

COMPREHENSIVE FARMLAND PRESERVATION PLAN 2012

for

Township of Green
County of Sussex



**The Land Conservancy
of New Jersey**
A nonprofit land trust

Compiled by

with



**Township of Green
Agricultural Advisory
Committee**

December 2012

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County of Sussex

Prepared for:



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Agricultural Advisory Committee

Prepared December 31, 2012 by:



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Jersey
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The original document was appropriately signed and sealed
in accordance with Chapter 41, Title 13 of the State Board of Professional Planners.

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Township of Green County of Sussex

Produced by:

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Green Township Agricultural Advisory Committee¹:

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¹Committee membership for the Agricultural Advisory Committee, Township Committee, Planning Board and Staff as of December 31, 2011.

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CHAPTER 1: AGRICULTURAL LAND BASE



Location and Size of Agricultural Land Base

Green Township is located in southern part of Sussex County, in northwestern New Jersey and is bordered by Fredon Township, Andover Borough, Byram and Andover Townships in Sussex County; and Frelinghuysen and Allamuchy Townships in Warren County. Green Township is a 16.31 square miles, and is a quiet, rural community with rolling hillsides, beautiful farms, rivers, and lakes. In 2009, the Township ranked ninth in Sussex County in total acres reported under farmland assessment, with 5% of the County’s farm-assessed land. Of its 10,560 acres, 5,493 acres, or 52%, qualified under farmland assessment (see *Farmland Map* in the Maps section of this Plan).

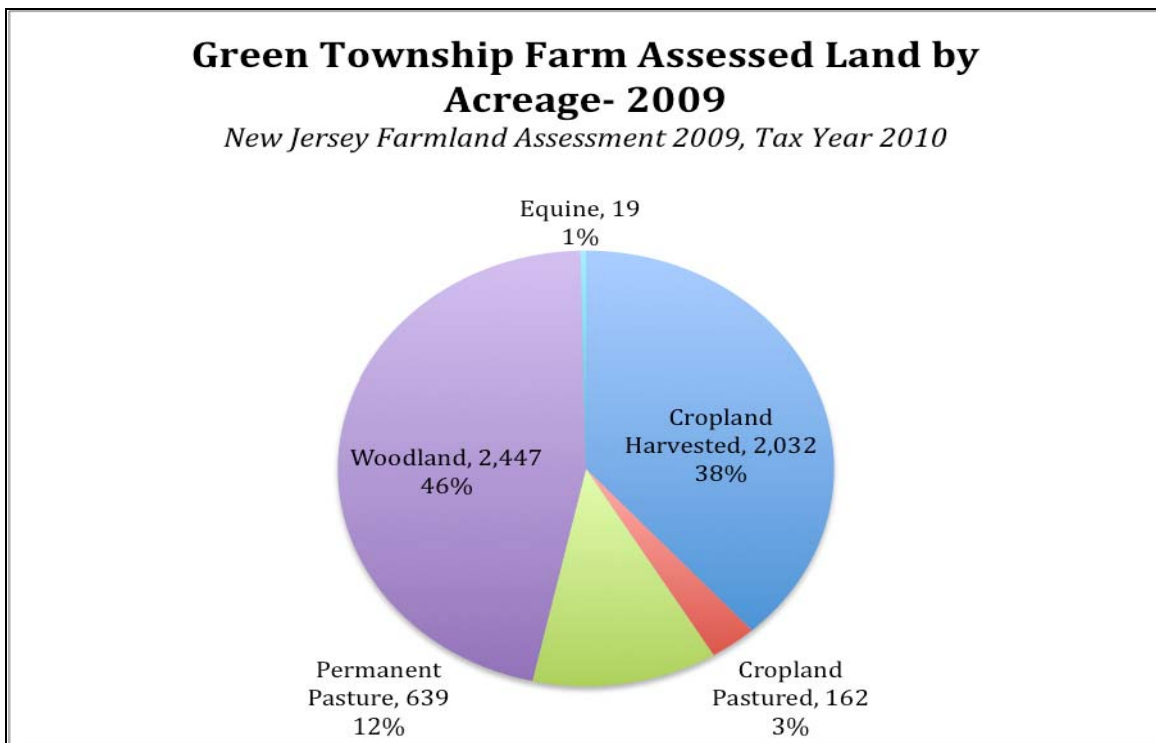
Farmland assessment reporting includes both lands devoted to agricultural or horticultural use and lands where the use is categorized as non-agricultural, such as farmhouses and outbuildings. Agricultural/horticultural use includes cropland, pasture, woodland and equine operations. The phrase “farm assessed” refers only to land devoted to agricultural or horticultural use, excluding non-agricultural use, and the phrase “active agriculture,” when used in reference to farmland assessment data, refers to harvested cropland, pastured cropland or permanent pasture, excluding woodland or equine operations.

Of the 5,493 acres reported under farmland assessment for 2009, 5,299 acres were devoted to agricultural or horticultural use, with 2,833 acres (54%) of active agricultural use (cropland and pasture), 2,447 acres (46%) of woodland and 19 acres of equine use. Another 194 acres were reported as non-agricultural land, such as land with farmhouses or other structures. (*New Jersey Farmland Assessment*)¹

Agricultural Landscape

Green Township spans both the Highlands and the Ridge and Valley Physiographic Provinces, two of the four distinct physiographic provinces that occur in New Jersey. Allamuchy Mountain in Green Township falls within the Highlands Province. This area consists of rocky terrain featuring steep slopes, wetlands, and poorly drained soils; underlain by a granitic gneiss formation; and is a source of runoff into the Trout Brook watershed. Much of the water quality within Green Township is dependent on drainage from the Allamuchy Mountain area.

The majority of Green Township lies within the Ridge and Valley Province, which covers approximately 15% of the land area in New Jersey, located in the most northwestern portion of the state. Green Township is located predominately within the Kittatinny Valley portion of the Ridge and Valley Province. The bedrock of this area is comprised of Kittatinny Limestone, causing sinkholes and caves to be common, and Martinsburg Shale, which is found predominately the northwestern parts of Green.² The Kittatinny Valley supports the largest concentration of agricultural operations in Sussex County, including hay and livestock farms and nursery operations in Green Township. (2008 Sussex County Comprehensive Farmland Preservation Plan (SCCFPP))³.



Between 1983 and 2009, Green Township lost almost a quarter of its farmland assessed acres, compared with 15% for Sussex County as a whole. Between 1983 and 2006, over 29% of farmland assessed acres were lost in the Township. Since 2006, acres of farmland assessed properties have been increasing slightly, reducing the overall loses to about 24%. The biggest declines between 1983 and 2006 were seen in acres of pastured cropland and permanent pasture. Acres of permanent pasture continued to decrease from 2006 to 2009, while acres of pastured cropland increased slightly. This slight increase of pastured cropland could be due to the increase in cover crop production between 2006 and 2009, as described in *Chapter 2*.

