within the Town's borders. The site also lists two Natural Communities: a Beech-Maple Mesic Forest along the border with Denning, which extends considerably to the north and east; and a Dwarf Shrub Bog at Amber Lake.

8.3 Recommendations

Several of the recommendations of this section have important connections with those in Section 12 – Land Use.

Strategy 1 Take proactive steps to protect and sustain environmental resources.

- Action 1.1 *Work with Sullivan County to explore conducting a natural/environmental resource asset inventory that would focus on the Town and one or more neighboring municipalities. Such a study with accompanying maps would, in part, help to guide the Town's future land use changes as well as assist in habitat protection and identifying areas that are more, or less, suitable for development. Some tools to assist in this endeavor are NYS' Environmental Resource Mapper, Floodplain Maps, Soil Surveys. Sullivan County GIS personnel could also assist in creating relevant maps. Grant programs to help fund the project should be explored with the county.*
- Action 1.2 *Encourage Sullivan County to consider an open space bond issue to fund purchases of scenic easements and acquire floodplains and other environmentally sensitive areas.*

¹ Kudish, Michael. *The Catskill Forest: A History*. Purple Mountain Press, 2000.

Action 1.3 *Develop regulations to manage commercial water extraction enterprises in the Town.*

Action 1.4 *Explore the creation of a purchase of development rights program to help protect open lands and guide density toward developable areas. Recruit the assistance of professional experts to help determine options for implementation.*

Strategy 2 Encourage stream appreciation and protection.

Action 2.1 *Consider developing a stream enhancement program that protects, highlights and encourages use of the Town's streams while mitigating flooding problems and enhancing water quality.*

Action 2.2 *Seek to make available at town hall and other public locations educational guidance materials relating to stream stewardship and best streamside management practices. This material could come from sources such as the Natural Resource Conservation Council and would be targeted at property owners in general and home owners in particular.*

Action 2.3 *Continue to build awareness of the location of the floodplains in the Town.*

Strategy 3 Help ensure long-term quality of individual onsite septic systems.

Action 3.1 *Adopt a septic district maintenance law to require that septic systems are pumped and inspected on a periodic basis. This may involve the creation of a special district(s) to generate the resources to operate this environmental protection program.*

Strategy 4 Pursue initiatives and practices to mitigate flooding and flood damage.

Action 4.1 *Continue to improve stream corridor management to reduce the practical effects of flooding by removing obstacles to free stream flow without dredging.*

Action 4.3 *Consider the development of local regulations for wetlands falling below the state's regulatory threshold (12.4 acres). There are numerous wetlands throughout that Town that are both integral to the water quality and help to mitigate flooding.*

Priority Action 4.4 *Develop building and infrastructure regulations for lands characterized by slopes.* Special attention should be given to prevent runoff and downstream flooding from any development on these lands. Consideration should be given to limiting or preventing construction on slopes over a certain percentage.

Strategy 5 Work to adopt measures to help ensure that new roadway design blends with the natural surroundings and will not adversely impact the environment.

- Action 5.1 *Require that new roads be designed to preserve natural topography and tree and ground cover, minimize cuts and fills and preserve important views and features.*
- Action 5.2 *Review Town road standards to assess for adequate environmental protection and revise as necessary.*
- Action 5.3 *Protect sensitive environmental areas by managing the use of salt on roads and highways. Determine appropriate areas to dump snow; examine salt storage facilities and application practices; actively explore alternatives to road salt; pursue related education and training opportunities for highway department personnel.*

SECTION 9 – TRANSPORTATION

9.1 Goals

- > To ensure that Rockland's transportation modes are safe, accessible and resilient.
- > To expand public transportation services to provide users with an affordable means of transit.
- > To improve wayfinding signage to attractions and centers throughout the Town.
- > To expand sidewalks and trails to connect communities and promote non-motorized transit.

"If you plan for cars and traffic, you get cars and traffic. If you plan for people and places, you get people and places." Cynthia Nikitin, Project for Public Space, speaking at the 2017 Sullivan Renaissance Conference.

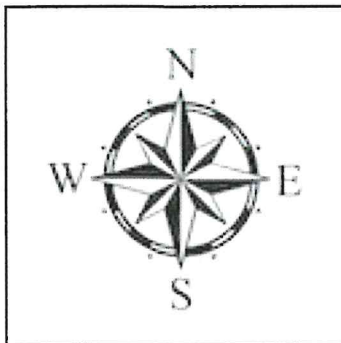
9.2 Summary of Existing Conditions

The efficient movement of people and goods is the primary purpose of all modes of transportation.

9.2.1 Transportation network

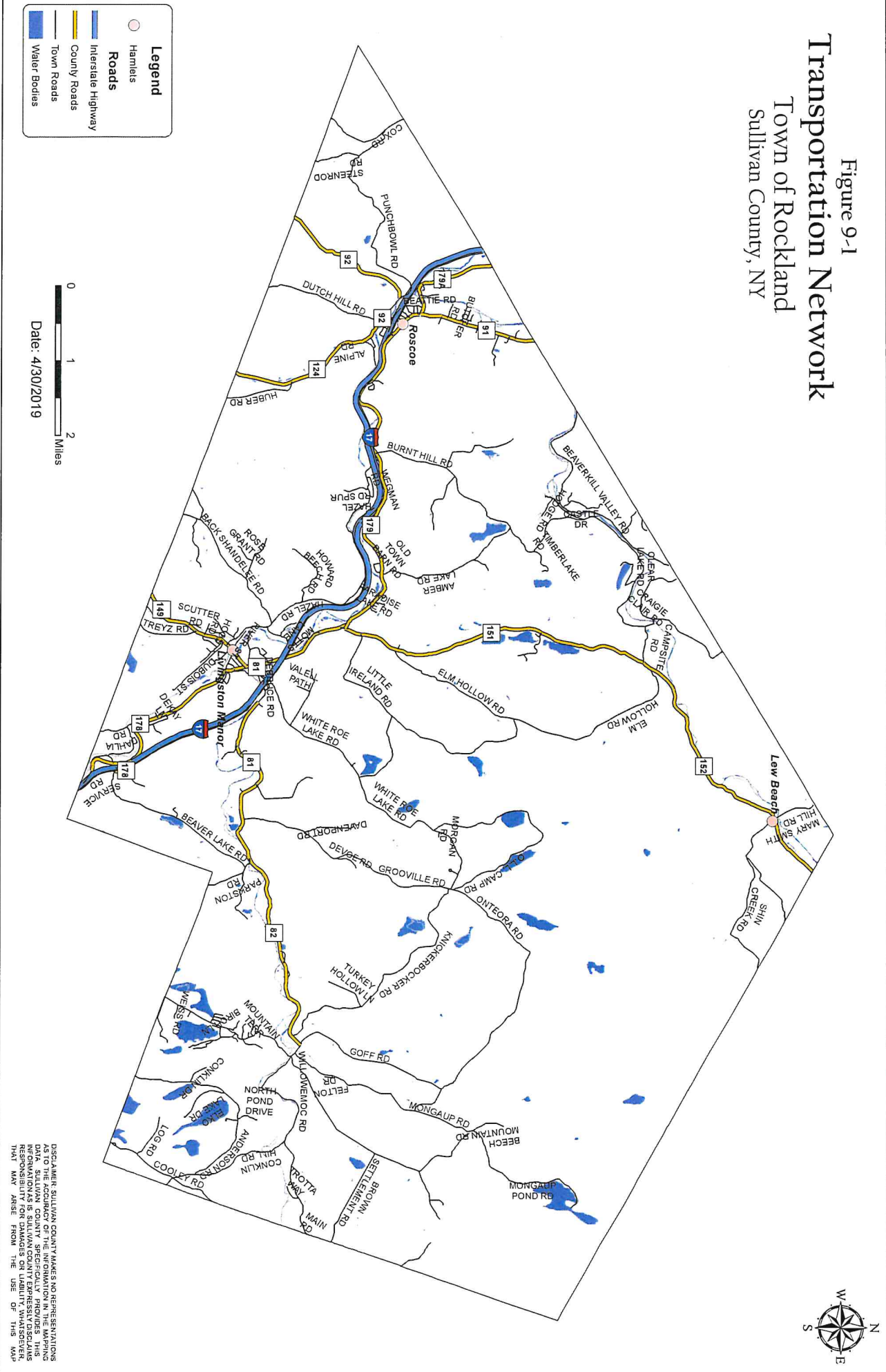
Historically, Rockland's transportation network was built around dirt roads and the railroad. Over time, railroads declined and horse-drawn vehicles disappeared as these modes of transportation were marginalized or replaced with the advent of airplanes and motor vehicles. As a result, most dirt roads were paved and new larger capacity roads were constructed.

