

CHAPTER 3: THE LAND USE PLANNING CONTEXT IN SUSSEX COUNTY



Historical Land Use Patterns

In Sussex County, geography and history have combined to form complex and evolving land use patterns. The natural geography of Sussex County greatly stimulated European settlement. During the pre-Revolutionary era, agriculture and mining were the region's driving socio-economic forces. Abundant resources of fertile land and metal-rich mountainsides were both readily available in Sussex County. However, the foundation of Sussex County's development was laid prior to European colonization when Native Americans established a system of trails between different parts of the region. These trails were restricted mostly to river valleys and mountain passes by the region's rolling topography, which formed formidable boundaries to land transportation. They later served as paths into the wilderness for colonists, and became magnets for European settlement.

For these reasons, Sussex County was settled by two different groups in two different areas. The first European settlement in Sussex County was made by the Dutch in the Upper Delaware Valley. The County's first village – Minisink – was established during the early 1700's near the Montague/Sandyston border. It helped support eastbound shipments of copper along a former Native American trail (Old Mine Road) from Pahaquarry in Warren County to Kingston, New York. (*Decker, 1942*)¹ Settlers quickly took advantage of the Valley's fertility and moved agricultural products eastwards by the same route. (*2003 Sussex County Open Space & Recreation Plan*)² However, they were virtually cut off from larger acreages of fertile farmland to the south by the Kittatinny Ridgeline. Consequently, the development of the Upper Delaware Valley has been more closely associated with that of southern New York than New Jersey.

On the other side of the Kittatinny Ridgeline, English and German settlers migrated to Sussex County from the south and east along different trails and established agricultural homesteads there. Newton – the County's largest town – was situated at the convergence of three major trails, and was declared the County seat in 1753. (*2003 Sussex County Open Space & Recreation Plan*)

Trails remained the primary stimulus for growth until more modern transportation routes, such as the Morris Canal and railroad lines, began to crisscross the County during the 1800's. These high-capacity routes allowed for heavier products such as pork, dairy, and iron ore to be shipped out of Sussex County. Towns formed around the railroad hubs at Andover, Sussex, and Branchville where agricultural products were loaded onto trains

bound for markets in eastern New Jersey and New York City. Improved transportation access also attracted industrial operations and their workers to Sussex County. Railroads served the productive mining towns of Franklin and Ogdensburg while the Morris Canal serviced the settlement at Andover Forge (Waterloo Village). (2003 *Sussex County Open Space & Recreation Plan*)

Agriculture replaced mining as the main economic force in Sussex County during the late 1800's. Competition from newly accessible iron deposits in the Midwest caused most of the region's mines to close while the County's proximity to the growing markets in New York prompted demand for perishable agricultural goods, especially dairy products. The region's dairy industry boomed during this time. Perishable agricultural products could be swiftly loaded and shipped via railroad to the New York markets before they spoiled. Sussex County's rolling landscape of hills and grasslands were particularly well-suited to dairy production as well. The dairy farmers' success prompted growth in field crop agriculture as well. The Kittatinny Valley and parts of the Highlands ridgeline were extensively cultivated.

The County's population became more dispersed in its increasingly agricultural landscape. The region's trail system expanded into a more intricate road network that serviced many far-flung areas and connected them to one another. However, significant concentrations of commercial, industrial, and residential land uses persisted in the transportation hubs at Newton, Franklin, and Sussex Borough. This agrarian, centers-based land use pattern, with development in existing towns and agricultural or natural areas surrounding them, remained prevalent in Sussex County through the mid-twentieth century. Then, residential development expanded westward from New York City causing the County's population to grow by more than 40% during the 1950's (see *Population Table* below). (*Workforce New Jersey Public Information Network website*)³; (*American Fact finder website*)⁴

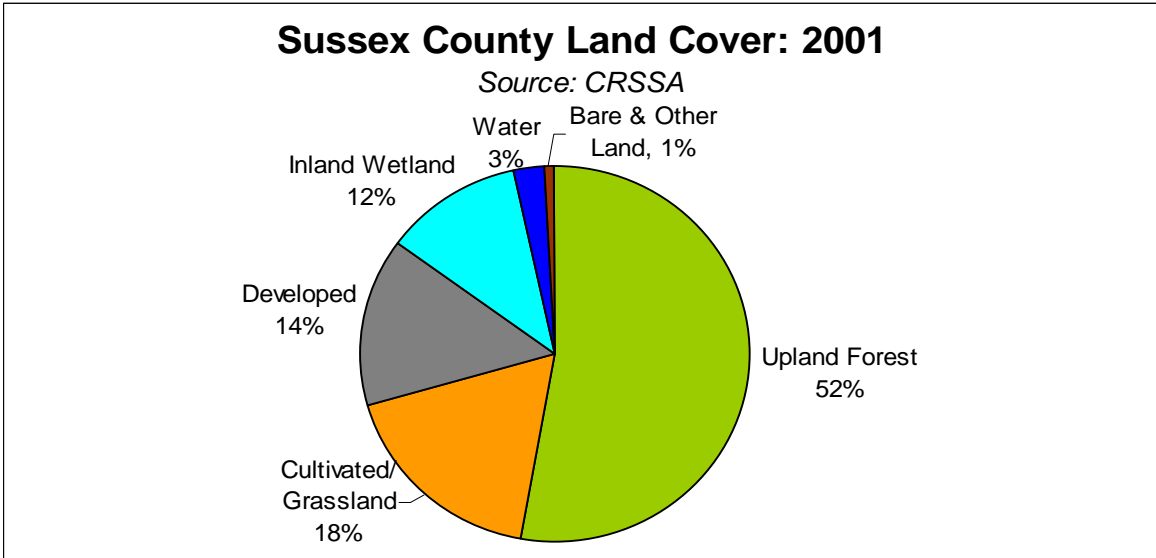
A number of factors contributed to the County's rapid growth during this decade. Government incentives encouraged the construction of single-family homes, causing developers to seek out larger and cheaper parcels of land on which to build. Simultaneously, the nation began constructing Interstate highways, which greatly increased the ease of living in rural communities far from traditional employment centers. Sussex County contained the necessary combination of inexpensive land and automobile accessibility that promoted rapid growth. Large subdivisions in the County's eastern municipalities created the demand for a more expanded road network. New arterial highways, such as Interstate 80, made Sussex County even more automobile accessible.

Residential and road construction perpetuated one another during the 1960's and 1970's. Between 1960 and 1980, Sussex County added nearly 67,000 residents and grew by 136%. Towns that were closest to the job centers and highways to Morris County and New York City began to transform from rural, agricultural areas into bedroom communities. Although growth occurred throughout Sussex County, its eastern municipalities – Vernon, Hardyston, Sparta, Hopatcong, and Byram – experienced some of the most dramatic increases. For example, Vernon added roughly 14,000 residents between 1960 and 1980, which increased its population by almost eight times (see *Population table*).

Sussex County Population: 1930 – 2000

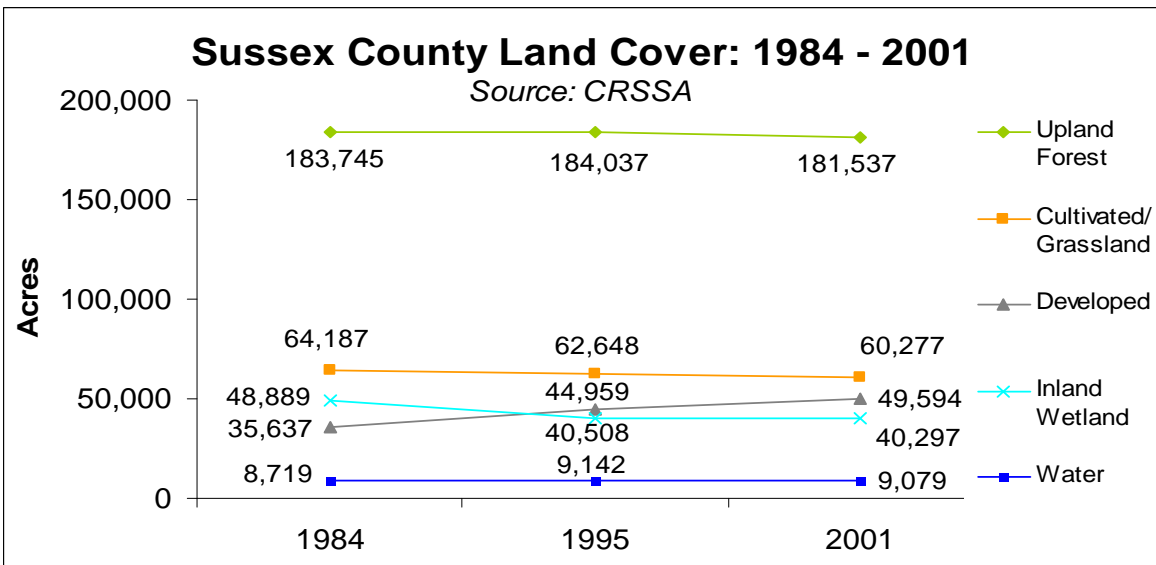
MUNICIPALITY	1930	1940	1950	1960	1970	1980	1990	2000
Andover Borough	479	512	560	734	813	892	700	658
Andover Township	496	591	1,052	2,177	3,040	4,506	5,438	6,033
Branchville Borough	665	715	810	963	911	870	851	845
Byram Township	245	373	761	1,616	4,592	7,502	8,048	8,254
Frankford Township	1,074	1,244	1,530	2,170	2,777	4,654	5,114	5,420
Franklin Borough	4,176	4,009	3,864	3,624	4,236	4,486	4,977	5,160
Fredon Township	412	478	584	804	1,372	2,281	2,763	2,860
Green Township	539	540	596	854	1,343	2,450	2,709	3,220
Hamburg Borough	1,160	1,116	1,305	1,532	1,820	1,832	2,566	3,105
Hampton Township	581	611	668	1,174	2,091	3,916	4,438	4,943
Hardyston Township	946	1,034	1,279	2,206	3,499	4,553	5,275	6,171
Hopatcong Borough	534	660	1,173	3,391	9,052	15,531	15,586	15,888
Lafayette Township	735	803	836	1,100	1,202	1,614	1,902	2,300
Montague Township	581	621	602	879	1,131	2,066	2,832	3,412
Newton Town	5,401	5,533	5,781	6,563	7,297	7,748	7,521	8,244
Ogdensburg Borough	1,138	1,165	1,169	1,212	2,222	2,737	2,722	2,638
Sandyston Township	610	651	829	1,019	1,303	1,485	1,732	1,825
Sparta Township	1,316	1,729	3,021	6,717	10,819	13,333	15,157	18,080
Stanhope Borough	1,089	1,100	1,351	1,814	3,040	3,638	3,393	3,584
Stillwater Township	706	679	816	1,339	2,158	3,887	4,253	4,267
Sussex Borough	1,415	1,478	1,541	1,656	2,038	2,418	2,201	2,145
Vernon Township	1,279	1,407	1,548	2,155	6,059	16,302	21,211	24,686
Walpack Township	178	207	204	248	384	150	67	41
Wantage Township	2,075	2,376	2,543	3,308	4,329	7,268	9,487	10,387
TOTAL	27,830	29,632	34,423	49,255	77,528	116,119	130,943	144,166
GROWTH RATE**		6.5%	16.2%	43.1%	57.4%	49.8%	12.8%	10.1%
** - Population increase over previous 10-year period								
<i>Sources: Workforce New Jersey Public Information Network website; American Factfinder website</i>								