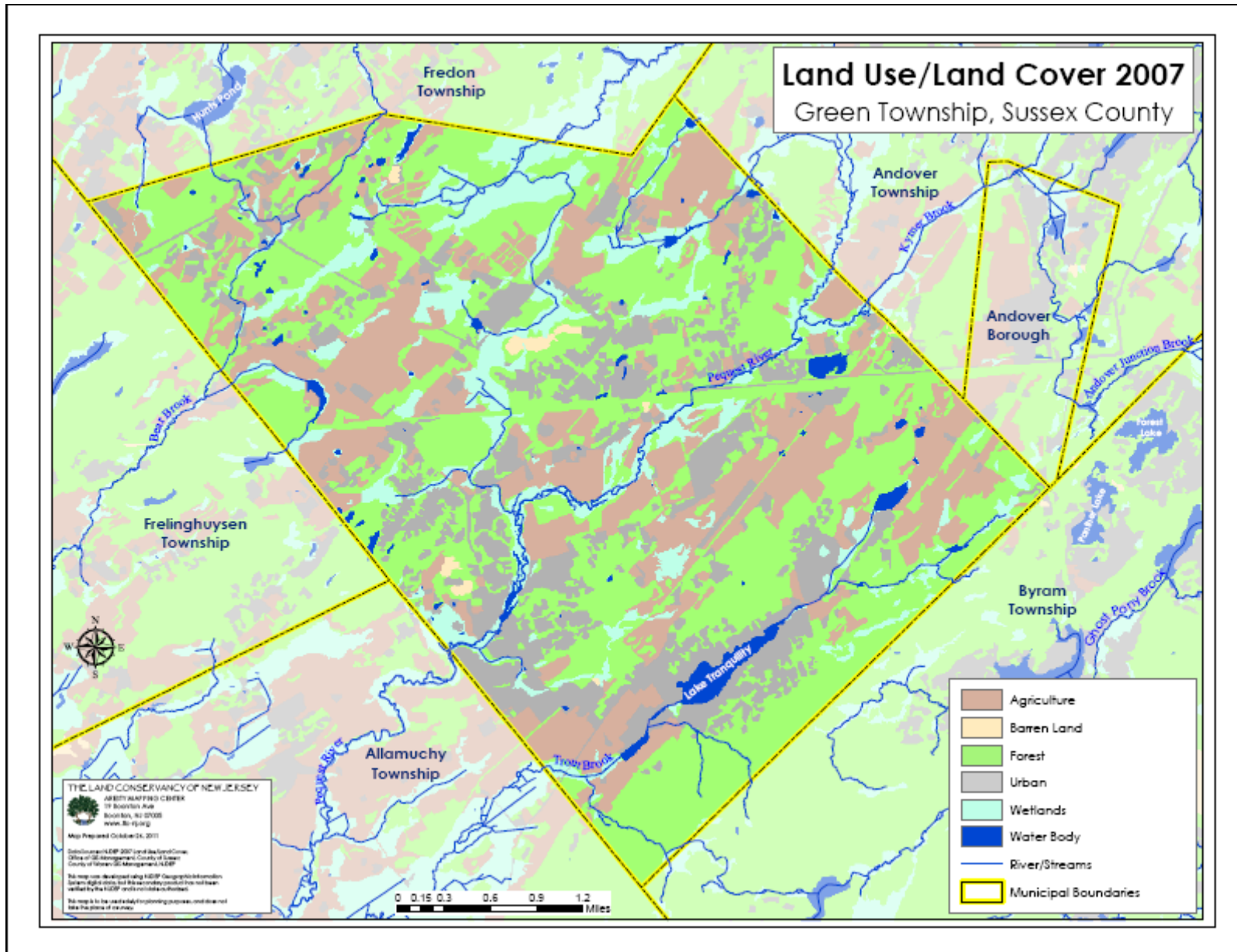
Comparison of Farm Assessed Acres – Green Township – 1983 vs. 2006, 2009							
	Cropland Harvested	Cropland Pastured	Permanent Pasture	Active Ag	Woodland	Equine	Total
1983	2,437	436	1,235	4,108	2,879	NA	6,987
2006	1,987	111	675	2,773	2,189	14	4,976
% Change	-18%	-75%	-45%	-33%	-24%	NA	-29%
2009	2,032	162	639	2,833	2,447	19	5,299
Total % Change (1983-2009)	-17%	-63%	-48%	-31%	-15%	NA	-24%

Source: NJ Farmland Assessment

According to the New Jersey Department of Environmental Protection (NJDEP) 2007 Land Use/Land Cover data, forested land represents the largest proportion of Green Township land use, at 43%, followed by agricultural land at 25%. Some of Green Township's 4,478 forested acres are located in parkland such as Allamuchy Mountain State Park, Whittingham WMA, and the Dark Moon Preserve. However, a large percentage of Green Township's forested area (2,513 acres) was reported under farmland assessment in 2007. The 2,602 acres of agricultural land reported by the NJDEP in 2007 tracks closely to the 2,766 acres of active agricultural land reported under farmland assessment in the same year. The proportion of agricultural land in Green (25%) is more than double that for the entire County (11%), while the proportion of urban land is slightly greater (18% in Green to 16% county wide) and wetlands in Green Township is slightly less than the County (11% in Green v. 14% county wide). (See 2007 Land Use/Land Cover chart and 2007 Land Use/Land Cover by Acres map below).

2007 Land Use/Land Cover (acres)				
	Green Township	% of Total	Sussex County	% of Total
Agricultural Land	2,602	25%	37,067	11%
Barren	45	0%	2,097	1%
Forested	4,478	43%	190,063	55%
Urban	1,890	18%	53,330	16%
Water	213	2%	13,188	4%
Wetlands	1,192	11%	46,734	14%
Total	10,429		342,479	

Source: NJDEP 2007 Land Use/Land Cover



Between 1995 and 2007, Green Township lost 9% of its agricultural land versus 14% for the County, and 6% of its forest, versus 3% for the County. Drawing from formerly forested or agricultural land, urban land use increased by 39%, or 531 acres, in Green Township, ahead of the County increase of 26% (see *Land Use in Acres* chart below).

Land Use Type (acres)								
Land Use Type	Green Township				Sussex County			
	1995	2007	Net Change		1995	2007	Net Change	
			Acres	%			Acres	%
Agriculture	2,862	2,26	-261	-9%	43,199	37,067	-6,132	-14%
Barren Land	34	45	11	32%	2,197	2,097	-100	-5%
Forest	4,757	4,478	-279	-6%	195,023	190,063	-4,961	-3%
Urban Land	1,369	1,900	531	39%	42,463	53,330	10,867	26%
Water	198	213	14	7%	12,681	13,188	507	4%
Wetlands	1,208	1,192	-16	-1%	47,883	46,734	-1,149	-2%

Source: NJDEP Land Use/Land Cover⁴

Distribution of Soils and Their Characteristics

Soil types are determined by the parent bedrock material from which they were formed, the drainage characteristics they exhibit, and the steepness of the slopes on which they are found. Soil types are grouped into larger categories called soil series, which are based on the parent materials, chemical compositions, and profiles of their member soil types. Soil series are often grouped into broader categories, called soil associations or complexes, which occur in regularly repeating patterns. (*NRCS Web Soil Survey*)⁵

The Natural Resources Conservation Service (NRCS) classifies certain soils as prime farmland soils, or soils of statewide or unique importance, based on their potential for agricultural productivity. The following chart identifies the major soils in Green Township, grouped by the NRCS classifications for agricultural soils.