In 2018, transportation in Rockland primarily consists of its road network (see Figure 9-1, Transportation Network). This network is anchored by Route 17 (future I-86), a four-lane highway which bisects the Town in an east-west direction. Route 17 works in concert with a system of county and Town roads to efficiently facilitate the movement of people and goods locally, regionally and nation-wide.



Route 17 (future I-86)

Figure 9-1
Transportation Network
 Town of Rockland
 Sullivan County, NY



With Route 17 at its core, Rockland's roadway network provides fast and easy access to major metropolitan centers, interstate highways and airports, all of which accommodate the many tourists and 2nd homeowner's that travel to and from the Town. These same roads also provide an efficient outlet for goods produced in the Town to all points of the compass nationwide, and in particular to markets in the New York metropolitan area.

The Town's highway department maintains some 106 miles of town owned streets and roads. There are a number of county arterial roadways traversing the Town, such as Route 151 and Route 82, which are designed to enable travel between different areas of the community at moderate to high speeds. Generally, the major collector roads traversing the Town are rural roads connecting arterials and local roads at moderate speeds. Based on apparent traffic volumes experienced on these roads, arterials and major collectors are not experiencing problems associated with heavy traffic volumes nor are they expected to in the near future. The remaining roads in the Town may be classified as minor collectors and local roads. Minor collectors provide connections between local roads and arterials at slower speeds. Local roads (including privately owned roads) channel traffic to and from major collectors and arterials. Local roads are used to access properties and are generally not utilized by through traffic. With a few exceptions discussed below, the Town's minor collectors and local roads are generally operating below capacity.

9.2.2 Transportation amenities

As is the case in most rural communities, owner-operated motor vehicles are the primary mode of transportation in the Town. Less used modes of public transportation consist of local taxi service, local and regional bus service, and a location-based ride sharing application. There is also a private bus service which shuttles fly-fishing enthusiasts from New York City to the Town's world renowned trout streams. In addition, the Sullivan County International Airport provides regional air taxi service and can handle small general aviation aircraft as well as larger business jets. The Norfolk Southern Railway (NS) operates a freight service on tracks running along the western border of Sullivan County. NS currently has two freight accounts in the county to which it provides service via rail sidings. Currently there is no demand for a transload facility in the County according to the railroad.¹ While there are a number of



Coach USA



Sullivan County International Airport

¹ **Sidings** service freight customers located adjacent to the rail line. **Transload facilities** service customers that are not located next to the rail line, but instead bring freight to and from the facility by truck.

biking and hiking trails in the Town, they were developed as recreation opportunities rather than a means of transporting people to and from homes, schools, and the workplace.

9.2.3 Transportation issues

9.2.3.1 Traffic congestion & pedestrian safety

NY Route 17 (future I-86)

As previously discussed, Rockland is bisected by Route 17 which crosses the Town in an east-west direction. Route 17 enters Sullivan County near the Village of Bloomingburg and continues west through the county and on into adjoining Delaware County. Currently, that part of Route 17 which runs through the Town is operating below capacity. East of the Town, however, heavy weekend traffic during peak tourist months can occur on Route 17 starting at the Village of Monticello and continuing east through Orange County to its intersect with I-87 (NY Thruway) at Harriman. This seasonal traffic congestion can partly be attributed to the large number of NY metropolitan area tourists (including bungalow colony renters and 2nd homeowners) traveling to Sullivan County. This situation may soon be exacerbated by the recent opening of the Resorts World Catskills Casino and the Kartrite Resort & Indoor Water Park, both located in Monticello, and the 2020 scheduled opening of the Legoland amusement park in the Orange County town of Goshen. While Rockland's section of Route 17 should not experience near-term capacity issues, the efficient flow of tourists to and from the NY metropolitan area is of great importance to the Town's tourist oriented economy (see Section 6, Economic Development). Chronic capacity issues on Route 17 that impede traffic flow could depress the number of tourists visiting the area and thereby hurt the Town's economy.

Currently Route 17 is undergoing improvements as it transitions to I-86, however these are essentially an upgrading of the existing roadway which will not have a significant effect on its carrying capacity. In 2013, a State transportation study reviewed capacity issues along the 47 mile stretch of Route 17 between Harriman and Monticello and recommended the addition of a third lane in both directions along Route 17 from Harriman to Route 211 in the town of Wallkill. In 2019, the NYSDOT will undertake a study to determine priority projects along this corridor. Sullivan County, in conjunction with other groups and elected officials, is lobbying to extend this study and the planned third lane to the Monticello area. Both the Town of Rockland and Sullivan County have a special interest in participating in the DOT study as it unfolds.

Livingston Manor

In recent years, the hamlet has seen a marked increase in tourism which, in part, is being driven by millennials from New York City who have discovered the Town's outdoor recreational attractions, including its fly-fishing streams. With its historic atmosphere, unique specialty shops and eateries, the hamlet has become a popular destination for tourists. However, the resulting increase in vehicle and pedestrian traffic on Main Street is straining available public parking and creating potential safety issues caused by pedestrian jaywalking through vehicular traffic - primarily on the weekends. This situation is exacerbated by the lack of clearly marked crosswalks at the Main Street signaled intersection with Pearl Street.

While there are sidewalks along both sides of Main Street's business district, many side streets connecting residences to Main Street lack this amenity. In addition, there is no sidewalk connecting Main Street with Rotary Park, which park will be a trailhead for the future O&W railtrail. Adding sidewalks and clearly marked ADA compliant crosswalks over time would improve pedestrian safety and encourage residents to leave their vehicles at home and walk to hamlet parks and Downtown shopping.² An expanded sidewalk network would also benefit those hamlet residents who cannot afford a vehicle.

The Town is exploring ways to address these issues along with similar issues in Roscoe discussed below. This will include a review of design elements under the NYSDOT's Complete Streets program (<https://www.dot.gov/programs/completestreets>). Vehicle parking issues in both hamlets are discussed in Section 5, Commercial Areas.



Unmarked intersection crosswalks (Main Street, Livingston Manor)



Clearly marked crosswalk (Hemlock Ridge, Livingston Manor)

Roscoe

Like Livingston Manor, Roscoe has also experienced an increase in tourist related vehicular and pedestrian traffic and an occasional shortage of public parking can occur on weekends during the tourist season. The existing sidewalk network is mostly limited to the commercial businesses on Stewart Avenue. In order to get to other popular attractions, such as the Prohibition Distillery on Union Street, pedestrians must walk in the street. ADA compliant crosswalks are also lacking. The Stewart Avenue intersect with Route 179 (Old Route 17) lacks clearly marked pedestrian crosswalks which is notable



Unmarked intersection crosswalks, no sidewalks
(Route 179 / Stewart Avenue intersect, Roscoe)



High crosswalk curbing is not wheelchair friendly
(Stewart Avenue, Roscoe)

² ADA is an acronym for the Americans With Disabilities Act.