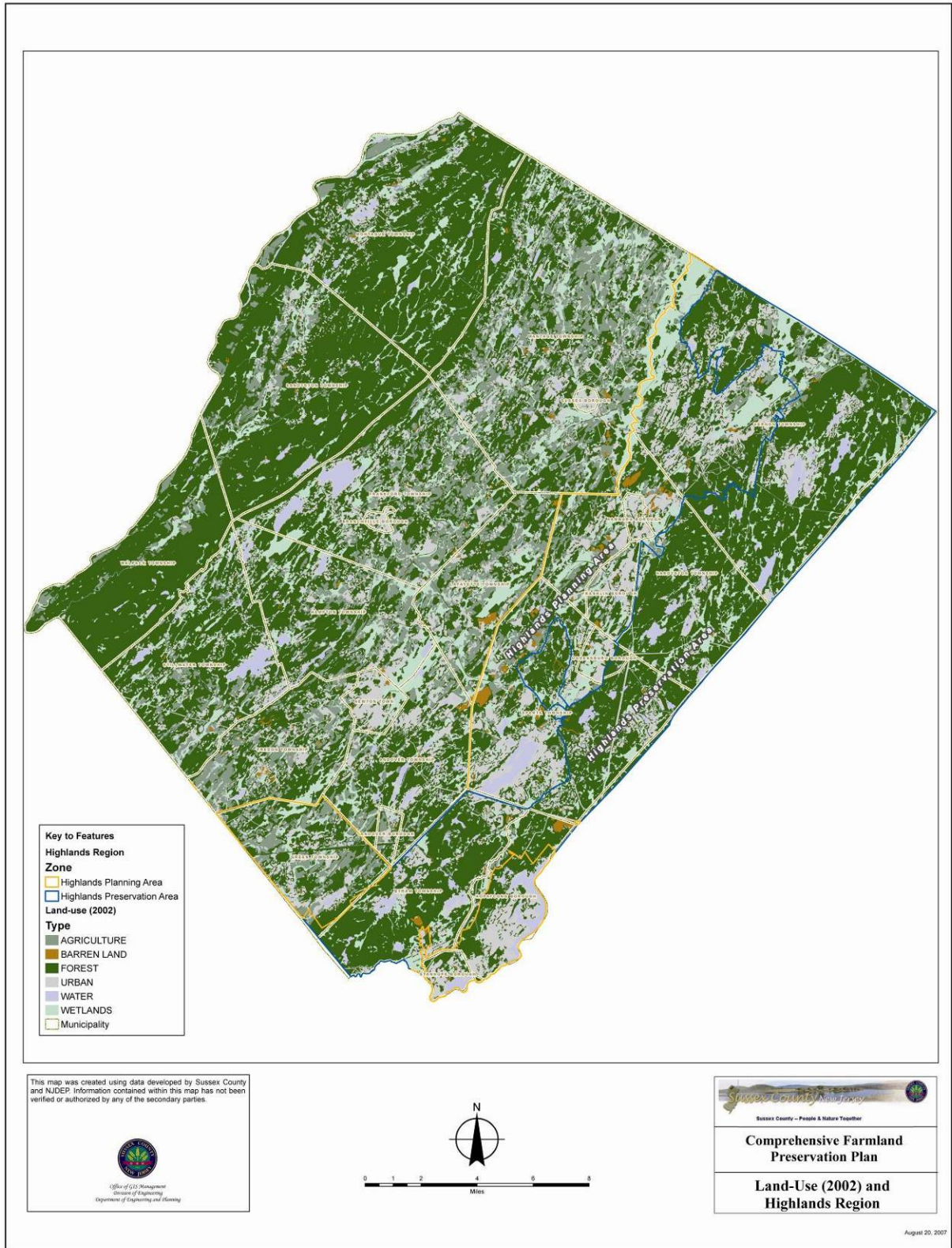
Today, Sussex County contains a diversity of rural, urban, and suburban areas. The Kittatinny and Upper Delaware Valleys are still predominately rural with a multitude of development centers that dot the agricultural landscape. These areas range from large regional centers such as Newton to small villages, such as Hainesville in Sandyston Township. Suburbanized areas of Sussex County remain concentrated in its eastern municipalities. Here, residential development tends to be evenly spread throughout the landscape while commercial and office areas are located next to arterial roads such as Routes 206, 15, 94, and 23. Large areas of forested land associated with the Highlands Ridgeline (and afforded significant protections through the Highlands Act) are the most substantial undeveloped areas in eastern Sussex County. The following *Land Cover* charts display the breakdown of these land uses in Sussex County as of 2001. (*Center for Remote Sensing and Spatial Analysis*)⁵



Land Value and Development Trends

Although the pace of development has slowed in recent years, Sussex County continues to lose natural and agricultural lands. The Center for Remote Sensing and Spatial Analysis at Rutgers University reports that 7,275 acres were converted to urban and barren land uses between 1995 and 2000. Roughly 4,100 of these newly urbanized acres had been forested while approximately 1,800 acres had been used for agriculture. The vast majority of these lands became residential subdivisions or transitional areas. (*Center for Remote Sensing and Spatial Analysis*) Prior to this time, inland wetlands were the most commonly developed areas (see *Land Cover Trend* chart below). (This chart also accounts for formerly developed and barren land that is now occupied by undeveloped land uses.) The 2002 *Land Use/Land Cover* map on the following page shows an aerial interpretation of Sussex County’s land uses as well as the Highlands Regional and Preservation Area boundaries.





Source: Sussex County Division of Planning

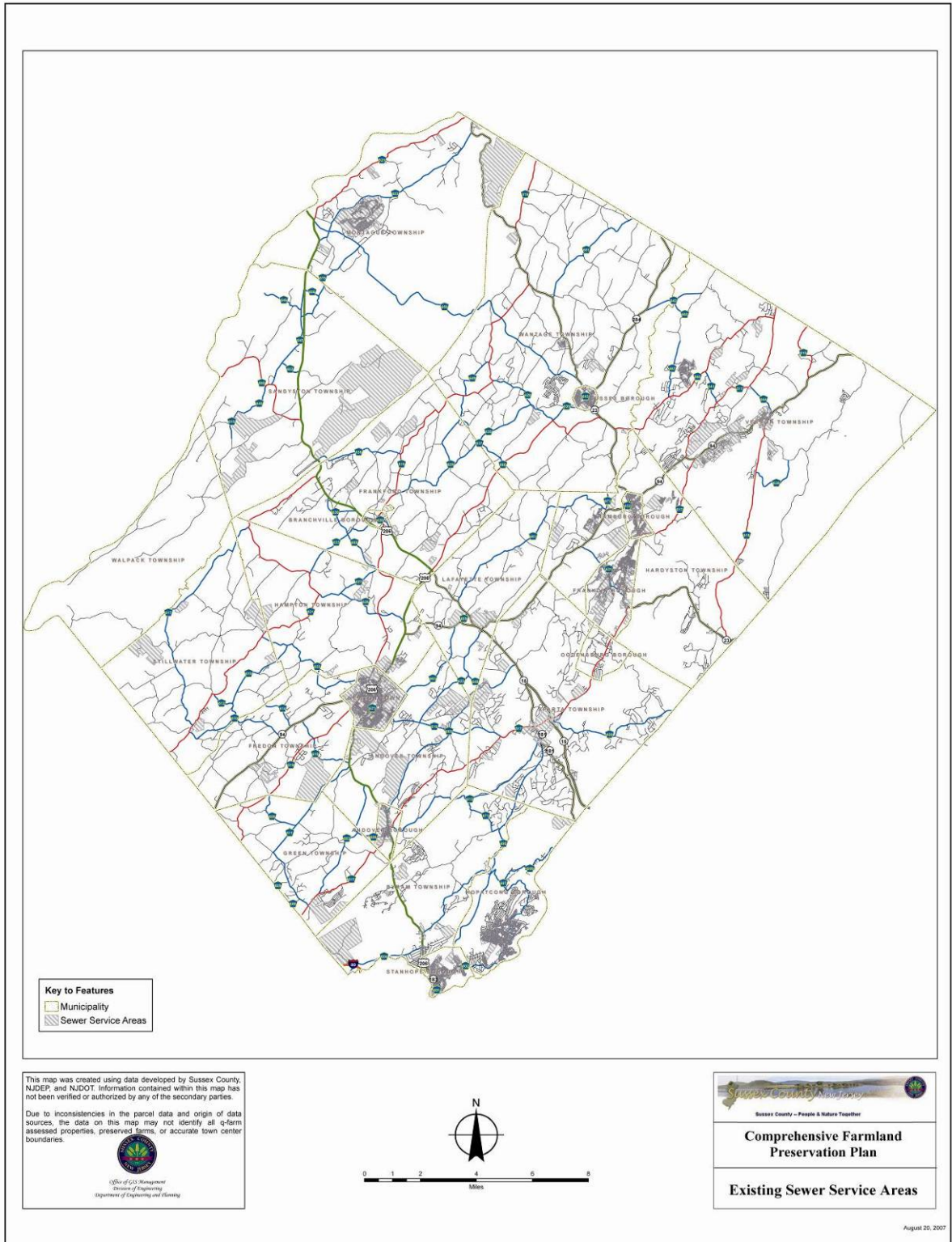
Development pressures in Sussex County intensified throughout the Kittatinny Valley after the Highlands Act imposed heightened development restrictions over many areas in eastern parts of the County. Many new developments have been proposed on former agricultural lands from Wantage to Andover. Farmland here is particularly attractive to developers because it tends to be clear of significant obstructions and is generally more flat than surrounding lands. Unfortunately, this land is usually the best farmland. Expanding development in the Kittatinny Valley – the heart of Sussex County’s agricultural industry – limits the effectiveness of the County’s substantial farmland preservation efforts there.