Soils of Green Township		
Soil Abbr	Name	Acres
HdxAb	Hazen-Hoosic complex, 0 to 3 percent slopes, very stony	802
HdxBb	Hazen-Hoosic complex, 3 to 8 percent slopes, very stony	1201
RkrB	Riverhead sandy loam, 3 to 8 percent slopes	0.2
	All areas are prime farmland Total	2003.2
CatbA	Catden mucky peat, 0 to 2 percent slopes	432
	All areas of unique importance Total	432
HonCb	Hoosic-Hazen complex, 8 to 15 percent slopes, very stony	29
	All areas of statewide importance Total	29

Soil Abbr	Name	Acres
AhbBc	Alden silt loam, 0 to 8 percent slopes, extremely stony	5
AhcBc	Alden mucky silt loam, gneiss till substratum, 0 to 8 percent slopes, extremely stony	150
ChkC	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	178
ChkE	Chatfield-Hollis-Rock outcrop complex, 35 to 60 percent slopes	27
FaxC	Farmington-Rock outcrop complex, 0 to 15 percent slopes	185
FdwB	Farmington-Wassaic-Rock outcrop complex, 0 to 8 percent slopes	288
FmhAs	Fluvaquents, loamy, 0 to 3 percent slopes, occasionally flooded	276
FrdAb	Fredon-Halsey complex, 0 to 3 percent slopes, very stony	285
HhmBc	Hibernia loam, 0 to 8 percent slopes, extremely stony	104
HopEb	Hoosic-Otisville complex, 25 to 60 percent slopes, very stony	244
NauBh	Nassau-Manlius complex, 0 to 8 percent slopes, very rocky	177
NauCh	Nassau-Manlius complex, 8 to 15 percent slopes, very rocky	505
NauDh	Nassau-Manlius complex, 15 to 35 percent slopes, very rocky	320
NavE	Nassau-Rock outcrop complex, 35 to 60 percent slopes	19
PHG	Pits, sand and gravel	42
RnfC	Rock outcrop-Farmington-Galway complex, 8 to 15 percent slopes	1121
RnfD	Rock outcrop-Farmington-Galway complex, 15 to 35 percent slopes	2707
RoefCc	Rockaway loam, thin fragipan, 8 to 15 percent slopes, extremely stony	78
RoefDc	Rockaway loam, thin fragipan, 15 to 35 percent slopes, extremely stony	191
RokD	Rockaway-Chatfield-Rock outcrop complex, 15 to 35 percent slopes	312
RooB	Rockaway-Urban land complex, thin fragipans, 0 to 8 percent slopes	8
RooC	Rockaway-Urban land complex, thin fragipans, 0 to 15 percent slopes	37
RooD	Rockaway-Urban land complex, thin fragipans, 0 to 25 percent slopes	80
UdaB	Udorthents, 0 to 8 percent slopes, smoothed	94
USFARC	Urban land-Farmington-Rock outcrop complex, 0 to 15 percent slopes	154
USFAWB	Urban land-Farmington-Wassaic complex, 0 to 8 percent slopes	34
USHAZB	Urban land-Hazen-Hoosic complex, 0 to 8 percent slopes	53
VepBc	Venango silt loam, 0 to 8 percent slopes, extremely stony	21
WATER	Water	116
	Not prime farmland Total	7695
<i>Source: Natural Resource Conversation Service Soil Survey 2008</i>		

Geographic locations of the agricultural soils within the Township can be seen on the *Agricultural Soil Categories Map* in the Maps section of this Plan. Prime farmland soils and soils of unique and statewide importance make up 24% of the Township's soils, but less than half of these farmland soils are in active agricultural use as identified by the 2007 NJDEP Land Use/Land Cover (LU/LC) data. *LU/LC active agriculture* is a more inclusive category than the *LU/LC agricultural land* category referenced earlier in this Chapter. LU/LC active agriculture encompasses the following Land Cover types: Agricultural Wetlands, Cropland and Pastureland, Former Agricultural Wetland, Orchards/Vineyards/Nurseries and Other Agriculture. As can be seen in the chart below, a comparison of the soils data and the NJDEP LU/LC data shows that prime farmland soils represent 44% of overall LU/LC-identified active agricultural land, with the other 56% made up of soils that are not considered prime farmland.

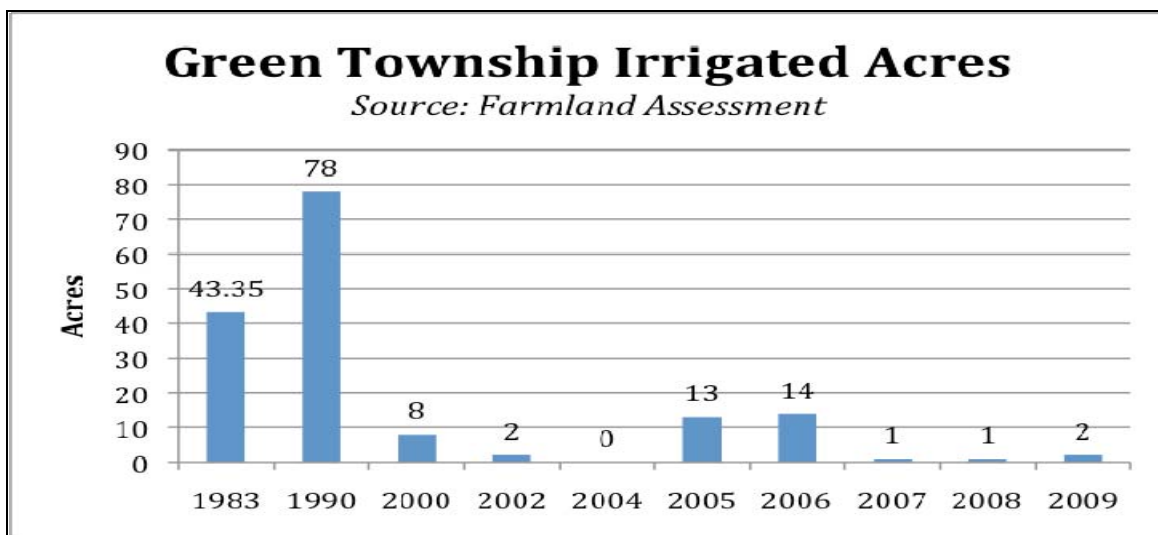
Land Use/Land Cover (LU/LC) Agricultural (Ag) Land in Each Soil Classification				
<i>Source: NRCS Soil Data Mart; 2007 NJDEP Land Use/Land Cover data</i>				
Soil Classification	Total Acres	LU/LC Active Ag Acres	Ag As % of Soil Class	Soil Class As % of Ag Acres
Prime Farmland Soil	2,044	1,217	60%	44%
Soils with Statewide Importance	29	1	3%	0%
Soils with Unique Importance	433	3	1%	0%
Not Prime Farmland	7,923	1,551	20%	56%
Total	10,429	2,772	27%	

- *Prime farmland soils*, as defined by the United States Department of Agriculture (USDA), rest on land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops. They have the quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed according to acceptable farming methods. Prime soils flood infrequently and are not excessively erodible or saturated with water for a long period of time. There are 2,003 acres of prime farmland soils in Green Township. Accounting for 20% of the total soils in the Township, these soils are located primarily in the eastern portion of the Township, in the area between the Pequest River and Trout Brook, as well as in a small area in the northwestern portion of the town between the Dark Moon Preserve and Whittingham Wildlife Management Area (WMA). These soils have been classified as belonging to the *Hazen-Hoosic Complex* (Hdx), which can be used for alfalfa hay, corn, grass (legume), wheat, soybeans and oats. 60% of these soils are in agricultural use.
- *Farmland soils of statewide importance* produce high crop yields when treated and managed according to acceptable farming methods. However, their yields are rarely as high as those of prime soils. There are 29 acres of soils of statewide importance in Green Township. Accounting for 0.3% of the total soils in the Township, these soils are located in a small area in the northwestern portion of the township just south of the Whittingham WMA and have been classified as belonging to the *Hoosic- Hazen Complex* (Hon), which can be used for hay, corn, small grains, vegetables, and fruit trees. 3% of these soils are in agricultural use.
- *Unique soils* exhibit specific qualities that may be favorable to the production of specialized crops. There are 432 acres of soils with unique importance in Green Township, representing 4% of the total soils. These soils have been identified as belonging to the *Catden series* (Catb) and are located mostly in and around the Whittingham WMA in the northwestern portion of the Township. Only 1% of these soils are in agricultural use.