Scenic agricultural landscape (hay field view from Route 152)

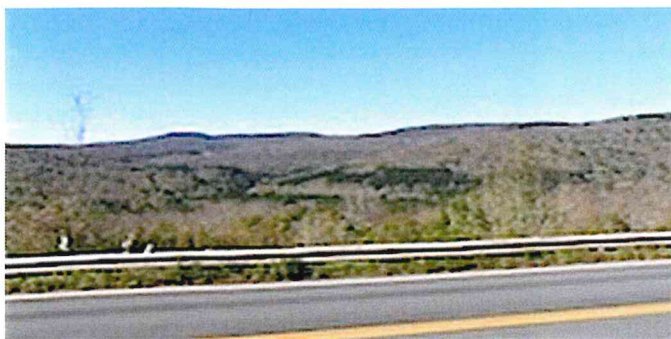
because public parking exists on the Route 179 side of this intersect. In addition, there are no sidewalks on either side of Route 179 which connect the parking areas to Stewart Avenue. Pedestrians are therefore forced to walk on the edge of Route 179 in order to reach Stewart Avenue sidewalks. Adding sidewalks and clearly marked ADA compliant crosswalks would improve pedestrian safety and encourage hamlet residents to leave their vehicles at home and walk to Downtown destinations. An expanded sidewalk network would also benefit those residents who cannot afford a vehicle.

Rural Roads

There is an increasing number of vehicles on Grooville Road, White Roe Lake Road, and Knickerbocker Road due to traffic from seasonal camps. The Town should monitor this situation for potential vehicle and pedestrian safety issues that may need to be addressed either now or in the future.

9.2.3.2 Scenic roadway views

There are opportunities throughout the Town to recognize the unique character of scenic roads and seek to preserve them as viewshed corridors. In addition to their transportation function, scenic roads establish the Town's overall rural beauty so beloved by its residents and tourists alike. Methods to preserve scenic roadway viewsheds, including views of scenic working farms, could be considered in order to assure their continued visual significance. While some viewsheds may be protected by designated parkland or conservation easements, others may be located in areas subject to change (see Section 3, Figure 3-3, Protected Open Space). In these latter cases, the implementation of development techniques may suffice to preserve visual attributes. Still others may require conservation easements or even outright purchase.



Scenic view (Route 151)



Scenic view (Camp Site Road)

The Town should identify important roadway viewsheds and determine if existing zoning regulations support their continued integrity. Attention would be given to viewsheds that transition between two zoning districts to assure that visual continuity is maintained.

9.2.3.3 Roadway flooding

Many of Rockland's roads and streams are closely nestled together at the base of its many steep-sloped mountains. As a result, periodic flooding during heavy rain events occurs on Downtown streets in Livingston Manor and Roscoe and on Craigie Clair Road, Tuttle Hill Road and Beaverkill Valley Road. There are a few other roads such as Grooville Road and Covered Bridge Road that are subject to flooding during less frequent extreme weather events such as Hurricane Irene. The Town is currently working with the U.S Army Corps of Engineers to mitigate flooding in Livingston Manor. The Town and Sullivan County are coordinating efforts to mitigate flooding in Roscoe. Hamlet flooding is also discussed in Section 5, Commercial Areas.

9.2.3.4 Public transit gaps

The combination of a low year-round population, a high percentage of vehicle ownership and a seasonal tourist population has likely caused a gap in public transportation for some low-income residents who could benefit from this service. While there are support services in Sullivan County to transport people to and from social benefit agencies and medical facilities, there is a gap in affordable transit services to take people to and from work. In this situation, the price of a job becomes a car or a cab which some low-income people cannot afford. Nearly 10% of Sullivan County households do not have a car according to a 2015 county transportation study and a number of those households are in Livingston Manor and Roscoe.³ While there is bus service in both hamlets, the buses only run two scheduled trips per day which is not enough to support shift work at say Walmart or the new casino, both located in nearby Monticello. Lacking a convenient and affordable means to get to work can cause people and families to become trapped in poverty and all the social and health issues associated with it. This same problem applies not only to getting to work, but to shopping and post-secondary education classes as well. The county study recognizes this issue and starts a dialog on ways to address it. The Town should join in this discussion.

9.2.3.5 Wayfinding signage

Wayfinding signage to attractions and centers could be improved in a number of places throughout the Town. For example, the westerly exit 96 ramp from Route 17 to Livingston Manor is lined with attraction signs that are too small and poorly placed to read, while there is a hodgepodge of signage at the ramp's intersect with Route 81 (DeBruce Road). In addition, underutilized roadside kiosks can lack useful, up-to-date information. Some beneficial signage is difficult to see, such as a hamlet of Roscoe sign on Route 206 that is partially blocked by foliage. The Town should conduct an audit of existing signage and identify places in need of new or improved signage. The development of a wayfinding mobile phone

³ 2015 Sullivan County Coordinated Transportation Services Plan.



Cluttered signage (Route 17 exit ramp intersect with Route 81)



Underutilized State roadside kiosk (Route 81)

application would be of further benefit to visitors. As more tourists come to the area, clearly marked, well maintained signage, both physical and mobile phone based, is important to guide people to attractions and centers of interest. See also Section 5, Commercial Areas for further discussion of signage improvements.

9.3 Recommendations

Strategy 1 Coordinate with governmental agencies and elected officials as Route 17 transitions to I-86 and seek mitigate traffic congestion.

Priority Action 1.1 *Coordinate with efforts by Sullivan County and elected officials to add a third lane in both directions to Route 17 from its intersect with I-87 (NY Thruway) to exit 100 at Liberty.*

Action 1.2 *Work with the NYSDOT to preserve the Town's three existing Route 17 interchanges.*

Action 1.3 *Work with the NYSDOT to implement directional signage improvements (if needed) on Route 17.*

Strategy 2 Improve wayfinding signage to attractions and centers throughout the Town.

Action 2.1 *Conduct an audit of existing signage on all roads and streets in the Town and identify areas in need of new or improved signage.*

Action 2.2 *Work with appropriate governmental agencies to implement signage improvements on State and County roads.*

Priority Action 2.3 *Explore development of a mobile phone wayfinding application.* This could include maps of biking and hiking trails, fly-fishing streams and other cultural, historic and agritourism attractions and centers of interest.

- Action 2.4 *Identify governmental and private sector programs that offer funding opportunities for improved roadway signage, including software development of a mobile phone wayfinding application.* For example, Sullivan County currently offers the Sullivan Signs grant program which offers funding for community signage.

Strategy 3 Seek to preserve scenic roadway viewsheds in the Town.

- Action 3.1 *Conduct a visual audit to identify unprotected scenic roadway viewsheds.*
This action will provide a list of scenic vistas for which options can be identified to preserve them.
- Action 3.2 *Review and improve (if necessary) zoning and land use ordinances for viewshed protection.* This may include establishment of viewshed corridors as tools to protect scenic views. It could also include establishment of strick off-premise signage controls and even banning billboards and other signage that block scenic viewsheds.³
- Action 3.3 *Explore the establishment of design ordinances that place limits on development impacts to scenic viewsheds.* Controls on things like height, bulk, design, color landscaping, density, vegetation, grading, and ridgeline development can better blend a project with its surroundings.
- Action 3.4 *Explore the establishment of rural roadway design standards.* Such standards could take into account things like topography, preservation of existing vegetation, minimal street lighting and traffic calming measures.
- Action 3.5 Encourage Sullivan County to consider an open space bond issue to fund purchases of scenic easements.

Strategy 4 Work to mitigate flooding on Town roads and streets.