Public Infrastructure – Sewer and Water Service Areas

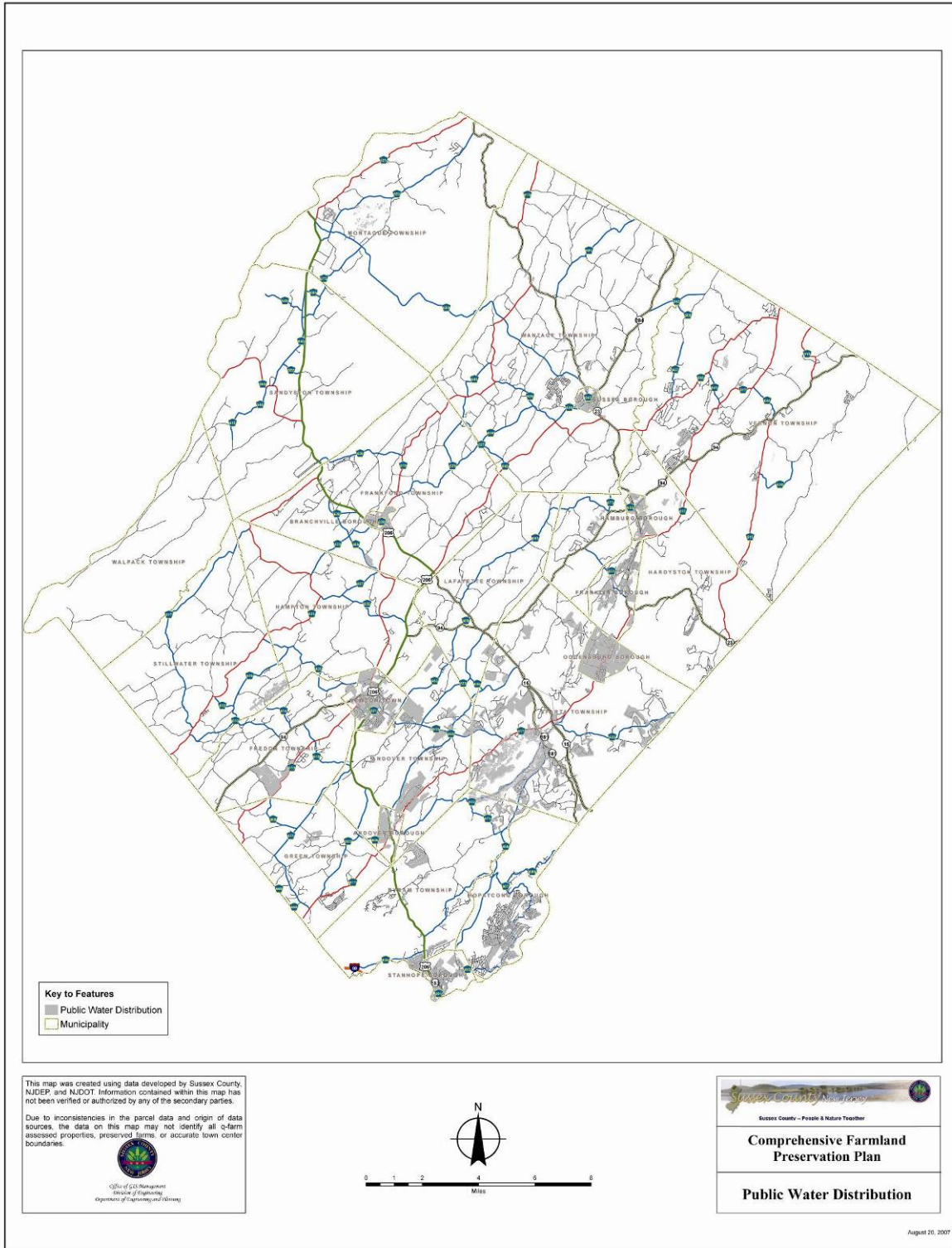
There are three publicly operated sewer treatment agencies in Sussex County. The Sussex County Municipal Utilities Authority (SCMUA) operates the “Upper Wallkill Valley Water Pollution Control Plant” in Hardyston Township. Its existing service area extends into Franklin, Hamburg, Hardyston, Vernon, Sussex, Wantage, and Sparta. Currently, the SCMUA’s coverage area uses roughly 2 million gallons per day (gpd) of the plant’s total permitted flow of 3.265 million gpd (see *Sussex County ADA* map). The SCMUA also operates other many smaller wastewater facilities in the County, including the Hampton Commons facility in Hampton Township. Each municipality in the sewer service area has an allocation for their use, and excess allocation may be transferred to another municipality upon mutual agreement and amendment to the County’s Wastewater Management Plan. Marginal increases to the SCMUA’s service areas are expected in the near future throughout the County. (*2007 Sussex County Wastewater Management Plan*)⁶

The Musconetcong Sewer Authority (MSA) owns and operates a wastewater treatment plant in Morris County with a permitted discharge of 5.9 million gpd. Its sewer service area extends into Stanhope, Byram, and Hopatcong as well as some towns in northwestern Morris County. Significant expansions to the MSA’s service area are planned within Hopatcong and Byram in the near future. (*2007 Sussex County Wastewater Management Plan*) The Town of Newton owns and operates its own wastewater treatment plant that currently operates at roughly 70% capacity of its 1.4 million gpd allocation. There are also smaller package treatment plants located throughout Sussex County that service schools, commercial areas, and industrial sites, which typically process less than 20,000 gpd. (*2007 Sussex County Wastewater Management Plan*) A map showing the *existing sewer service areas* in Sussex County is provided on the following page.

More than 90% of Sussex County’s residents rely upon local groundwater as their sole source of drinking water. (*2003 Sussex County Open Space Plan*)⁷ Private wells that tap underlying aquifers are these residents’ primary supplies of water. Areas that are serviced by public water systems and/or private water companies also receive most of their water from local wells. (see *Public Water Distribution* map on page 3-8)



Source: Sussex County Division of Planning



Source: Sussex County Division of Planning

Surface waters in Sussex County are primarily recreational, but the following surface water bodies are used for potable water supply purposes:

- Morris Lake, in Sparta – used by Newton;
- Lake Rutherford, in Wantage – used by Sussex Borough;
- Branchville Reservoir, in Frankford – used by Branchville;
- Franklin Pond, in Franklin – used by Franklin as an emergency water supply;
- Lake Hopatcong - an emergency water supply for several towns;
- Canistear Reservoir, in Vernon – contained on Newark water supply lands; and
- Heaters Pond, in Ogdensburg – an emergency water supply.

(2007 Sussex County Wastewater Management Plan)

Publicly supplied sewer and water service areas provide some of the most appropriate lands for development. Developments in sewer service areas can be easily connected to the existing wastewater system, which helps prevent contamination of the County's aquifers and drinking water reserves from leaking septic tanks. Restricting development to areas with existing infrastructure also conserves the rural environs that surround them. The table on *page 3-13* of this Plan lists the designated centers in Sussex County, where available infrastructure and development potential are both present. *(2007 Sussex County Strategic Growth Study)*⁸

Land Use Planning Initiatives

Sussex County has been the subject of extensive land use planning efforts. Through the *State Development and Redevelopment Plan* and the *Highlands Regional Master Plan*, the New Jersey State government has recognized Sussex County as the location of excellent agricultural and natural resource lands. The County incorporates many of the State's policy directives from these plans into its own *2007 Strategic Growth Study*, which was formally endorsed by the New Jersey Office of Smart Growth in 2007. Many of the County's municipalities also conduct their own master planning efforts and participate in the State's Cross-acceptance process.