The Nassau-Manlius (Nau) soil series, although not identified as farmland soil, may also play a role in Green Township's active agriculture. This series is often very rocky but capable of growing corn, oats and wheat with more moderate yields than the Hazen-Hoosic complex that has been identified as prime farmland soil. It is 1,002 acres, or 10% of the Township's total acreage.⁶

Irrigated Land & Water Sources

Irrigation has not been a significant water use in Green Township, according to farmland assessment data. Due to the nature of farming in Green Township and demand for water for other uses, this is unlikely to change. The year of greatest use was 1990, with 78 acres of field crops receiving irrigation. In 2009, irrigation was only used for ornamentals (2 acres). Use in other years has been extremely low. (See *chart* below) (*NJ Farmland Assessment*) Due to the small size of many Green Township farms and the fact that they draw their water supply from their own on-property wells, this may be an underreported category on farmland assessment forms. Farmers may get adequate water for their small-scale irrigation needs from their own water supplies. (*Steve Komar*)⁷



Green Township relies on just one underground aquifer for all of its water needs, including irrigation. At this time, there are no plans to develop a public water system within Green Township. The Pequest River Hidden Corridor is the area of greatest groundwater recharge potential in Green Township. It is located above Trout Brook and Decker Pond Road and is covered predominately with farmland. In the southeastern corner of the Township, water quality is dependent on drainage from the Allamuchy Mountain Range.⁸ There are also three above-ground waterways in Green Township; Bear Brook, Trout Brook, and the Pequest River. All three have excellent water quality, with Bear and Trout Brooks being classified as Category 1 trout production waters. (*Green Township Open Space and Recreation Plan (OSRP) Update*)⁹ However, groundwater sources are generally preferred to surface waters for irrigation because they contain less sediment and particulates that may clog irrigation pipes and damage crops.

Farmland Trends & Statistics

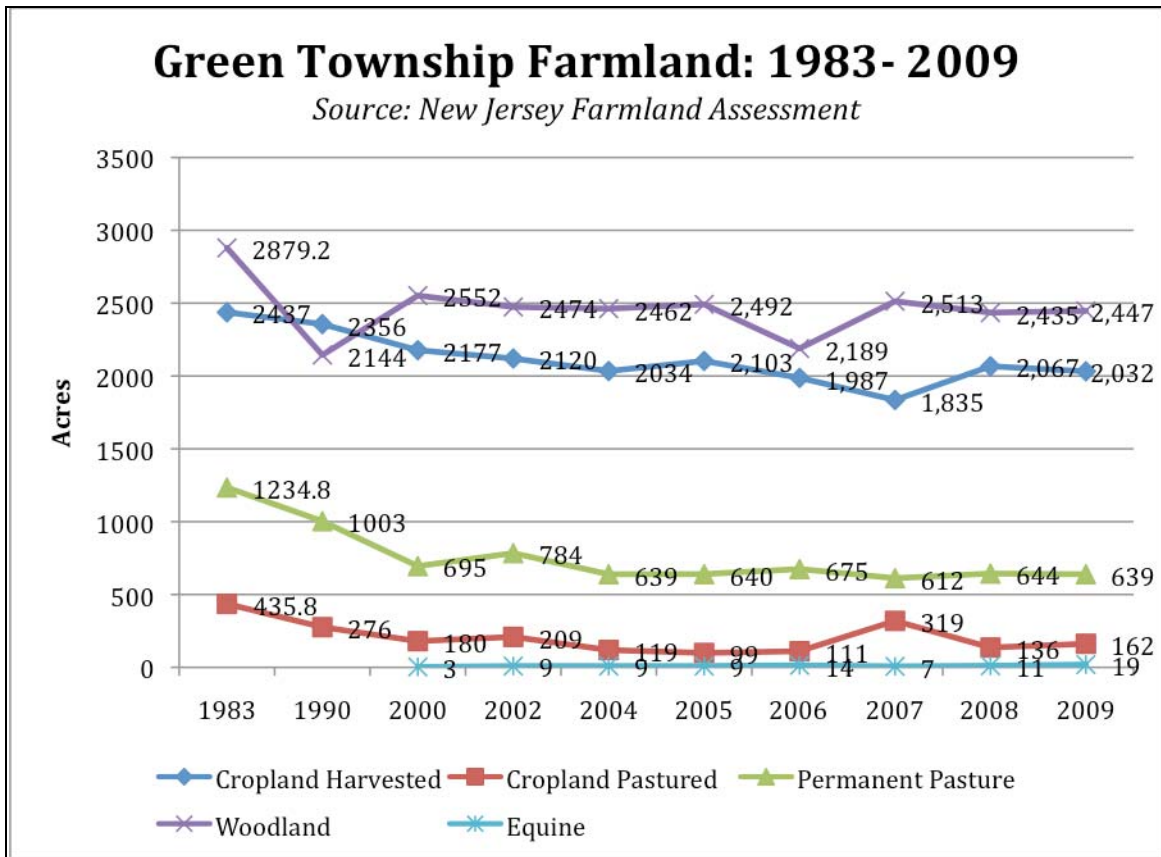
The overall size of the total farmland-assessed agricultural land base in Green Township, including active agricultural, woodland and equine uses, declined from 1983 (6,987 acres) to 2009 (5,299 acres) by 24%. (see *Farmland* chart below). The overall Sussex County

agricultural land base declined 14% in the same time period, from 120,847 to 104,269 acres. In Green Township, land devoted to active agriculture declined 31% while woodland declined 15%. The equine category, added in 2000, has dipped and risen, with a high of 19 acres in 2009.

Harvested cropland, the largest category of active agricultural land in Green Township, has declined 17% between 1983 and 2009, from 2,437 to 2,032 acres. Permanent pasture declined from 1,239 to 639 acres, or 48%. Pastured cropland declined from 436 to 162 acres from 1983 to 2009, or a 63% decrease. Overall, land in active agricultural use from 1983 to 2009 has declined 31% versus 29% for Sussex County.

Woodland has declined 15%, from 2,879 acres in 1983 to 2,447 acres in 2009. Within this category, unattached woodland acres have risen from 669 acres in 1990 to 1,598 acres in 2009, while attached woodland acres have declined from 1,475 acres to 849 acres during this same time period. Equine use has risen from 3 acres in 2000 to 19 acres in 2009.

Comparison of the 1995 and 2007 Land Use/Land Cover data above shows that much of the lost agricultural and forested land in Green Township, and county wide, has been replaced by urban land, or development.



The trend towards smaller farm sizes has been prominent throughout New Jersey and Sussex County over the past thirty years. County wide there has been a 73% increase in

number of farms between 1982 and 2007, but an 11% decrease in overall farm acres. The average size of a farm has declined from 119 to 62 acres. The definition of a farm used for the purposes of calculating farm size is not the individual parcels tracked in farmland assessment but a farm operation, which is composed of the total land area of the reporting farm and may include land rented from others. (*NJDA Sussex County Agricultural Profile*¹⁰ and *2007 Census of Agriculture*¹¹) The 2007 Census of Agriculture indicates that for ZIP codes 07821, 07839, 07860, and 07879, which includes Green Township as well as Newton and a portion of Andover, 255 of 327 farm operations were under 50 acres, 71 operations were 50-999 acres, and only one operation was over 1,000 acres. The ZIP code tabulations also indicated that of these 327 operations, 284 were operated by full owners, 27 by part owners, and 16 by tenant farmers, who rented the land from others or worked for shares. For 120 of the operators, farming was their primary occupation and 275 of the operators had their residences on the operation. (*2007 Census of Agriculture Quick Stats*)¹²

In 2009, Green Township ranked in ninth of all Sussex County municipalities for number of farms in farmland assessment Its 129 approved farmland assessment forms represented 5% of the county total of 2,565. Green Township also ranked ninth in the County for acres of land in farmland assessment (5,493). The average farm size in Green Township was 42.6 acres, versus 42.4 acres for the County, approximately equal. On a farm parcel basis, according to 2011 tax records, the majority of parcels were less than 50 acres. There were 291 farm parcels totaling 5,386 acres, with an average size per parcel of 18.5 acres and a median size of 6 acres. The following chart shows the breakdown of farm parcel sizes in Green based on 2011 tax records:

Farm Parcels in Green Township - 2011	
Size	# of Farms
Under 1 acre	32
1-9.9 acres	144
10-49.9 acres	80
50-179 acres	33
180+ acres	2
<i>Sources: NJ Association of County Tax Boards/GIS Parcel Data</i>	

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- ¹ New Jersey Farmland Assessment. Municipal and County Summaries. Various years.
- ² Open Space and Recreation Plan for Green Township. Compiled by Morris Land Conservancy with Township of Green Open Space committee. September 2001.
- ³ Comprehensive Farmland Preservation Plan for the County of Sussex. Compiled by Morris Land Conservancy with Sussex County Agriculture Development Board. May 2008.
- ⁴ New Jersey Department of Environmental Protection. Land Use/Land Cover Data 1995/97 and 2007.
- ⁵ United States Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/>. Accessed August 2010.
- ⁶ USDA/NRCS Soil Survey of Sussex County, New Jersey. 2009. http://soils.usda.gov/survey/online_surveys/new_jersey/NJ037/Sussex_NJ.pdf. Accessed April 2011.
- ⁷ Personal communication with Steve Komar, County Agricultural Agent, Rutgers Cooperative Extension. December 2010.
- ⁸ Open Space and Recreation Plan for the Township of Green. Compiled by the Morris Land Conservancy with the Green Township Open Space Committee. September 2001.
- ⁹ Open Space and Recreation Plan Update for the Township of Green. Compiled by the Land Conservancy of New Jersey with the Township of Green Open Space Committee. May 2009.
- ¹⁰ New Jersey Department of Agriculture, State Agriculture Development Committee, 2007 Sussex County Agricultural Profile.
- ¹¹ United States Department of Agriculture, National Agricultural Statistics Service. 2007 Census of Agriculture – County Data. New Jersey. County Summary Highlights. <http://www.agcensus.usda.gov> Accessed August 2010.
- ¹² United States Department of Agriculture, National Agricultural Statistics Service. 2007 Census of Agriculture. Quick Stats. <http://quickstats.nass.usda.gov>. Accessed October 10, 2011.

CHAPTER 2: AGRICULTURAL INDUSTRY



Agricultural History - Overview

The majority of Green Township is located within the Kittatinny Valley in Sussex County. Capitalizing on the Valley's rich soils, Green Township has a deep agricultural history, defining the landscape of the community. While many residents in the community no longer farm, the agricultural history of this community is deeply ingrained in its identity and is highly visible throughout the landscape of the town. The number of large dairy farm operations has been declining county-wide since 1971, with only one such farm remaining in Green Township, a trend that has been attributed to higher input costs, lower milk prices and unfavorable weather conditions. The trend is to increased diversity in farming operations, including increases in home gardening and equine operations. Although large dairy farms have virtually disappeared, agriculture remains the single greatest land use in Green Township, with over 50% of the land within the Township dedicated to agriculture. Area farmers are producing vegetables, eggs, and poultry. (*Green Township Open Space and Recreation Update*¹)

Trends in Market Value and Production

The Census of Agriculture classifies agricultural activities in two categories: "crops, including nursery and greenhouse" and "livestock, poultry and their products." Sales figures and crop production figures are not available at the municipal level but can be analyzed at the County level. In addition, municipal and county data on acres devoted to crops and inventories of livestock are available through the farmland assessment reports gathered by the State from the tax assessors in each municipality.

Trends in Market Value of Agricultural Products Sold

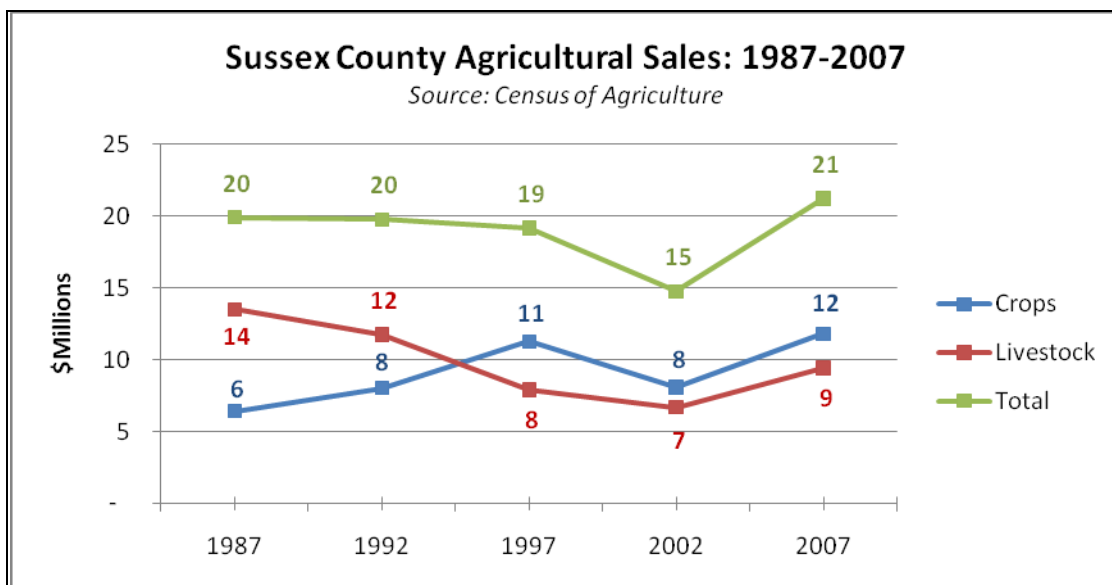
While the market value of agricultural products sold has increased slightly County wide since 1987^a, the average per farm has trended downward. (See *Market Value Trends* chart below) This correlates with the statistics from *Chapter 1*, which show the number of farms increasing but the size of farms decreasing in Sussex County as a whole. More dollars are spread among more farms with fewer dollars per farm. However, many farmers own or lease multiple properties, often in multiple municipalities.

^a2002, a year of severe drought, was an exception.

Market Value Trends in Sussex County					
	2007	2002	1997	1992	1987
Value of Products Sold (\$1,000)	\$21,242	\$14,756	\$19,780	\$19,763	\$19,922
Average Per Farm	\$20,040	\$14,340	\$21,500	\$24,984	\$25,673
Number of Farms	1,060	1,029	920	791	776
Average Size of Farm	63	73	83	95	101
<i>Source: US Census of Agriculture</i>					