- Priority Action 4.1 *Continue to work with the Army Corps of Engineers to mitigate flooding in downtown Livingston Manor.*
- Action 4.2 *Continue to coordinate with Sullivan County to mitigate flooding in downtown Roscoe if it reoccurs.*
- Action 4.3 *Identify Town roads and streets that are subject to periodic flooding and explore*

³ “An off-premise sign is a sign displaying advertising copy that pertains to a business, person, organization, activity, event, place, service or product not principally manufactured or sold on the premises on which the sign is located.” Texas Department of Transportation, 2013.

ways to mitigate future flood events. Predicted climate change scenarios in New York State include an increase in the number and intensity of heavy precipitation events.

- Action 4.4 *Review designs for new public and private roads for appropriate flood resiliency measures.*

Strategy 5 Work to address gaps in public transportation.

- Action 5.1 *Coordinate with Sullivan County as it implements public transportation recommendations in the 2015 "Sullivan County Coordinated Transportation Plan."*

- Action 5.2 *Encourage Sullivan County to expand its public bus service to include routes in the Town.*

Strategy 6 Coordinate with State and County agencies as they implement local and regional traffic plans.

- Action 6.1 *Coordinate with Sullivan County as it implements transportation recommendations in its comprehensive plan.*

- Action 6.2 *Coordinate with Sullivan County and elected officials regarding Town participation in the upcoming 2019 NYSDOT study to address congestion issues on Route 17 (future I-86). The study will, in part, review the addition of a third lane in both directions from its I-87 (Thruway) intersect to Route 211 in the Town of Wallkill and perhaps to Liberty.*

Strategy 7 Improve Town roadway design specifications.

- Action 7.1 *Continue to periodically review and update (if necessary) Town specifications for new road construction. See also actions 3.4 and 4.3 above.*

- Action 7.2 *Evaluate the use of private roads as a mechanism for access to residential subdivisions. Private roads are a tool to allow development of residential subdivisions without placing the burden of roadway maintenance on the Town.*

- Action 7.3 *Work to minimize curb cuts along Town roads. Develop access management standards such as shared driveways for adjacent uses in order to reduce points of access on roads in the Town. As development occurs, access drives are created and each new access point creates a potential for traffic conflict.*

Action 7.4 *Evaluate rural roads for the need to incorporate NYSDOT Complete Streets elements.*

Action 7.5 *Continue to document vehicle accidents in order to identify any accident-prone roadways and intersections that may need improvement.*

Strategy 8 Improve and expand sidewalk networks over time in Livingston Manor and Roscoe.

Priority Action 8.1 *Conduct a visual audit of existing sidewalks and crosswalks and identify any needed repairs and improvements.*

Action 8.2 *Explore NYSDOT Complete Streets elements for ways to improve pedestrian issues such as jaywalking. For example, if there is a long distance between signalized intersections in commercial districts, consider adding a mid-block crossing with crosswalk signage directing motorists to stop for pedestrians.*

Action 8.3 *Work to assure that all new and existing pedestrian crosswalks are clearly marked and ADA compliant.*

Action 8.4 *Work to add sidewalks over time to hamlet streets and link them to the Downtown sidewalk networks. This would improve pedestrian safety and encourage people to walk to Downtown business centers.*

Strategy 9 Seek to incorporate trails, bicycle lanes and pedestrian walkways into the Town's transit network.

Action 9.1 *Identify roadways, streets and abandoned railroad beds that may be appropriate for the addition of trails, bicycle lanes and pedestrian sidewalks.*

Action 9.2 *When Town roads and streets are repaved or resurfaced, consider adding accommodations for pedestrians and cyclists such as sidewalks, bike lanes or widened shoulders. Coordinate with Sullivan County to consider adding the same amenities to county roads that traverse the Town*

Action 9.3 *Continue to pursue construction of the River Walk trail project in Livingston Manor. Along with its recreational opportunities, the project would provide a pedestrian-friendly walkway to access commercial businesses on Main Street (see also a discussion of the River Walk trail in Section 5, Commercial Areas).*

Priority Action 9.4 *Evaluate the need for pedestrian safety measures for streets and sidewalks leading to the Round Top trailhead in Livingston Manor.*

use regulations, many of these being specified in the Town's 2010 comprehensive plan and carried forth in this plan. For example, the 2010 plan includes expanded discussion on *conservation subdivision*. It's important to recognize that New York State uses the term *cluster development* (Town Law §278). The two are not necessarily synonymous but they operate on the same principle: a subdivision plat in which the applicable zoning law is modified (often by a reduction in lot size) to provide an alternative permitted method for the layout (i.e., configuration and design of lots, buildings and structures, roads, utility lines and other infrastructure, parks and landscaping) in order to preserve the natural and scenic qualities of open lands. Often the difference lies in the statutory requirement for cluster development that the density - the number of lots or units -- shall not exceed the number that is permitted by a conventional subdivision and the underlying zoning district. Whereas, conservation subdivision does not necessarily come with this requirement.

Cluster development is a land use tool that preserves open space. Open space is intended to be the driver of the subdivision design. Because lot size can be modified, a cluster development affords flexibility in design, allowing for more creative and efficient use of land. It enables communities to structure neighborhoods around common spaces that may include trails, historic features, working landscapes, significant natural resources, or wildlife habitat preservation. It also enables the protection of stream corridors by riparian buffers and, because the overall impervious surfaces on the site are reduced, it offers improved opportunities for stormwater management. The efficiencies of reduced lengths of streets and utilities come with lower costs for infrastructure installation, fees, and maintenance. The amenities that are often provided in the open space, such as trails and parks, often increase property values and marketability. It is also possible to preserve larger, contiguous open spaces when cluster developments abut, and the larger context and long-term planning are factored in.

An open space plan, a natural resource inventory, an analysis of environmental constraints, or a build-out study with alternate projection scenarios (e.g., conventional vs. conservation subdivision design or applied vs. not-applied open space protection strategies) are all planning tools that help determine the benefits and location of cluster developments and guide a quality of development that is less consumptive in the long term. Analyzing environmental constraints at the site level is also integral to the application of cluster development. Typically in cluster development regulations two (or more) sketch plats are undertaken. The conventional plat illustrates the number of lots that can be accommodated by the site; while the cluster plat(s) illustrates the alternate design(s).

The offering of incentives for the application of clustering is often put forth as a need to drive the use of this tool. However, not only does the statute provide for the option of the town to require clustering (the Rockland Planning Board has this authority under certain circumstances), but with all the benefits of clustering and the adoption of its application as a town policy, incentives should not be needed. Nevertheless, if the Town would like to offer density bonuses, for example, Town Law §261-b. Incentive Zoning, provides the basis for doing so. This zoning tool enables a system of exchanging bonuses for community amenities, both of which the town identifies in the local regulations. The use of clustering itself, if it is optional on the part of the applicant for example, is typically not an amenity. Amenities, like

bonuses, are meant go above and beyond baseline requirements. Incentive zoning may also be used for a host of other reasons to help carry out town policy.

Effective development and application of cluster development regulations requires careful consideration by the Town. There are many options to choose and define, and among the best sources for developing cluster regulations are local laws from other municipalities, as these illustrate the spectrum and detail of this tool's components.

The Town of Rockland Subdivision Law includes a modest section on conservation subdivision. This existing language should be compared with other municipal examples. The presence of rock outcrops, soils that present challenges for wastewater disposal, steep slopes, and other factors limiting development opportunities, are important factors in the application of clustering in Rockland. At the same time, if these constraints are identified in advance or during the application process, it will facilitate the use of this tool, which is suited to accommodate both development and environmental protection.