State Development and Redevelopment Plan

The New Jersey State Planning Commission has written and updated a *State Development and Redevelopment Plan* (SDRP)⁹ that outlines general policy objectives concerning land use and future development in the State. The SDRP identifies five Planning Areas within the State where different sets of goals and guidelines are considered appropriate to determine development activities. These Planning Areas are labeled as Metropolitan, Suburban, Fringe, Rural, and Environmentally Sensitive lands. The SDRP also identifies Centers where future development activities are most appropriate and where they will be actively promoted. Centers are categorized as Urban Centers, Regional Centers, Towns, Villages, and Hamlets corresponding to criteria including size, regional location, population, residential and employment densities, and available housing stock. The combination of Planning Areas and Designated Centers establishes a comprehensive framework for pursuing land use and development regulation throughout New Jersey (see *State Development and Redevelopment Plan Policy Map – Sussex County on page 3-11*).

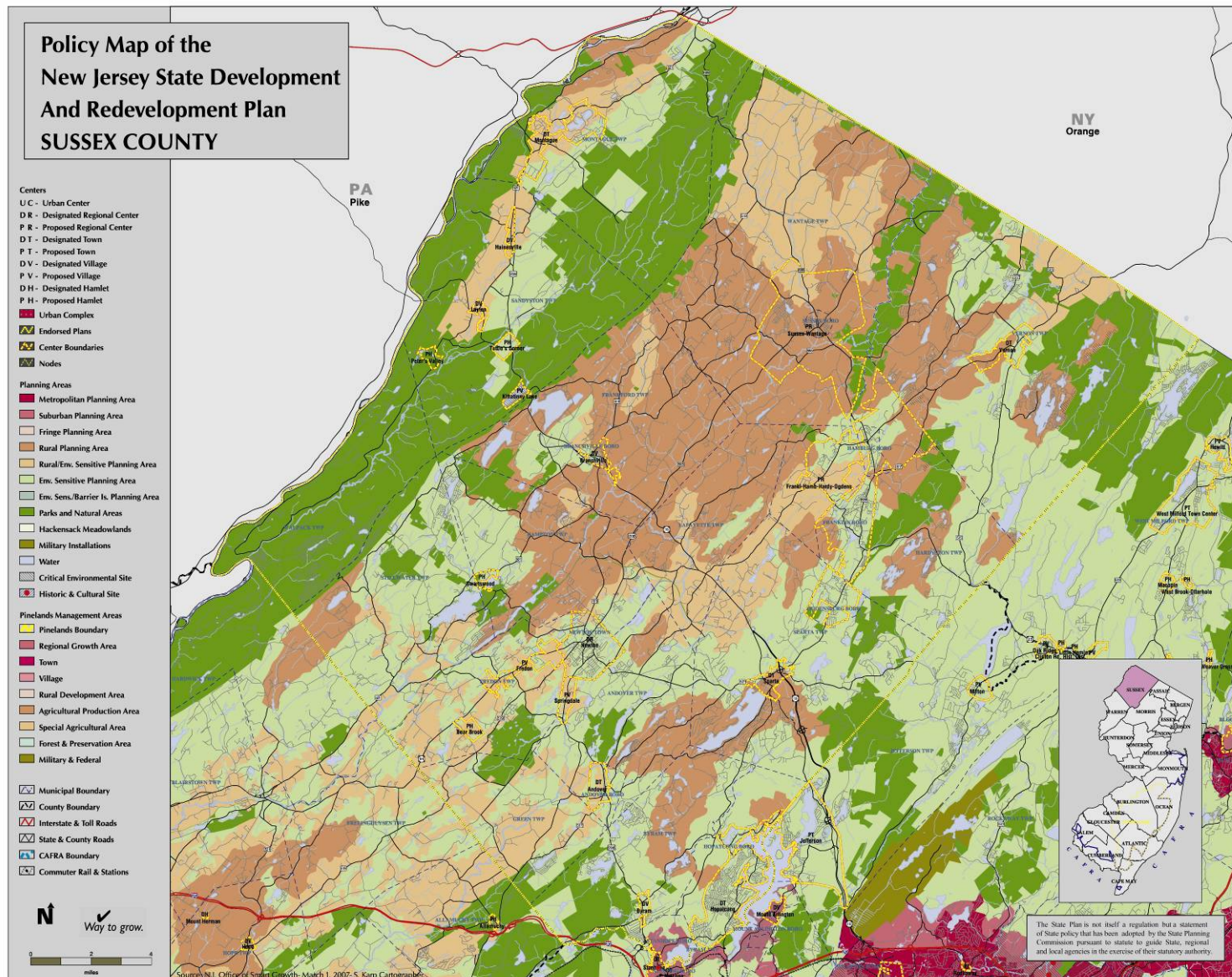
Metropolitan Planning Areas are comprised of the highly developed regions in the state. The goals in this planning area revolve around revitalizing existing cities and towns by encouraging compact growth and redevelopment. The Metropolitan Planning Area is identified as the most appropriate location for future development in New Jersey. Sussex County does not contain any land within the Metropolitan Planning Area.

Suburban Planning Areas are called upon to support most of the new development that will occur in New Jersey while maintaining the character of existing communities there. Growth in suburban town centers is especially encouraged in order to help protect and preserve the natural resources that exist in these areas. The Suburban Planning Area is meant to complement metropolitan areas, and is most commonly found outside heavily urban areas. Sussex County has one small pocket of Suburban Planning Area land along its southern border in Stanhope Borough.

Fringe Planning Areas serve as an appropriate interface between suburban and rural areas. They are not as built-up as metropolitan and suburban areas, but may support more development activity than nearby rural lands. Fringe Areas are buffers between these land uses. Consequently, they are often the frontlines of urban sprawl, and must be carefully planned to ensure that development is appropriately restricted to existing urbanized areas. Sussex County does not contain any land designated as Fringe Planning Area.

Rural Planning Areas are suitable for the preservation of large contiguous areas of farmland. Sustaining the agricultural industry while confining development and redevelopment within existing towns are included among the policy objectives applicable to these areas. Much of the land within the Rural Planning Area supports environmentally-sensitive resources such as underground aquifers or critical wildlife habitats. Lands within the Rural and Rural-Environmentally Sensitive Planning Area are widespread throughout Sussex County. The Rural Planning Area is concentrated mostly within the Kittatinny Valley with another significant pocket to the west of Andover Borough. Rural-Environmentally Sensitive Planning Area lands are scattered throughout the County with notable concentrations in the Upper Delaware Valley and the eastern, central, and western portions of the Kittatinny Valley.

Environmentally Sensitive Planning Areas contain lands where natural resource preservation should be the primary planning consideration. Development is to be minimized or constrained around existing centers while large contiguous natural areas are to be preserved as open space. Large areas of Sussex County fall within the Environmentally Sensitive Planning Area. Most of this area is located along the Highlands Ridge that runs between Vernon and Byram Townships or the Kittatinny Ridge near the County's northern border. There is a significant acreage of Environmentally-Sensitive Planning Area land scattered among the Rural Planning Area in Stillwater, Green, Fredon, Andover, and Hampton Townships as well.



Centers are defined by the New Jersey State Planning Commission as “compact forms of development that, compared to sprawl development, consume less land, deplete fewer natural resources and are more efficient in the delivery of public services.” (*State Development and Redevelopment Plan*) Centers become designated after the municipalities or counties that encompass them submit plan endorsement applications to the State Planning Commission (Office of Smart Growth) that are subsequently approved. Proposed Centers are currently in the process of having their plans reviewed by the State. A list of the *Designated Centers in Sussex County* is found on the following page.

There are various types of center designations. Each different center category corresponds to the characteristics of the areas being considered. Different policies concerning land use and the promotion of future development opportunities are recommended in each type of center. *Urban Centers* are the most intensively utilized areas in the State. They serve as concentrations for corporate headquarters, industry, residential areas, and culture. Sussex County contains no Designated, Proposed, or Potential Urban Centers.

Regional Centers are smaller urban areas that provide the various commercial, cultural and residential needs of a geographically-defined region. Regional Centers are generally less than 10 square miles, but are sufficiently active enough to support public transportation. Newton is the only Designated or Proposed Regional Center in Sussex County.

Towns are smaller than Urban and Regional Centers, usually less than two square miles in size, that serve as a local concentrations of commerce and government activity. They support residential neighborhoods and offer access to local commercial goods and services. Sussex County contains six Designated Town Centers including Andover, Hopatcong, Montague, Sparta, Stanhope, and Vernon.

Villages are residential neighborhoods that have access to some local public and commercial facilities. Villages are small, occupying less than one square mile. There are four Designated Villages in Sussex County – Branchville, Byram, Hainesville (Sandyston Township), and Layton (Sandyston Township). Tri-State (Montague Township) is the County’s only proposed Village.

Hamlets are the smallest type of Center. They are small residential communities between 10 and 100 acres that are oriented around a local focal point, such as a house of worship or general store. The recommended size of a hamlet varies depending on its accessibility to community wastewater systems. Sussex County contains no designated Hamlets.