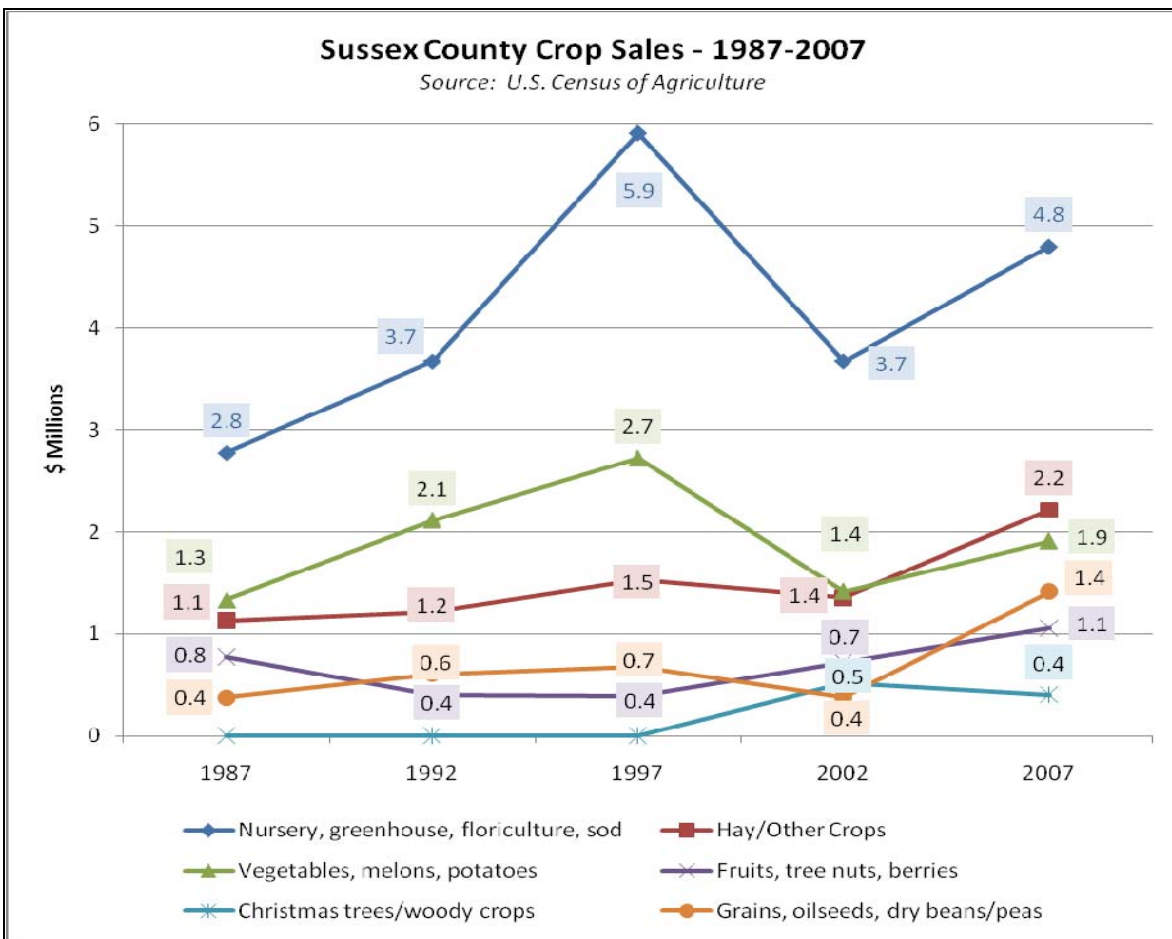
A review of farmland assessment figures shows that trends in Green Township shows that while the number of approved farmland assessment forms in the County have increased slightly, from 2,467 in 2004 to 2,565 in 2009, the number of forms in Green Township have dropped 18% from 2004 to 2009, from 158 to 129. The decrease in farmland assessment forms, combined with a slight 1.4% increase in active agricultural acreage, from 2,792 to 2,833 indicates that while the number of farms in Green Township may be decreasing, the number of acres dedicated to agriculture production is staying the same or increasing slightly throughout Green Township.

A breakdown by Census category shows the value of livestock sold dropped from 1987 through 1997 while value of crops sold increased. Both dipped in 2002 and rose again in 2007. The value of crops sold has reached a 20-year high, while the value of livestock sold is lower than in 1987. (See *Sussex County Agricultural Sales* chart below) While statistics are not available to determine the market value trend in Green Township, a review of livestock inventories shows a decrease in inventories of beef and dairy cattle since 1983 (see *Production Trends* later in this *Chapter*), which tracks with lower overall County sales. Despite recent increases in acreage devoted to vegetables, overall acreages of field crops and vegetables have been in decline since 1983, thus Green may not be a major contributor to the increased value for the County in this category.



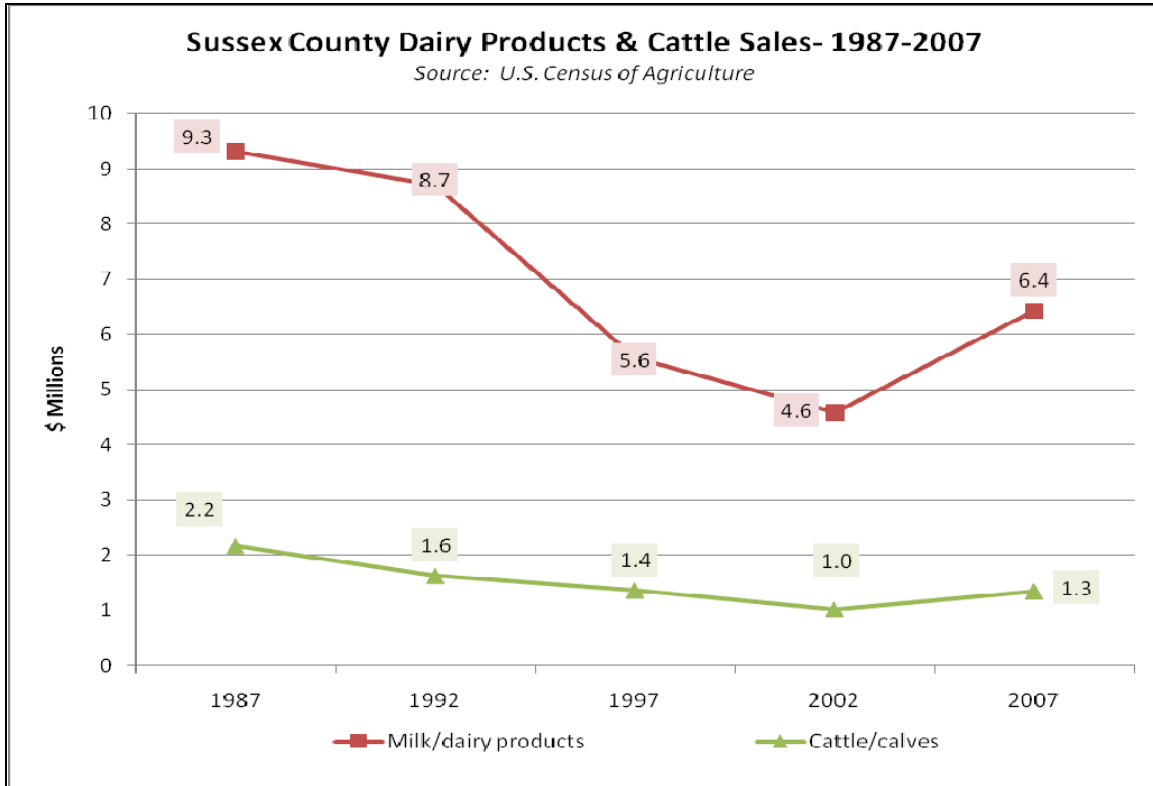
The following chart shows a breakdown of crop sales by category: Sussex County ranked first in New Jersey in value of sales for cut Christmas trees and woody crops and 51st in the

nation. While this is a growing source of revenue within the County, it is still the smallest contributor to overall crop sales at \$0.4 million in 2007. By far the largest contributor to crop sales in 2007 in Sussex County, as indicated by the graph below, is nursery crops, with more than double the sales of the second largest contributor, hay and other crops (\$4.8 million in sales vs. \$2.2 million). In 2007, Sussex County ranked second in the state in value of sales for hay and other crops and eleventh for grains, oilseeds, dry beans and peas. Within Sussex County, Green Township ranked fifth in 2009 in both acres devoted to nursery crops and Christmas trees as well as ranking 4th in acres devoted in field crops (such as hay)². Green Township farmers, similar to other County farmers, should have benefited from a recent significant increase in prices for grain crops. Prices for the Township's leading field crops, hay and corn for grain saw rises of 13% and 183% respectively between 2005 and 2007. (NJAES)³