12.4 Ongoing review of land use tools

Towns in New York State are afforded the ability to adopt numerous land use tools and tailor these to meet local needs. The extent to which a municipality details requirements within these tools has a direct relationship with the resulting development project. In subdivision regulations, site plan review, special use permit, and planned unit development, among others, are all facets of these tools and they should be reviewed on a regular basis and improved as needed. Submission requirements, performance standards, review procedures, tools for assuring site improvements, definitions, stormwater mitigation practices, and many other components will all benefit from periodic review and improvement.

12.5 Stormwater

The Town's 2010 comprehensive plan includes several recommendations related to stormwater protection. Since 2010, the Town has taken steps to implement improvements to stormwater protection. Each zoning district has an impervious surface threshold per lot, and language has been integrated into the zoning law requiring that stormwater practices are in conformance with the NYS Stormwater Design Manual.

12.6 Scenic resources

Given the Town's outstanding scenic and aesthetic qualities and their importance in attracting homebuyers, recreationists, and tourists, it is critical the town protect these resources while also accommodating the growth that is generated. Land use tools, regulatory and recommendatory, offer numerous opportunities to strike this balance. Any combination of chosen approaches should be carefully based on a solid planning foundation. Because the scenic and aesthetic area of the land use arena is its most subjective, it is crucial that a municipality provide strong rationale for the regulatory tools it adopts.

(Non-regulator tools, e.g., supplementary guidance materials, can complement regulations or stand on their own.) A scenic resources inventory, which could be conducted at the county level, or a visual preference survey are examples of baseline exercises to guide the adoption and implementation of tools to protect scenic qualities.

Use of the overlay zoning district is among the most common methods to apply criteria for protecting scenic resources. Design guidelines, often a combination of text and graphics, are also popular and successful. And there is no shortage of additional ways, and combinations thereof, to integrate scenic and community character protection tools: performance standards, review elements in site plan review, criteria in a special use permit, incentive zoning, and non-regulatory guidance materials.

12.7 Recommendations

Many of the land-use recommendations that follow have relationships with those found in other sections. For example, design guidelines relate to historic preservation; complete streets to transportation; and several regulatory measures to environmental resource protection.

Strategy 1 Continue to review and improve as necessary land use regulations on a regular basis.

- Action 1.1 *Continue to involve the committee that has been reviewing and developing improvements to the Town's land use regulations for adoption.*
- Action 1.2 *Focus on "hot button" emerging topics and identified priorities for revising regulations. These topics may include, but not be limited to short-term rentals, traffic impact analyses, and adoption of campground regulations and nonconforming use provisions.*
- Action 1.3 *Improve cluster development regulations by integrating more detailed review procedures, illustrated guidance materials, provisions for determining calculations for buildable and unbuildable areas, and open space ownership options.*

Strategy 2 Adopt guidelines with illustrations to complement land use regulations and help sustain the character of the community.

- Action 2.1 *Work to develop and integrate design guidelines within the zoning law and connect these with the site plan review and special use permit review processes. Consider applying these guidelines to all commercial development throughout the Town. Guideline elements include overall site design, parking and landscape layout, best site practices for stormwater mitigation, lighting, architectural materials and form, signage, and historical preservation.*

- Action 2.2 *Work to adopt a set of illustrated rural siting guidelines to include elements that are intended to mitigate the visual or environmental impacts of residential development and may be arranged in a preferred vs. discouraged format. Elements include cut-and-fill, driveway placement, tree preservation, and the choice of architectural features. Such guidelines could be adopted as a handbook, separate from regulations.*

Strategy 3 Undertake planning and policy initiatives to assist in the long-term implementation of land use recommendations.

- Action 3.1 *Consider conducting a scenic resources inventory and analysis to provide a basis for protection strategies, such as a scenic or ridgeline protection overlay district.*
- Action 3.2 *Explore undertaking a buildout and fiscal analysis study to better understand the benefits and drawbacks of long-term growth scenarios and to further implement the goals and objectives of this plan.*
- Action 3.3 *Explore adopting a Complete Streets resolution to help direct policy and increase eligibility for funding sources.*

Strategy 4 Develop and adopt regulations for floodplain and stormwater protection

Priority Action 4.1 *Develop regulations for land clearing and development on steep slopes to mitigate stormwater runoff impacts that can negatively affect water quality, harm unique ecosystems and exacerbate flooding.*

- Action 4.2 *Integrate incentives within land use regulations for development projects that reduce the overall amount of stormwater runoff such that post-development runoff amounts are less than predevelopment amounts.*
- Action 4.3 *Work to ensure that the requirements and amounts for professional fees to assist in the review of projects are sufficient in meeting the needs of the Town. For example, the involvement of a Certified Professional in Erosion and Sediment Control (CPESC) or similarly qualified professional can ensure that the standards of the NYS Stormwater Design Manual are being adhered to.*
- Action 4.4 *Explore creating a stream corridor overlay district with protective buffers that include limitations on development, land clearing activities, and storage of materials. This action would will afford greater protection of the Town's water resources.*

Priority Action 4.6 *With input from the forest industry, work to develop a local timber harvesting permit that requires site plan review and integrates NYS Best Management Practices for Water Quality and other guidance.* This will help to ensure logging operations do not create adverse environmental impacts such as stormwater runoff, impacts on Town roads, and sedimentation of streams.

Strategy 5 **Examine options to increase protections for the larger lakes within the north central portion of the Town and integrate the same within land use regulations.**

Action 5.1 *Explore the creation of a lake overlay district with specific development standards such as buffers, heightened septic system design standards, building height limitations, and increased minimum lot sizes.*

Action 5.2 *Consider provisions for lake access, including minimum lot frontage, limited public access, limitations on the number of boats per lot, and requiring accessory use permits for all new boat docks, such that lake use does not exceed carrying capacity.*

Strategy 6 **Take advantage of land-use training and other topical session opportunities that will fulfill the planning board's and the zoning board of appeal's annual training requirements and benefit the community.**

Action 6.1 *Coordinate with Sullivan County and other providers to have training topics that are related to the implementation of this plan.* Such topics could include Conservation Subdivision, Planned Unit Development, Design Guidelines, Historic Preservation, and Complete Streets.

Strategy 7 **Explore the creation of an Official Map**

New York Town Law §270) permits a town to create an Official Map indicating proposed roadway, sewage and water infrastructure, and other public facilities. The map can be a useful and effective tool for implementing a Comprehensive Plan by reserving future development sites and rights-of-way. In addition, development cannot take place in a way that does not conform to the public facilities set forth on the Official Map. This aspect provides a rare level of certainty and stability to the development process.

SECTION 13 – IMPLEMENTATION

This chapter includes a description and prioritization of the recommended strategies that the Town will take to implement this Plan. Although the preference may be to implement all of the recommendations immediately, a prioritized approach may be more realistic based on the availability of funding, staff and volunteers.

The Town Board is ultimately responsible for implementation of the Plan. To monitor progress in Plan implementation and to identify and address new issues and changes that may emerge in the coming years, the Town Board should maintain a dialogue with the Planning Board and Zoning Board of Appeals. However, it is often a burdensome task for town boards to carry out a plan's recommendations on their own and as a result many comprehensive plans are simply shelved. One way to prevent this from happening in Rockland is for the Town Board to establish an ad hoc committee to assist it with shepherding the Plan's recommendations towards completion.

The pages that follow list the recommended strategies found in this Plan and they are organized under the sections in which they appear (see the relevant section for action items that appear under each strategy). For each strategy there is an indication of when it should be implemented and what party is responsible for ensuring it is followed. Some strategies should be implemented immediately (within 1 year) while others are "short-term" (within 2 to 3 years) and "long-term" (within 4 to 5 years). Still others require "ongoing" action on a continual basis. Some strategies are also marked as "Priority" items because they either: (a) address critical issues, (b) require a timely response, or (c) are readily achievable given existing or expected resources (i.e., personnel, costs, etc.). Setting time periods in this way helps to ensure that the implementation process will get started upon adoption of the Plan.