Sussex County's Centers

Source: 2007 Sussex County Strategic Growth Study

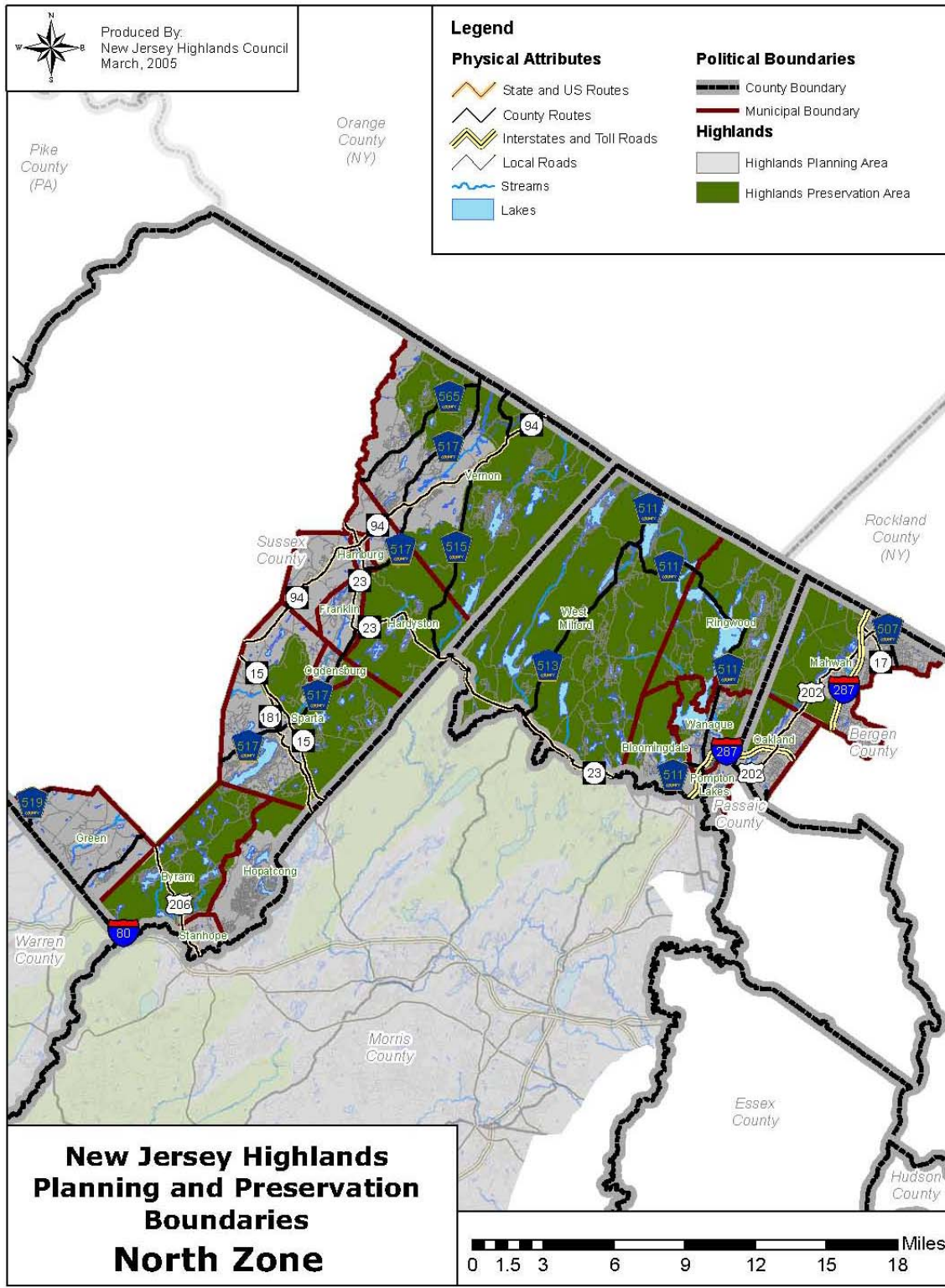
Municipality	Center	Type	Designation Status	Sewer Service
Andover Borough	Andover	Town	Designated	Existing
Branchville Borough	Branchville	Village	Designated	Proposed
Byram Township	Byram	Village	Designated	Existing & Proposed
Hopatcong Borough	Hopatcong	Town	Designated	Existing & Proposed
Montague Township	Montague	Town	Designated	Existing
Newton Town	Newton	Regional	Designated	Existing
Sandyston Township	Hainesville	Village	Designated	None
Sandyston Township	Layton	Village	Designated	None
Sparta Township	Sparta	Town	Designated	Existing
Stanhope Borough	Stanhope	Town	Designated	Existing
Vernon Township	Vernon	Town	Designated	Existing

Highlands Regional Master Plan

The New Jersey State Legislature enacted the Highlands Water Protection and Planning Act on August 10, 2004. In an effort to ensure the integrity of northern New Jersey's drinking water resources, the Highlands Act imposes strict land use controls over large parts of the 88-municipality region, known as the Highlands Preservation Zone. Areas within the Preservation Zone are subject to heightened restrictions on development, water use, and activities that affect water quality or environmentally sensitive lands. Among the most prohibitive Preservation Area rules is the enforcement of State-mandated development densities of 25 acres per unit on open fields and 88 acres per unit on wooded parcels. The Act also expands mandatory buffers around the region's streams and water bodies, sets limits on impervious coverage for individual properties, and requires master plan conformance from Preservation Area municipalities, among other criteria.

Significant portions of Sussex County fall within the Highlands region. Over 70,000 acres in eight Sussex County towns fall within the Highlands Preservation Zone, and are subject to the restrictions that apply there (see *Highlands Acreage* chart below). The Preservation Area in Sussex County roughly extends from the Highlands Ridgeline along the County's eastern border into Vernon, Hardyston, Sparta, and Byram Townships. Developed areas in Stanhope and Hopatcong Boroughs are left in the Planning Zone while natural resource areas in western Vernon and Sparta Townships are included within the Preservation Zone (see *Highlands* map below).

The Highlands Council – the regional planning body charged with implementing the Highlands Act – has established the preservation of farmland and the industry of farming as one of its principal objectives. To this end, the *Highlands Draft Regional Master Plan* identifies an Agricultural Resource Area that will receive the bulk of future funding and institutional support from the Highlands Council. The Agricultural Resource Area encompasses areas that contain contiguous farmbelts and quality agricultural soils. Large parts of Green, Sparta, Hardyston, and Vernon Townships fall within the Agricultural Resource Area. (*Highlands Draft Regional Master Plan*)



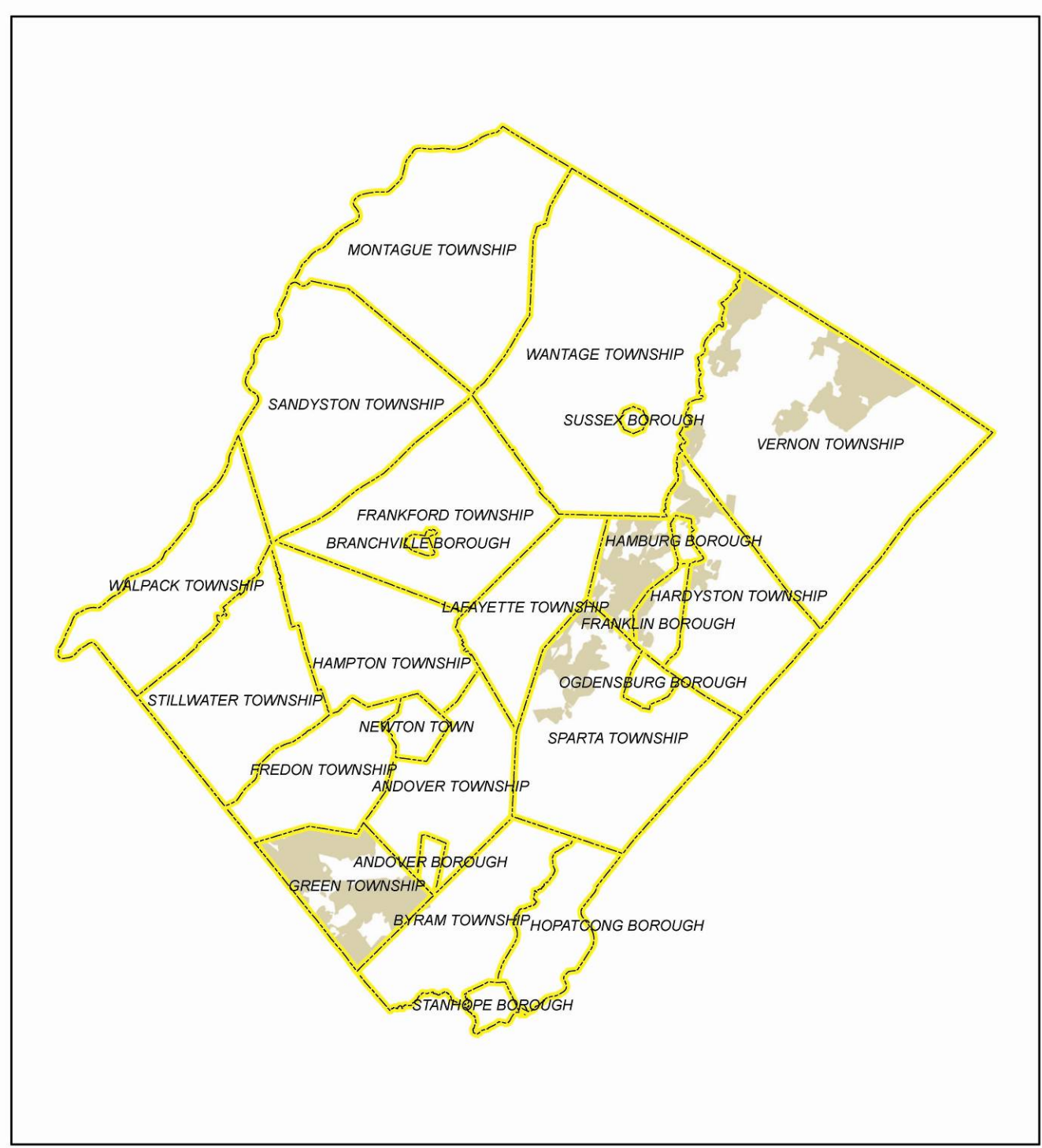
Source: New Jersey Highlands Council Website: www.highlands.state.nj.us . Accessed July 2007