The following charts show a breakdown of livestock sales by category: Sussex County ranked fourth in the state for value of cattle and calves and third in heads of cattle and calves. It ranked third in value for milk and other dairy products from cows and second in milk production in 2007 according to the Census. In 2009, Green Township was third in the county of heads of dairy cattle, with 161 young dairy cattle and 103 mature dairy cattle. Wantage was the leader in this category, with 1,364 head of mature dairy cattle and 993 head of young dairy cattle in 2009. Sales of other livestock products generally followed an

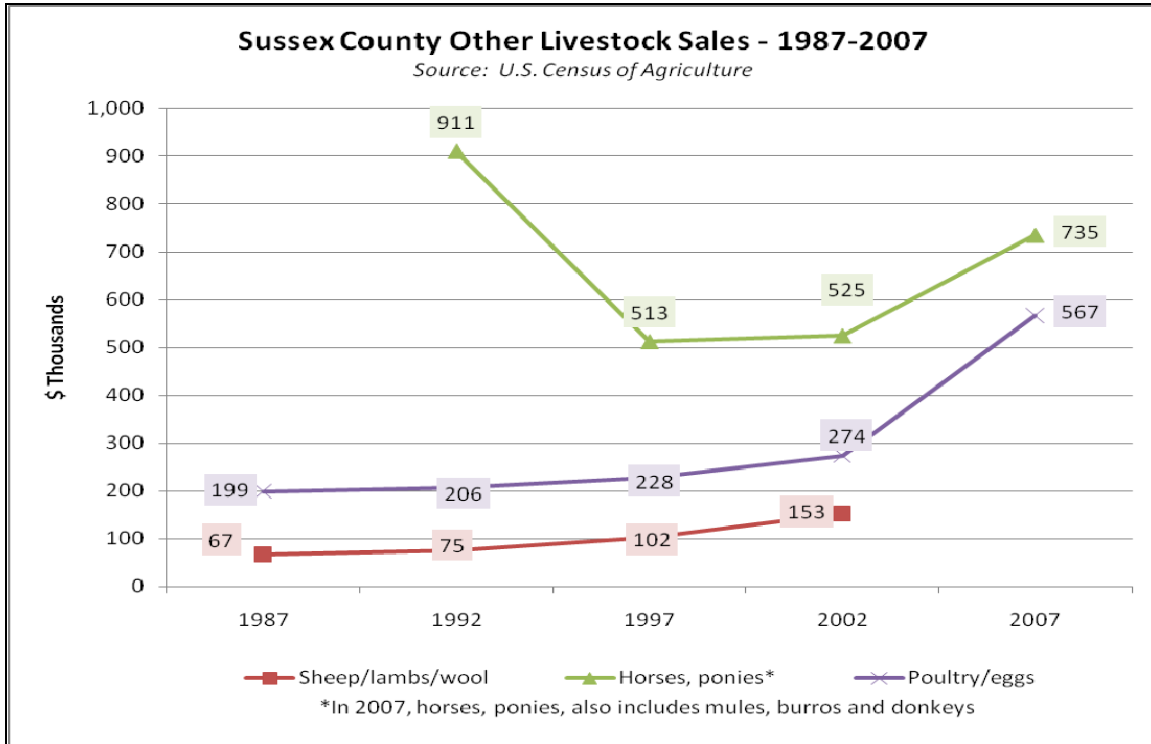
upward trend in Sussex County. In Sussex County, poultry rose significantly in market value from 2002 to 2007. The County ranked seventh in the state in value of poultry and eggs sold. In 2009 for Sussex County, Green Township ranks first in inventory of beehives and third in egg laying chickens and duck inventories



A newly tracked category for the 2007 Census was a breakdown between vegetables harvested for processing and those harvested for fresh market. In Sussex County, 111 farms harvested vegetable crops from 689 acres; only two of these farms harvested for processing and the remaining 109 harvested for fresh market, which tracks with the tendency for smaller farms and underscores the importance of supporting agri-tourism and farm markets on a County and municipal basis. The County ranked thirteenth in the state in acres of vegetable crops harvested. By comparison, the number one County, Salem, harvested 11,786 acres spread among 101 farms, with 31 large farms harvesting for processing and the majority of the farms harvesting for both processing and fresh markets. Within Sussex County, Green Township ranks second for the number of vegetable acres harvested with 126 acres in 2009.

Sales of organic agriculture and products sold directly to individuals are also tracked by the Census of Agriculture. 41% more farms in Sussex County reported sales directly to individuals in 2007 than in 1997, and the value of products sold increased by 98% (see *Sussex County Direct and Organic Market Trends* below). This outpaces a 6% increase statewide in farms, from 1,832 to 1,931, and 64% increase in values, from \$18.4 million to \$30.1 million. Statistics for organic agriculture were only available in 2002 and 2007. While farms increased by 70%, reported value decreased by 54% in Sussex County.

County growth in this sector trails the statewide trend of a 279% increase in the number of farms, from 53 to 201, and a 1,814% increase in value, from \$222,000 to \$4,250,000.



Sussex County Direct and Organic Market Trends (Value in \$1,000s)				
	Direct to Individuals		Organically Produced	
	Farms	Value	Farms	Value
2007	242	\$1,530	17	\$45
2002	234	\$919	10	\$97
1997	172	\$774	N/A	N/A
% Change	41%	98%	70%	-54%

Source: US Census of Agriculture

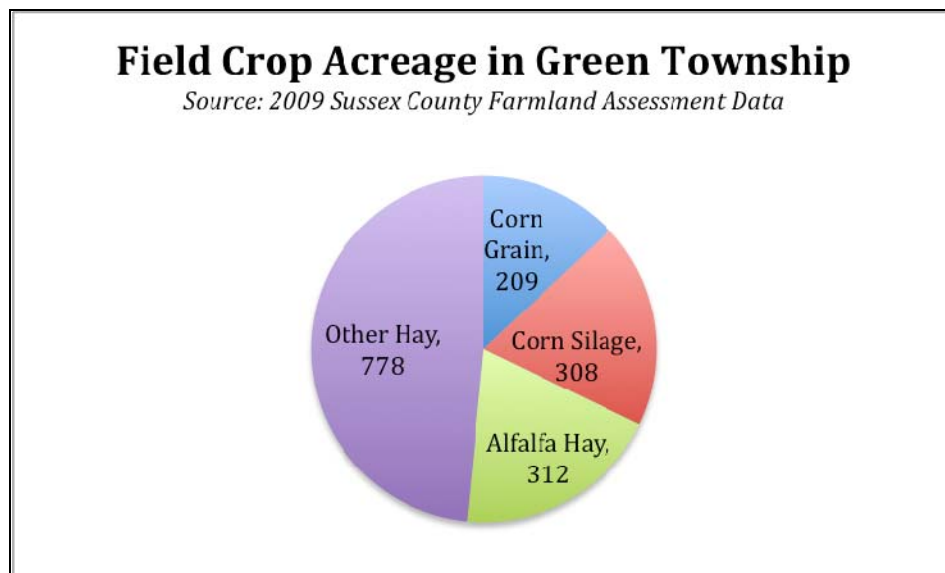
Trends in Production

Field Crops

Hay is the primary field crop in Green Township, with corn a distant second, little acreage is devoted to other field crops. (*Field Crop Acreage* chart below) (*NJDA Farmland Assessment data*)⁴ Trends in the acreage of land planted for these field crops are dictated by short-term and long-term market fluctuations (*Field Crop Trend* chart below). Short-term trends include seasonal weather conditions and prices of inputs, such as fertilizers and fuel. Sussex County's field crop production (and Green Township's by inclusion) was significantly affected by severe drought conditions during 2002, causing low outputs of corn and hay (*Hay, Corn for Grain Production* charts below). (NJ NASS)⁵