The Comprehensive Plan itself should be understood to be a "living document." As such, the Plan may need to be adjusted or updated from time to time in order to reflect current conditions and needs of the community. As a point of reference, the final implementation item in this section recommends that every five (5) years the entire Comprehensive Plan should be reviewed and (if necessary) updated.

Recommendations

Time Horizon

Responsibility

Section 4 – Residential Areas

Strategy 1.	Increase affordable housing in the community (p. 4.5).	Long-term	Town Board
Strategy 2.	Enhance housing opportunities in hamlet areas (p. 4.6).	Short-term	Town Board
Strategy 3	Balance growth with community character in rural areas (p. 4.6).	Short-term	Town Board
Strategy 4	Encourage the use of sustainable standards for new residential development (p. 4.7).	Ongoing	Town Board Planning Board ZBA

Section 5 – Commercial Areas

Strategy 1.	Continue to maintain infrastructure serving the NB and GB zones (p. 5.8).	Ongoing	Town Board
Strategy 2.	Maintain civic and cultural elements in downtown business districts (p. 5.8).	Ongoing	Town Board
Priority Strategy 3.	Continue to promote the Town as a world-class tourist destination (p. 5.9).	Ongoing	Town Board
Strategy 4.	Preserve the historic architectural heritage of Downtown business districts (p. 5.9).	Short-term	Town Board
Strategy 5	Maintain and enhance Town gateway signage from Route 17 and seek to establish new gateway signage locations (p. 5.10).	Long-term	Town Board
Strategy 6.	Encourage the use of sustainable standards for new and existing commercial development (p. 5.10).	Ongoing	Town Board Planning Board

Immediate = 1 Year	Short-Term = 2-3 Years	Long-Term = 4-5 years	Ongoing = continual basis
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Recommendations

Time Horizon

Responsibility

Priority Strategy 7. Create an interconnected sidewalk network in Roscoe and Livingston Manor (p. 5.10).

Long-term

Town Board

Priority Strategy 8. Increase vehicle parking opportunities in Roscoe and Livingston Manor (p. 5.11).

Short-term

Town Board

Priority Strategy 9. Mitigate flooding in downtown Roscoe and Livingston Manor (p. 5.11).

Short-term

Town Board

Section 6 – Community Services

Strategy 1. Continue to assess the needs of police and fire protection (p. 6.9).

Ongoing

Planning Board
Town Board

Strategy 2. Strive to maintain and expand library services for Town residents (p. 6.10).

Ongoing

Town Board

Strategy 3. Inform the three school systems of growth impacts to enrollment from proposed large-scale residential developments (p. 6.10).

Ongoing

Planning Board

Strategy 4. Continue to maintain a high level of service and maintenance on Town roads (p. 6.10).

Ongoing

Town Board

Strategy 5. Continue to maintain high quality standards for water and sewer service (p. 6.11).

Ongoing

Town Board
Water & Sewer Dept.

Strategy 6. Continue to support proper disposal of solid waste and recycling efforts (p. 6.11).

Ongoing

Town Board

Section 7 – Historic, Cultural and Recreational Resources

Strategy 1 Strengthen partnerships (p. 7.14).

Ongoing

Town Board

Immediate = 1 Year

Short-Term = 2-3 Years

Long-Term = 4-5 years

Ongoing = continual basis

<u>Recommendations</u>		<u>Time Horizon</u>	<u>Responsibility</u>
Strategy 2	Enhance existing resources and explore the creation of new facilities (p. 7.15).	Long-term	Town Board
Strategy 3	Advance historic preservation efforts (p. 7.16).	Long-term	Town Board
Strategy 4	Work to provide recreational opportunities for persons with special needs (p. 7.17).	Long-term	Town Board
Strategy 5	Seek governmental and private sector funding opportunities (p. 7.17).	Ongoing	Town Board
Section 8 – Environmental Resources			
Strategy 1	Take proactive steps to protect and sustain environmental resources (p. 8.8).	Long-term	Town Board
Strategy 2	Encourage stream appreciation and protection (p. 8.9).	Long-term	Town Board
Strategy 3	Help ensure long-term quality of individual onsite septic systems (p. 8.9).	Short-term	Town Board
Priority Strategy 4	Pursue initiatives and practices to mitigate flooding and flood damage (p. 8.9).	Long-term	Town Board
Strategy 5	Work to adopt measures to help ensure that new roadway design blends with the natural surroundings and will not adversely impact the environment (p. 8.10).	Long-term	Town Board
Section 9 – Transportation			
Priority Strategy 1	Coordinate with NYSDOT and County agencies as Route 17 transitions to I-86 (p. 9.8).	Ongoing	Town Board Sullivan County NYSDOT
Immediate = 1 Year	Short-Term = 2-3 Years	Long-Term = 4-5 years	Ongoing = continual basis

<u>Recommendations</u>		<u>Time Horizon</u>	<u>Responsibility</u>
Priority Strategy 2	Improve wayfinding signage to attractions and centers throughout the Town (p. 9.8).	Ongoing	Town Board Sullivan County NYSDOT
Strategy 3	Seek to preserve scenic roadway viewsheds (p. 9.9).	Long-term	Town Board
Priority Strategy 4	Work to mitigate flooding on Town roads and streets (p. 9.9).	Short-term	Town Board
Strategy 5	Work to address gaps in public transportation (p. 9.10) .	Long-term	Town Board Sullivan County Private sector
Strategy 6	Coordinate with state and county agencies as they implement local and regional traffic plans (p. 9.10).	Ongoing	Town Board Sullivan County
Strategy 7	Improve Town roadway design specifications (p. 9.10).	Short-term	Town Board Town Highway Dept.
Priority Strategy 8	Improve parking and sidewalk networks in Livingston Manor and Roscoe (p. 9.11).	Long-term	Town Board
Priority Strategy 9	Seek to Incorporate bicycle lanes and pedestrian walkways into the Town's transit network (p. 9.11).	Long-term	Town Board Sullivan County
Strategy 10	Monitor advances in vehicle technology against infrastructure needs they may require (p. 9.12).	Ongoing	Town Board
Section 10 – Economic Development			
Strategy 1.	Develop a property inventory for commercial and industrial sites (p. 10.8).	Immediate	Town Board
Immediate = 1 Year	Short-Term = 2-3 Years	Long-Term = 4-5 years	Ongoing = continual basis

Implementation

<u>Recommendations</u>		<u>Time Horizon</u>	<u>Responsibility</u>
Strategy 2.	Develop a list of target industries that would enhance and diversify Rockland's economy (p. 10.8).	Immediate	Town Board
Strategy 3.	Seek to develop shovel ready sites (p. 10.9).	Ongoing	Town Board
Strategy 4.	Support efforts to streamline Permits and SEQRA (p. 10.9).	Long-term	Town Board
Strategy 5.	Promote the Town as a desirable place to do business (p. 10.9).	Ongoing	Town Board
Priority Strategy 6.	Maintain and enhance the Town's transportation advantages (p. 10.10).	Ongoing	Town Board
Strategy 7.	Explore expanding water and sewer service in the commercial zones (p. 10.10).	Long-term	Town Board
Priority Strategy 8.	Work to close broadband service gaps in the Town (p. 10.11).	Short-term	Town Board
Strategy 9.	Partner with Sullivan County, the Sullivan County Partnership and the Roscoe and Livingston Manor chambers of commerce on initiatives to attract and retain businesses (p. 10.11).	Ongoing	Town Board
Strategy 10.	Promote small business attraction and retention (p. 10.11).	Ongoing	Town Board
Strategy 11.	Promote agribusiness industries including agricultural production, support services and value-added processing (p. 10.12).	Ongoing	Town Board
Strategy 12.	Promote labor force education (p. 10.13).	Ongoing	Town Board SC Partnership Education institutions