HIGHLANDS ACREAGE			
<i>MUNICIPALITY</i>	<i>PLANNING AREA</i>	<i>PRESERVATION AREA</i>	<i>TOTAL</i>
Byram Township	233	14,272	14,505
Franklin Borough	2,843	0	2,843
Green Township	10,198	281	10,478
Hamburg Borough	753	0	753
Hardyston Township	8,254	12,557	20,811
Hopatcong Borough	5,346	2,607	7,953
Ogdensburg Borough	1,232	199	1,431
Sparta Township	13,359	11,538	24,896
Stanhope Borough	1,399	5	1,404
Vernon Township	15,470	29,319	44,789
Total	59,087	70,778	129,864
<i>Source: Highlands Draft Regional Master Plan</i>			

The Highlands Council also identifies Agricultural Priority Areas – subsets of the larger Agricultural Resource Area – that are particularly well-suited to agricultural production. Criteria used by the Highlands Council to delineate these areas include soil quality, tillable acreage, buffers, development potential, local commitment, contiguity with other farm parcels, and size. (*Highlands Sustainable Agriculture Technical Report*)¹⁰ Clusters of High Priority Agricultural Areas are found in Vernon, Sparta, and Green Townships. (*Highlands Draft Regional Master Plan*, see table below and *Agricultural Priority Areas Map* on following page).

Agriculture Priority Areas by Municipality	
Municipality	Acreage
ANDOVER BOROUGH	0
ANDOVER TOWNSHIP	0
BYRAM TOWNSHIP	55
FRANKLIN BOROUGH	584
GREEN TOWNSHIP	7,325
HAMBURG BOROUGH	124
HARDYSTON TOWNSHIP	5,147
SPARTA TOWNSHIP	2,630
VERNON TOWNSHIP	7,111
<i>Source: Highlands Council</i>	

As the *Highlands Regional Master Plan* is still in draft form, the Sussex CADB feels that it would be inappropriate to comment on the effect of the Plan on agricultural issues in Sussex County. This *Comprehensive Farmland Preservation Plan Update* addresses agricultural issues for the entire county, both in and outside of the Highlands. On the following pages are tables detailing the acreage, by municipality, of land in each of the Land Use Capability Zones and acres, by municipality, of the total farm assessed property and both the preserved and unpreserved farmland.



This map was created using data developed by Sussex County and NJ Highlands Council. Information contained within this map has not been verified or authorized by any of the secondary parties.

Due to inconsistencies in the parcel data and origin of data sources, the data on this map may not identify all q-farm assessed properties, preserved farms, or accurate town center boundaries.



Office of GIS Management
 Division of Information Management
 Department of Central & Shared Services



Comprehensive Farmland Preservation Plan

Agriculture Priority Areas
23,038 acres

September 24, 2007

Land Use Capability Zones by Municipality			
	Acreage within Conservation Zone	Acreage within Protection Zone	Acreage within Existing Community Zone
ANDOVER BOROUGH	0.39	0.41	-
ANDOVER TOWNSHIP	0.48	5.66	0.40
BYRAM TOWNSHIP	-	12,737.91	1,764.53
FRANKLIN BOROUGH	563.71	858.99	1,420.11
GREEN TOWNSHIP	5,742.18	4,063.92	667.06
HAMBURG BOROUGH	68.87	89.52	594.66
HARDYSTON TOWNSHIP	3,773.49	14,962.64	2,069.52
HOPATCONG BOROUGH	-	4,651.86	3,301.47
OGDENSBURG BOROUGH	-	1,030.04	401.09
SPARTA TOWNSHIP	1,879.74	19,591.00	3,419.37
STANHOPE BOROUGH	-	431.60	972.23
VERNON TOWNSHIP	5,951.70	33,907.35	4,916.21

Source: Highlands Council

QFarms by Municipality			
Municipality	Total Acreage of Qfarms in Municipality	Acreage of Preserved Farms	Acreage of Unpreserved QFarms
ANDOVER BOROUGH	341.74	-	341.74
ANDOVER TOWNSHIP	4,925.49	221.67	4,703.82
BRANCHVILLE BOROUGH	15.02	-	15.02
BYRAM TOWNSHIP	4,221.31	-	4,221.31
FRANKFORD TOWNSHIP	10,709.47	735.07	9,974.40
FRANKLIN BOROUGH	489.20	-	489.20
FREDON TOWNSHIP	5,466.26	101.28	5,364.98
GREEN TOWNSHIP	5,504.87	523.56	4,981.31
HAMBURG BOROUGH	12.78	-	12.78
HAMPTON TOWNSHIP	7,056.64	686.49	6,370.15
HARDYSTON TOWNSHIP	6,985.52	-	6,985.52
HOPATCONG BOROUGH	1,130.01	-	1,130.01
LAFAYETTE TOWNSHIP	6,449.15	1,231.80	5,217.35
MONTAGUE TOWNSHIP	2,848.65	515.31	2,333.34
NEWTON TOWN	110.17	-	110.17
OGDENSBURG BOROUGH	101.38	-	101.38
SANDYSTON TOWNSHIP	4,638.99	256.18	4,382.81
SPARTA TOWNSHIP	2,417.02	67.56	2,349.46
STANHOPE BOROUGH	166.93	-	166.93
STILLWATER TOWNSHIP	7,823.77	322.60	7,501.17
SUSSEX BOROUGH	34.05	-	34.05
VERNON TOWNSHIP	6,030.24	334.65	5,695.59
WALPACK TOWNSHIP	92.41	-	92.41
WANTAGE TOWNSHIP	24,289.53	4,884.13	19,405.40

Source: Sussex County GIS Office, April 2008

2007 Sussex County Strategic Growth Study

The *2007 Sussex County Strategic Growth Study* was endorsed by the New Jersey State Planning Commission in May 2007. It recommends specific land use policies for the County to follow and establishes consistency between these policies and the more general policies outlined in the *State Development and Redevelopment Plan*. The *Strategic Growth Study* identifies six different Sussex County Landscapes in which the Plan's policies will be differentially applied: Rural/Agricultural, Highlands, Parks/Wildlife Areas, Lake Communities, Job Centers, and Town Centers. For instance, housing construction is actively encouraged in Town Centers, discouraged in the Highlands, and accepted in low-density clusters within the Rural/Agricultural landscape. The following are the land use policies recommended by the Strategic Growth Plan for the Agricultural/Rural landscape:

- Provide guidelines for municipal use in redirecting development from the environs to centers;
- Encourage the establishment and expansion of mass transit options, tied to existing and proposed centers;
- Continue the County contribution to the bi-state effort to reactivate the Lackawanna Cut-off and New Jersey efforts to extend and add passenger service to the New York, Susquehanna and Western railroad;
- Emphasize the multi-state importance of small scale aviation facilities;
- Continue to refine and focus the farmland preservation and open space programs in the County;
- Assist landowners and coordinate with the Natural Resources Conservation Service, the Resource Conservation and Development Program, County Board of Agriculture and County Agriculture Development Board to publicize the numerous agriculture support programs of the State;
- Avoid slopes in excess of twenty-five percent wherever possible and approach the disturbance of lesser slopes with care; and
- Determine density based upon both soil characteristics and available water supply as determined through on-site groundwater hydrology. The soils analysis (modified nitrate dilution model @ 5.2mg/l), suggests that an *average* acceptable density for residential construction is three acres per unit, and that 100,000 square feet of commercial space would require a land area of not less than 150 acres. (*2007 Sussex County Strategic Growth Study*)

Municipal Planning

Municipalities in Sussex County have utilized a number of planning tools that seek to preserve agricultural and open space lands. Some towns have opted to implement cluster zoning ordinances that require or “strongly encourage” constraining development on a portion of a parcel being developed. For example, if a 10-acre parcel is approved for the development of 10 homes, a cluster zoning scheme would require the developer to set aside five acres for agriculture or open space while building up to ten homes on half-acre lots instead of one-acre lots. The land that is set aside through clustering should be the most valuable agricultural or natural resource areas. Byram Township is an example of one

Sussex County municipality that offers flexible minimum lot size requirements in order to accommodate clustering. (*Code of Township of Byram, New Jersey, 240:10*)

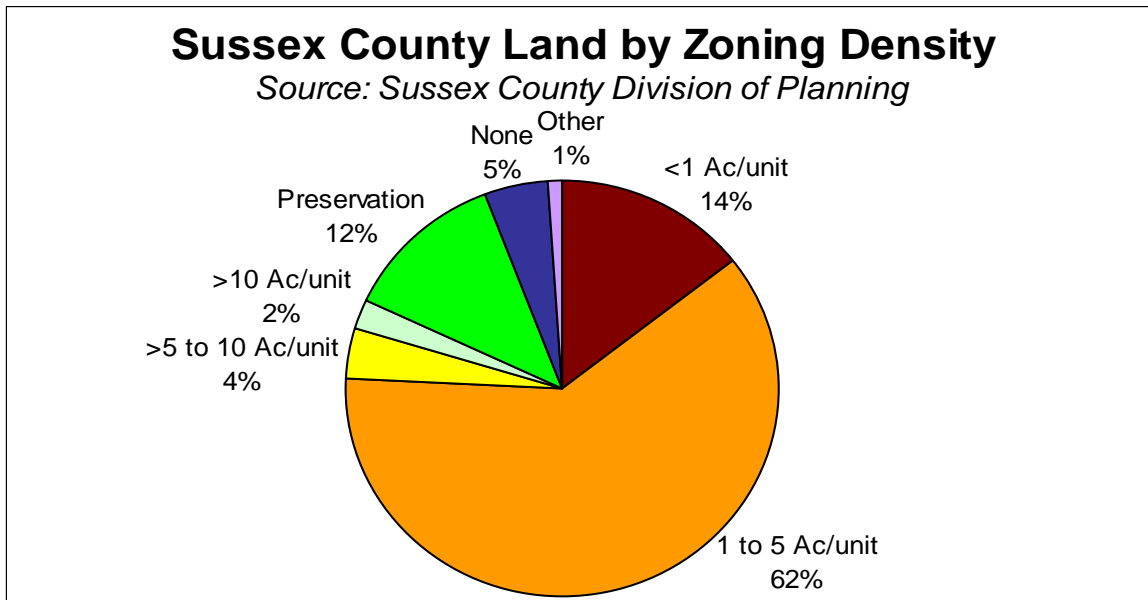
Another planning tool employed in Sussex County is the designation of Open Space and Minimum Impact Development Districts (MIDD's) where the conservation of natural resources and rural environs is given paramount consideration. These zones usually require developers to provide substantial buffers around environmentally-sensitive areas. Some require extensive studies that document important natural features, such as stone rows and wildlife habitats, with plans for their conservation, as in Hardyston Township. (*Code of the Township of Hardyston, New Jersey, 185:23*) Open Space zones and MIDD's normally incorporate some sort of clustering provision as well.

Municipal Zoning

The majority of land in Sussex County is zoned at densities between three and seven acres per development unit. (see *Municipal Zoning* chart below) Zoning densities of greater than one unit per acre tend to be concentrated within towns that have existing or proposed centers such as Byram, Hardyston, and Vernon. Large lot zoning of greater than ten acres per development unit exists in many municipalities, but only Stillwater uses it on most of the land in their municipality. Conservation zoning districts are utilized in six Sussex County towns to designate preserved parkland, such as High Point State Park in Montague. This zoning scheme, where most of the County's land is zoned between three and seven acres per development unit, encourages growth of the sprawling, suburban landscape that Sussex County is trying to prevent. A zoning scheme that is more consistent with the centers-based land use pattern that the County favors would have more land designated for high density uses (more than 1 unit per acre) near development centers and lower density uses outside the centers. Mixed-use, or "other", zoning standards within centers may help encourage attractive and economically feasible land uses there. Intermediate zoning, between one and ten acres per development unit, is appropriate for some TDR receiving areas so that additional development credits can be applied to these lands. Also, conservation zoning should be applied to town recreation and resource areas as well as permanent parklands.

Sussex County Municipal Zoning Densities (Acres)								
<i>Municipality</i>	<i><1 Ac/unit</i>	<i>1 to 5 Ac/unit</i>	<i>>5 to 10 Ac/unit</i>	<i>>10 Ac/unit</i>	<i>Conser- vation</i>	<i>None*</i>	<i>Other^</i>	<i>TOTAL</i>
Andover Borough	201	638	0	0	0	0	0	839
Andover Township	875	11,489	0	538	0	0	0	12,902
Branchville Borough	400	0	0	0	0	0	0	400
Byram Township	6,679	7,223	0	423	0	0	0	14,325
Frankford Township	289	21,556	0	680	0	0	0	22,525
Franklin Borough	756	1,829	0	365	0	0	0	2,950
Fredon Township	166	9,655	0	0	1,421	0	287	11,529
Green Township	0	9,778	807	0	0	0	0	10,585
Hamburg Borough	423	279	0	0	0	37	0	739

Sussex County Municipal Zoning Densities (Acres)								
<i>Municipality</i>	<i><1 Ac/unit</i>	<i>1 to 5 Ac/unit</i>	<i>>5 to 10 Ac/unit</i>	<i>>10 Ac/unit</i>	<i>Conser- vation</i>	<i>None*</i>	<i>Other^</i>	<i>TOTAL</i>
Hampton Township	69	15,932	163	0	0	0	0	16,164
Hardyston Township	16,663	2,091	0	0	0	0	2,181	20,935
Hopatcong Borough	3,327	4,501	0	0	0	0	0	7,828
Lafayette Township	0	11,798	0	0	0	0	0	11,798
Montague Township	811	10,898	0	0	17,049	0	0	28,758
Newton Town	1,674	447	0	0	0	0	42	2,163
Ogdensburg Borough	781	417	0	56	226	0	0	1,480
Sandyston Township	2,037	24,141	0	0	0	642	0	26,820
Sparta Township	2,314	16,761	193	4,645	0	0	0	23,913
Stanhope Borough	777	685	0	0	0	0	0	1,462
Stillwater Township	439	6,162	10,155	266	1,142	74	0	18,238
Sussex Borough	289	78	0	0	20	0	16	403
Vernon Township	7,433	13,932	2,197	247	21,310	0	607	45,726
Walpack Township	0	0	0	0	0	15,881	0	15,881
Wantage Township	2,946	39,246	0	496	0	0	379	43,067
TOTAL	49,349	209,536	13,515	7,716	41,168	16,634	3,512	341,430
* - No zoning density requirements indicated					^ - Mixed or planned unit dev. densities			
<i>Source: Sussex County Planning Division</i>								



Cluster zoning allows the reconfiguration of a subdivision from uniform lot areas incorporating all portions of a property into smaller lots for private use and reservation of one or more lots for open space. There are few disadvantages to its use as it involves only one property and permits reasonable use of the land while conserving areas of particular concern/interest to the municipality.

Non-contiguous cluster zoning has the potential to be more effective than standard cluster zoning as it permits complete preservation of one or more parcels of land in favor of concentrated development on one or more others. Its downside is the degree of coordination needed between varied property owners if all properties are not in common ownership.

Lot size averaging is a highly limited cluster-like option with the spectrum of alternative lot sizes typically constrained within a narrow range.

Transfer of development rights (TDR) is an option with the greatest potential for wholesale land preservation at no cost to the municipal, county and/or state government(s). The land development pattern resulting from use of this technique is focused, center-based development with substantial areas of protected environs. The downside of this technique is the extensive and expensive studies needed, including plan endorsement from the State Planning Commission. It has been successfully used in very limited areas of Burlington County although it is now an option available to all counties in the state. It has been successfully employed in other states.

Mandatory versus voluntary options would really only apply to cluster zoning and TDR. Where the market or incentives in the municipal code are sufficient to motivate a developer to voluntarily cluster or use TDR, it is preferable from a community relations standpoint to permit the option to be voluntary. Where the issue is critical or market conditions and ordinance incentives prove insufficient, mandatory use of the option is needed to accomplish the objectives of focusing growth in areas considered most appropriate by the municipality.

In Sussex County, the use of cluster development has been sporadic, although it is being considered more frequently as experience is gained. The County is not aware of any instances of non-contiguous cluster or actual transfer of development rights being used in Sussex to date. In fact, TDR may not be used until a municipality has either received plan endorsement from the State Planning Commission or plan conformance from the Highlands Council. No municipalities in the County have received either of these certifications. As the State Planning Commission is requiring some form of environs protection in connection with establishment or expansion of centers, both non-contiguous zoning and TDR will be a near necessity for a municipality to receive plan endorsement.

All of these techniques serve as alternatives to finding monetary compensation for the purchase of development rights. As the eventual financial yield from a property is maintained or increased, the affected government is able, through zoning, to protect or increase wealth outside of any form of taxation. From the perspective of the Sussex CADB,

these techniques will be useful to leverage their efforts under existing programs to preserve farmland and farming.

Transfer of Development Rights

Transfer of Development Rights (TDR) is a planning tool that channels development into desirable locations without diminishing landowners' equity. TDR allows development rights to be separated from the land in TDR *sending areas* and transferred to parcels in a different location – TDR *receiving areas*. Sending areas are places where further development is inconsistent with the local landscape, such as natural resource lands or contiguous farm belts, while receiving areas are places where further development is consistent with local planning objectives, such as Towns and Boroughs.

By allowing the development rights of sending area lands to be exercised in a geographically different location, TDR preserves the economic value of land in sending areas without requiring that development take place there. Therefore, sending area land (where physical development may be legally precluded) can be sold at fair market values that are comparable to those in areas where development is still permitted. Sending area lands are thereby effectively preserved in an undeveloped state while sending area landowners retain the economic value of their full property rights.

The New Jersey State Transfer of Development Rights Act (*N.J.S.A. 40:55D-140*)¹¹ authorizes the transfer of development rights by municipalities and outlines what a town must do in order to adopt or amend a TDR ordinance. First, the municipality must prepare a Real Estate Market Analysis (REMA) that quantifies the development potential of the sending zone(s) and the capacity of the receiving zone(s) to accommodate additional development. It must then amend its master plan to include a Development Transfer Plan Element that outlines a mechanism for assigning development credits to areas in the sending zone and reapplying them to areas in the receiving zone. An updated Utility Service Plan and Capital Improvement Program for the receiving zone should be adopted as well. Finally, a town must receive approval from the State Planning Commission to adopt the TDR ordinance. (*N.J.S.A. 40:55D-140*)

There are many different transfer-of-development rights programs that may be instituted in Sussex County. One such program is the *intra-municipal* TDR in which sending and receiving areas are located within the same town. Intra-municipal TDR programs would be appropriate for the many Sussex County towns that have designated or proposed centers and large amounts of agricultural or natural resource lands such as Montague, Sandyston, Vernon, Lafayette, and Sparta.