Immediate = 1 Year	Short-Term = 2-3 Years	Long-Term = 4-5 years	Ongoing = continual basis
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<u>Recommendations</u>		<u>Time Horizon</u>	<u>Responsibility</u>
Strategy 13.	Encourage the expansion of childcare providers in the Town (p. 10.13).	Short-term	Town Board
Strategy 14	Plan for the development of alternative energy systems that minimally impact adjacent land uses, properties, and the environment in each of the Town's zoning districts (p. 10.13).	Short-term	Town Board
Section 11 – Agriculture			
Strategy 1	Coordinate the implementation of strategies in this section with Sullivan County's farmland protection plan (p. 11.10).	Short-term	Town Board
Strategy 2	Continue to maintain the Town's farm-friendly regulations (p. 11.10).	Ongoing	Town Board
Strategy 3	Work to preserve farms and agricultural lands for next generation farmers (p. 11.11).	Ongoing	Town Board
Strategy 4.	Encourage policies that support new and next generation farmers (p. 11.13).	Ongoing	Town Board Sullivan County New York State
Strategy 5.	Seek to expand food processing and distribution networks (p. 11.13).	Long-term	Town Board Sullivan County SC Partnership
Strategy 6.	Expand financial incentives, access to capital and farm-friendly policy reforms (p. 11.14).	Long-term	Town Board Sullivan County SC IDA

Immediate = 1 Year	Short-Term = 2-3 Years	Long-Term = 4-5 years	Ongoing = continual basis
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<u>Recommendations</u>		<u>Time Horizon</u>	<u>Responsibility</u>
Strategy 7.	Work to promote agritourism in the Town (p. 11.14).	Short-term	Town Board SC Tourism Ass.
Strategy 8.	Promote citizen education on farmland benefits (p. 11.15).	Short-term	Town Board Sullivan County
Section 12 – Land Use			
Strategy 1	Continue to review and improve land use regulations on a regular basis (p. 12.4).	Ongoing	Town Board Planning Board
Strategy 2	Adopt guidelines with illustrations to complement land use regulations and help sustain the character of the community (p. 12.4).	Short-term	Town Board
Strategy 3	Undertake planning and policy initiatives to assist in the long-term implementation of land use recommendations (p. 12.5).	Short-term	Town Board
Priority Strategy 4	Develop and adopt regulations for floodplain and stormwater protection (p. 12.5).	Immediate	Town Board
Strategy 5	Examine options to increase protections for large lakes within the north central portion of the Town and integrate within land use regulations (p. 12.6).	Short-term	Town Board
Strategy 6	Take advantage of land-use training and other topical session opportunities that will fulfill the planning board's and zoning board of appeal's annual training requirements (p. 12.6).	Ongoing	Planning Board
Strategy 7	Explore the creation of an Official Map (p. 12.6).	Short-term	Town Board
<div> <div>Immediate = 1 Year</div> <div>Short-Term = 2-3 Years</div> <div>Long-Term = 4-5 years</div> <div>Ongoing = continual basis</div> </div>			

Review the Comprehensive Plan

As a final recommendation, the Town should review and update (if necessary) this Comprehensive Plan in its entirety every five (5) years. As the Town of Rockland changes over time, its needs and desires may also change. The Plan should be a flexible and adaptable document that reflects such changes.

Immediate = 1 Year	Short-Term = 2-3 Years	Long-Term = 4-5 years	Ongoing = continual basis
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Appendix A

Appendix A

Demographic, Social, and Economic Data

Population	2
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Prepared by:
Peter Manning, Genius Loci Planning

The following tables provide demographic and other trends influencing the Town of Rockland. These data contributed to development of the Comprehensive Plan and informed other components of the planning process: research for each topic, public input and committee discussion, and materials from the Town's 2010 comprehensive plan.

(Information in tables and figures are from U.S. Census Bureau, unless otherwise noted.)

Population

The Town of Rockland, occupying the northernmost extent of Sullivan County, had a population of 3775 persons as of the 2010 US Census. The Town's 2010 population density of 41.5 people per square mile places it significantly below the average of Sullivan County (80/ sq. mi.), yet well above other towns in the western portion of the county.

While the County as a whole experienced an average of just under 6% population growth from the 1990 through the 2010 censuses, the Town of Rockland saw a 3.5% average population loss during the same period (Table 1). This trend is not unlike that of Rockland's adjacent towns (Table 2). The County's growth rate from the 2000 through the 2010 censuses placed it just outside the grouping of the state's fastest growing counties (Figure 1). However, following the 2010 census, the County began to lose population, and from July 1, 2014 – July 1, 2015 Sullivan led the state's 62 counties in population loss at 1.18%, according to U.S. Census Bureau estimates. The County lost approximately 2700 people from 2010 to 2015.

	Town of Rockland	Percent Change	Sullivan County	Percent Change
1980	4,207	(7.3%)	65,155	(23.9 %)
1990	4,096	(-2.6%)	69,277	(6.3%)
2000	3913	(-4.5%)	73,966	(6.8%)
2010	3775	(-3.5%)	77,547	(4.8%)
2014 (est.)	3668	(-2.8%)	74,877	(-3.4%)

Table 1. Population Change
Town of Rockland and Sullivan County, 1980-2014
(% change from previous census)

	Callicoon	Fremont	Liberty	Neversink	Andes	Colchester	Denning	Hrdnbg.
1980	2998	1346	9879	2840	1312	1848	474	280
% Change	(25.0)	(28.6)		(38.2)	(10.0)	(11.0)	(59.6)	(17.2)
1990	3024	1332	9825	2951	1291	1928	524	204
% Change	(0.9)	(-1.0)	(-0.5)	(3.9)	(-1.6)	(4.3)	(10.5)	(-27.1)
2000	3052	1391	9632	3556	1356	2042	516	208
% Change	(0.9)	(4.4)	(-0.2)	(20.5)	(5.0)	(5.9)	(-1.5)	((2.0)
2010	3057	1381	9885	3557	1301	2077	551	238
% Change	(0.2)	(-0.7)	(2.6)	(0.0)	(-4.1)	(1.7)	(6.8)	(14.4)
2014 (est.)	2976	1353	9719	3472	1268	2049	547	231
% Change	(-2.6)	(-2.0)	(-1.7)	(-2.4)	(-2.5)	(-1.3)	(0.7)	(-2.9)

Table 2.
Population Change, Town of Rockland and Adjoining Towns, 1980-2014
(% change from previous census)