Townships with large acreages of resource lands and proximity to existing centers in adjoining municipalities might be better served by *inter-municipal* TDR programs. In this case, sending areas are established in one municipality with receiving areas in another. Some form of tax-based revenue sharing is normally involved with these programs. Pairs of Sussex County municipalities where inter-municipal TDR programs may be appropriate are Wantage-Sussex Borough, Hampton-Newton, and Frankford-Branchville.

Regional TDR programs could also be instituted in Sussex County. These may operate throughout the County or at a higher level of regional government. The New Jersey Highlands Council is currently considering a regional TDR program that will be open to all Sussex County municipalities. Through the Highlands program, landowners within the Preservation Zone may sell the development rights on their lands at pre-Highlands Act prices to developers, who will then use them within designated receiving areas throughout the seven-county region. The municipalities containing these receiving areas will have the right to assess impact fees of up to \$15,000 per unit for all new development. They will also be able to apply for grants to offset the costs associated with amending their master plans and municipal ordinances.

In the future, the New Jersey TDR Bank will facilitate TDR activities Statewide. It plans to offer Planning Assistance Grants to municipalities looking to establish municipal TDR programs, and may provide funds for the purchase of development credits. The State TDR Bank will also provide financial banking on loans secured using development credits as collateral, and keep records of all development credit transfers within the State. The New Jersey Office of Smart Growth (OSG) also offers Smart Future Planning Grants to municipalities in order to help them plan for and implement TDR programs. Frankford Township is the only municipality in Sussex County that has taken advantage of these State programs. It has received an OSG Smart Future Grant of \$45,000 and a Planning Assistance Grant for \$40,000 to develop and implement an intra-municipal TDR program.

Summary of future trends

Sussex County is slowly seeing a shift to more development in centers. There is also more multi-family development rather than single-family homes on large lots. This shift will continue and more development is expected to occur in centers due to the *Sussex County Strategic Growth Plan* which was endorsed by the State Planning Commission. Additionally, the *Sussex County Wastewater Management Plan* is being updated to discourage sprawl in environs and promote growth in Centers with the designation of sewer service areas. The new NJDEP rules to be adopted in May 2008 will also add regulations for major subdivisions (of six or more lots) that will discourage large lot subdivisions.

See charts on the following pages for information on building permits by municipality.

Total Building Permits, by Municipality, for 2007		
Sussex County	Total Units	Single Family Units
Andover Borough	0	0
Andover Township	25	25
Branchville Borough	0	0
Byram Township	15	15
Frankford Township	19	19
Franklin Borough	10	10
Fredon Township	10	10
Green Township	32	32
Hamburg Borough	7	7
Hampton Township	5	5
Hardyston Township	12	12
Hopatcong Borough	18	18
Lafayette Township	4	4
Montague Township	27	27
Newton Town	0	0
Ogdensburg Borough	3	3
Sandyston Township	4	4
Sparta Township	78	54
Stanhope Borough	1	1
Stillwater Township	12	12
Sussex Borough	7	7
Vernon Township	28	28
Walpack Township	0	0
Wantage Township	48	33
Sussex County Total	365	326

(US Census Bureau¹²)

RESIDENTIAL BUILDING PERMITS AUTHORIZED 2000-2006

SUSSEX COUNTY									
MUNICIPALITY	TYPE	2000	2001	2002	2003	2004	2005	2006	Total
Andover Boro.	Total	0	1	0	0	2	0	0	3
	Single	0	1	0	0	2	0	0	3
	Multi	0	0	0	0	0	0	0	0
Andover Twp.	Total	49	43	34	24	22	31	37	240
	Single	49	43	34	24	22	31	37	240
	Multi	0	0	0	0	0	0	0	0
Branchville Boro.	Total	0	0	2	0	0	2	1	5
	Single	0	0	2	0	0	2	1	5
	Multi	0	0	0	0	0	0	0	0
Byram Twp.	Total	26	28	34	22	22	18	16	166
	Single	26	28	34	22	22	18	16	166
	Multi	0	0	0	0	0	0	0	0
Frankford Twp.	Total	26	22	23	22	22	19	20	154
	Single	26	22	23	22	22	19	20	154
	Multi	0	0	0	0	0	0	0	0
Franklin Boro.	Total	5	4	4	6	9	9	14	51
	Single	5	4	4	6	9	9	14	51
	Multi	0	0	0	0	0	0	0	0
Fredon Twp.	Total	25	18	40	48	29	25	21	206
	Single	25	18	40	48	29	25	21	206
	Multi	0	0	0	0	0	0	0	0
Green Twp.	Total	26	22	16	19	16	16	20	135
	Single	26	22	16	19	16	16	20	135
	Multi	0	0	0	0	0	0	0	0
Hamburg Boro.	Total	67	28	37	15	21	8	9	185
	Single	67	28	37	15	21	8	9	185
	Multi	0	0	0	0	0	0	0	0
Hampton Twp.	Total	12	24	23	27	22	20	16	144
	Single	12	24	23	27	22	20	16	144
	Multi	0	0	0	0	0	0	0	0
Hardyston Twp.	Total	173	203	114	81	155	195	110	1,031
	Single	173	121	102	61	131	195	99	882
	Multi	0	82	12	20	24	0	11	149
Hopatcong Boro.	Total	9	6	10	13	14	14	25	91
	Single	9	6	10	13	14	14	25	91
	Multi	0	0	0	0	0	0	0	0
Lafayette Twp.	Total	12	12	13	14	12	15	3	81
	Single	12	12	13	14	12	15	3	81
	Multi	0	0	0	0	0	0	0	0
Montague Twp.	Total	11	23	42	62	59	46	35	278
	Single	11	23	42	62	59	44	35	276
	Multi	0	0	0	0	0	2	0	2
Newton Town	Total	18	18	7	9	32	0	4	88
	Single	18	18	7	9	9	0	0	61
	Multi	0	0	0	0	23	0	4	27
Ogdensburg Boro.	Total	0	0	0	0	0	6	7	13
	Single	0	0	0	0	0	6	7	13
	Multi	0	0	0	0	0	0	0	0

RESIDENTIAL BUILDING PERMITS AUTHORIZED 2000-2006

SUSSEX COUNTY									
MUNICIPALITY	TYPE	2000	2001	2002	2003	2004	2005	2006	Total
Sandyston Twp.	Total	5	8	16	8	11	12	6	66
	Single	5	8	16	8	11	12	6	66
	Multi	0	0	0	0	0	0	0	0
Sparta Twp.	Total	103	117	134	53	50	75	105	637
	Single	103	117	134	53	48	75	71	601
	Multi	0	0	0	0	2	0	34	36
Stanhope Boro.	Total	9	4	18	12	3	0	3	49
	Single	9	4	18	12	3	0	3	49
	Multi	0	0	0	0	0	0	0	0
Stillwater Twp.	Total	10	15	5	10	14	14	14	82
	Single	10	15	5	10	14	14	14	82
	Multi	0	0	0	0	0	0	0	0
Sussex Boro.	Total	2	4	6	6	6	10	11	45
	Single	2	4	6	6	6	10	8	42
	Multi	0	0	0	0	0	0	3	3
Vernon Twp.	Total	50	149	33	53	30	54	46	415
	Single	50	44	33	33	25	54	46	285
	Multi	0	105	0	20	5	0	0	130
Walpack Twp.	Total	0	0	0	0	0	0	0	0
	Single	0	0	0	0	0	0	0	0
	Multi	0	0	0	0	0	0	0	0
Wantage Twp.	Total	81	59	68	83	61	79	80	511
	Single	81	59	68	83	61	79	80	511
	Multi	0	0	0	0	0	0	0	0
Sussex County	Total	719	808	679	587	612	668	603	4,676
	Single	719	621	667	547	558	666	551	4,329
	Multi	0	187	12	40	54	2	52	347

Source: U.S. Census Bureau, Manufacturing & Construction Division
 Prepared by: New Jersey Department of Labor & Workforce Development, 7/07

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- ¹ Decker, A. 1942. *That Ancient Trail*. Trenton, NJ: Petty Printing Company.
- ² County of Sussex Board of Chosen Freeholders. *Sussex County Open Space & Recreation Plan*. 2003.
- ³ Workforce New Jersey Public Information Network. Labor Market Information Website: www.wnjp.in.net/OneStopCareerCenter/LaborMarketInformation/lmi01/poptrd6.htm . Accessed July 2007.
- ⁴ United States Census Bureau. American Factfinder – Sussex County, New Jersey. www.factfinder.census.gov . Accessed July 2007.
- ⁵ Lathrop, R. Land Use / Land Cover Update to Year 2000/2001. Center for Remote Sensing and Spatial Analysis – Cook College, Rutgers University. 2004.
- ⁶ Sussex County Department of Engineering and Planning. *Draft Sussex County Wastewater Management Plan*. 2007. page 5.
- ⁷ Morris Land Conservancy in Cooperation with the Sussex County Open Space Committee. *An Open Space and Recreation Plan for the County of Sussex*. Boonton, NJ, September 2003.
- ⁸ Sussex County Department of Engineering and Planning. *Sussex County Strategic Growth Plan*. 2007.
- ⁹ New Jersey State Planning Commission. *New Jersey State Development and Redevelopment Plan*. March 2001.
- ¹⁰ New Jersey Highlands Council. *Highlands Sustainable Agriculture Technical Report*. January 2007.
- ¹¹ New Jersey Statutes Annotated 40:55D: *Municipal Land Use Law*.
- ¹² U.S. Census Bureau, Manufacturing & Construction Division. Residential Building Permits Authorized 2000-2006. Prepared by New Jersey Department of Labor & Workforce Development, July 2007 <http://lwd.dol.state.nj.us/labor/lpa/industry/bp/hist00/bpsus.pdf>. Accessed May 8, 2008.