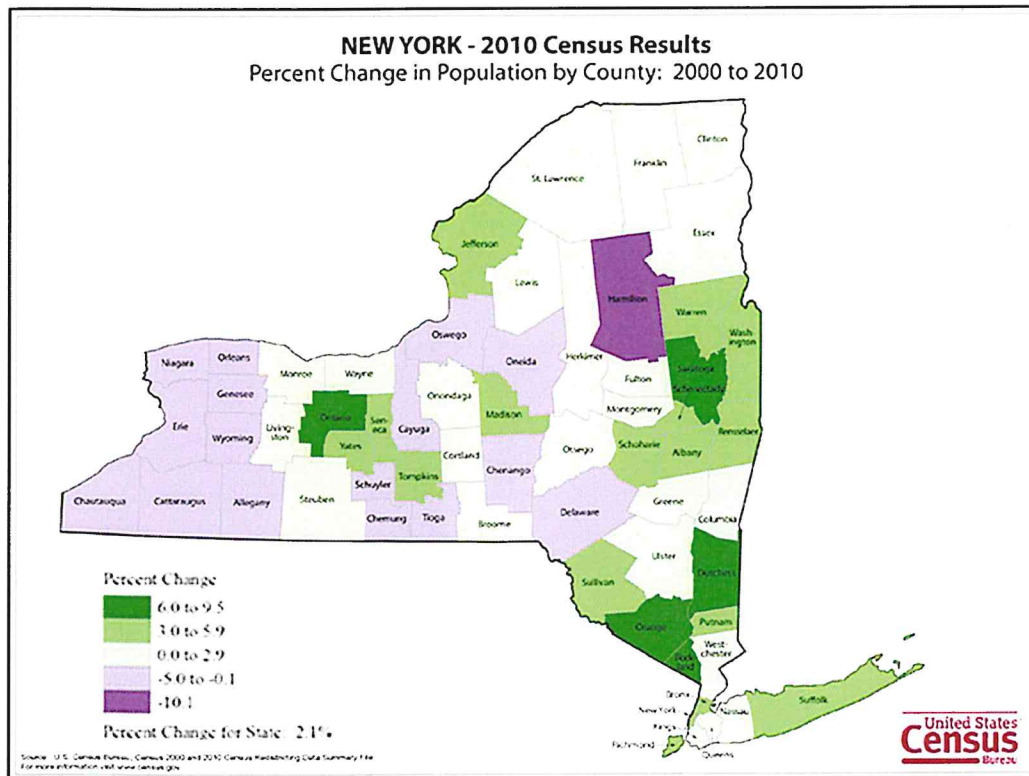


Figure 1.

From a statewide perspective, New York, from 2005 – 2013, saw a domestic outmigration of 416,871 people, while only 265,970 people moved to the state during the same period, resulting in a net loss of 150,901, or an average of 16,767 people per year. Despite these statistics, projections for Sullivan County show a slight increase in population for 2020, with a steadying to slight loss for the following 20 years (Figure 2).

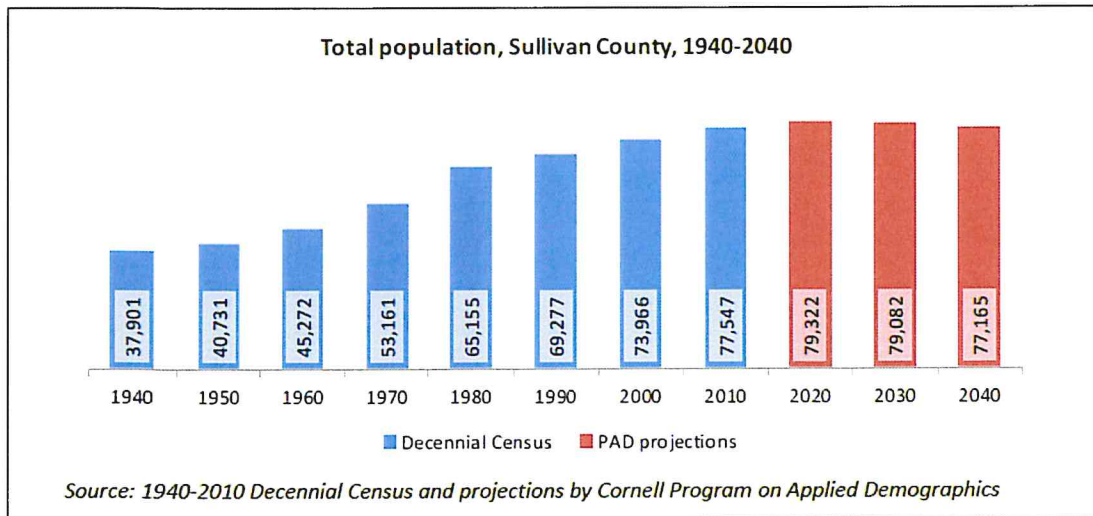


Figure 2.

Age Distribution

The percentage distribution of Rockland's age cohorts approximates that of Sullivan County, although Rockland's median age was almost three years higher than the county's in the 2010 census. Also of note is the county's slightly higher percentages for people ages 20-39 (Table 3). Both the percentage distribution of age cohorts (Table 3) and age groups (Table 4) for the Town illustrate decreased numbers of people ages 20-39 from 2000-2010. These statistics may be connected to the outmigration of youth at the high school graduate age, a pattern exhibited in several counties in upstate New York. Details on the increase in the Town's median age are shown in Table 5.

Town of Rockland			Sullivan County		
Total population	3,775	100 (%)	Total population	77,547	100 (%)
Under 5 years	188	5	Under 5 years	4,626	6
5 to 9 years	229	6.1	5 to 9 years	4,728	6.1
10 to 14 years	250	6.6	10 to 14 years	4,878	6.3
15 to 19 years	243	6.4	15 to 19 years	5,351	6.9
20 to 24 years	164	4.3	20 to 24 years	4,476	5.8
25 to 29 years	186	4.9	25 to 29 years	4,248	5.5
30 to 34 years	175	4.6	30 to 34 years	4,340	5.6
35 to 39 years	212	5.6	35 to 39 years	4,410	5.7
40 to 44 years	260	6.9	40 to 44 years	5,397	7
45 to 49 years	296	7.8	45 to 49 years	6,479	8.4
50 to 54 years	303	8	50 to 54 years	6,271	8.1
55 to 59 years	254	6.7	55 to 59 years	5,677	7.3
60 to 64 years	296	7.8	60 to 64 years	5,211	6.7
65 to 69 years	239	6.3	65 to 69 years	3,940	5.1
70 to 74 years	171	4.5	70 to 74 years	2,748	3.5
75 to 79 years	142	3.8	75 to 79 years	1,987	2.6
80 to 84 years	104	2.8	80 to 84 years	1,514	2
85 years and over	63	1.7	85 years and over	1,266	1.6
Median age (years)	44.6	(X)	Median age (years)	41.7	(X)

Table 3.
Age Cohorts, 2010

Age Group	Age Range	Total	Percentage
Pre-School	Under 5	188	5
School Age	5 to 19 years	752	19.1
College Age	20 to 24 years	164	4.3
Young Professional	25 to 29 years	186	4.9
Young Family	30 to 39 years	387	10.2
Teenage Family	40 to 49 years	556	14.7
Empty Nester	50 to 64 years	853	22.5
Senior	65+	719	19.1

Table 4.
Town of Rockland Age Groups, 2010

	2000		2010		2000-10
					Percent
	Number	Percent	Number	Percent	Change
Total population	3,913	100.0	3,775	100	-3.5
Male	1,941	49.6	1,903	50.4	0.5
Female	1,972	50.4	1,872	49.6	-0.5
Under 5 years	238	6.1	188	5	-1.1
5 to 9 years	276	7.1	229	6.1	-1
10 to 14 years	298	7.6	250	6.6	-1
15 to 19 years	263	6.7	243	6.4	-0.3
20 to 24 years	182	4.7	164	4.3	-0.4
25 to 34 years	384	9.8	361	9.5	-0.3
35 to 44 years	571	14.6	472	12.5	-2.1
45 to 54 years	565	14.4	599	15.8	1.4
55 to 59 years	246	6.3	254	6.7	0.4
60 to 64 years	211	5.4	296	7.8	2.4
65 to 74 years	387	9.9	410	10.8	0.9
75 to 84 years	226	5.8	246	6.6	1.2
85 years + over	66	1.7	63	1.7	0
Median age	40.4	(X)	44.6	(X)	

Table 5.
Town of Rockland Age Cohort Change, 2000-2010

Educational Attainment

Education levels can contribute to the economic success of a community and help influence locational decisions of businesses, for example. While the percentage of Rockland's residents over 25 years of age with a Bachelor's or higher degree was less than the same categories for New York State, Rockland did outpace the county for these categories and for the Associate's attainment level, which also surpassed the state percentage. Rockland also saw a marked increase in higher attainment levels from the 2000 census, in which the percentages were Associate's 6.7, Bachelor's 7.9, and Graduate or Professional: 3.6.