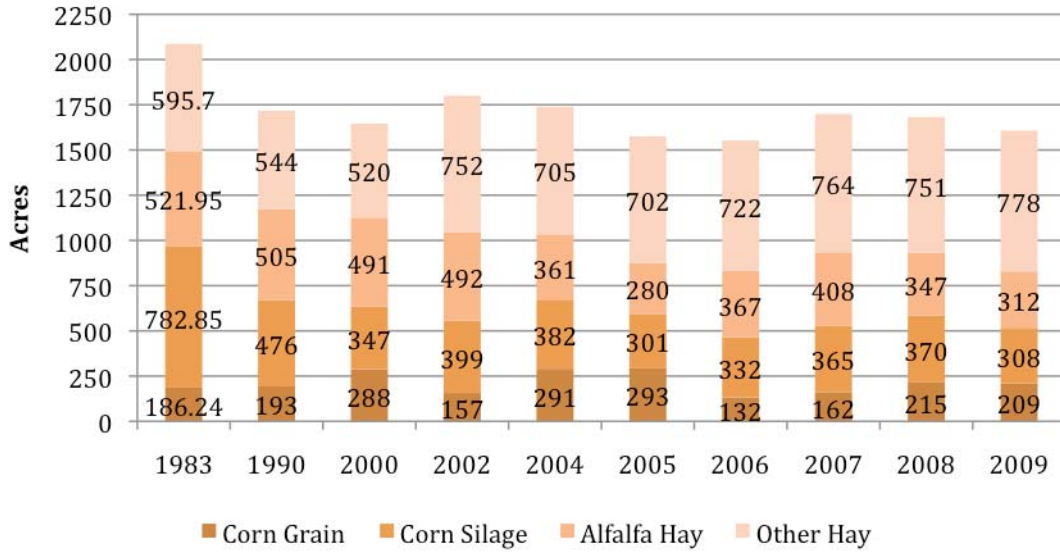
Harvested acreage for corn and hay are declining in Sussex County, yet production in bushels reached a four-year high for corn for grain, rising from 204,000 in 2003 to 406,100 in 2007, with a yield per acre that increased from 85 to 131. In 2008, corn production in bushels increased again, up to 473,600 bushels. Yield per acreage decreased from 2007 to 2008, down to 128 bushels per acre. Since 2008, corn production has been in decline throughout Sussex County both in total yield of bushels and bushel per acre. In 2009, 306,000 bushels were produced at a yield per acre of 102. Sussex County ranked eighth in New Jersey for corn for grain production. Hay, by far the larger Green Township crop, fell from a yield of 2.1 tons per acre in 2003 and 2004 to 1.8 tons in 2006 and 1.6 tons per acre in 2005 and 2007 in Sussex County. However, in 2008 hay yields increased slightly to 1.74 tons per acres. Sussex County ranks second in the state, after Hunterdon County, for hay production. (NASS) In Green Township, acres devoted to alfalfa hay have continued to decrease, from 522 acres in 1983 to 312 acres in 2009; an overall 40% decrease. Other hay, the leading field crop category, has increased by 24% since 1983, with 778 acres in 2009 compared to 596 in 1983. In 2009, Green Township ranked seventh in the County for acres devoted to hay. (Farmland Assessment)

Long-term trends include availability of support services, land prices, and local demand for certain crops. With local support services in shorter supply, the value of and demand for developable farmland having risen in recent years, and the dairy industry declining in the Township and County, long-term trends for field crops can be problematic. For example, the decline in cattle inventory in Green Township since 1983 signaled a similar decline of more than 60% in the production of low-value, land-intensive corn for silage grown by those farms as feed for their stock. (Farmland Assessment)



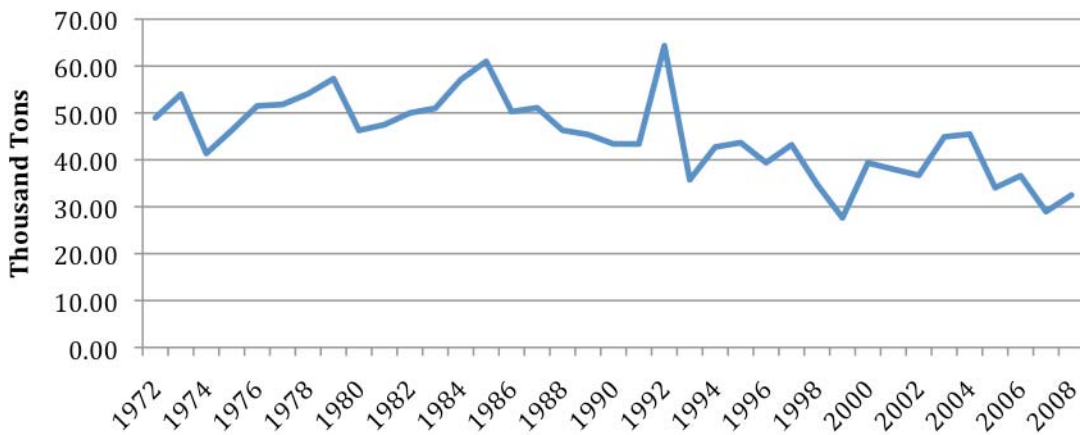
Field Crop Trend in Green Township: 1983- 2009

Source: Sussex County Farmland Assessment Data



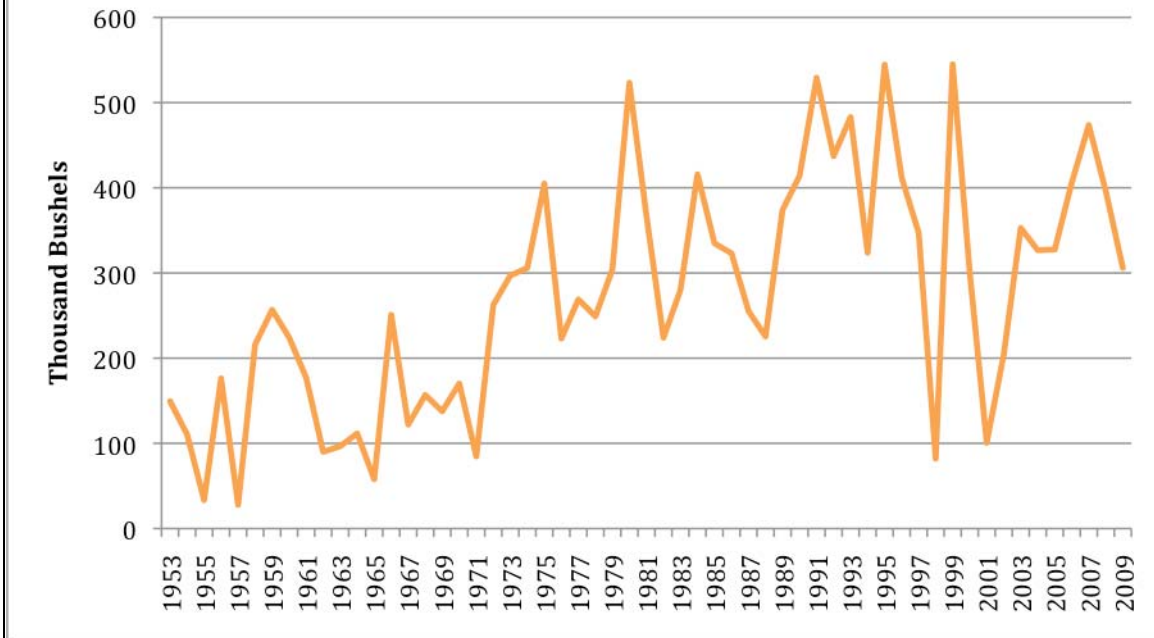
Sussex County Hay Production: 1972-2008

Source: New Jersey Office of NASS



Sussex County Corn for Grain Production: 1953- 2009

Source: New Jersey Office of NASS



Vegetables and Other Crops

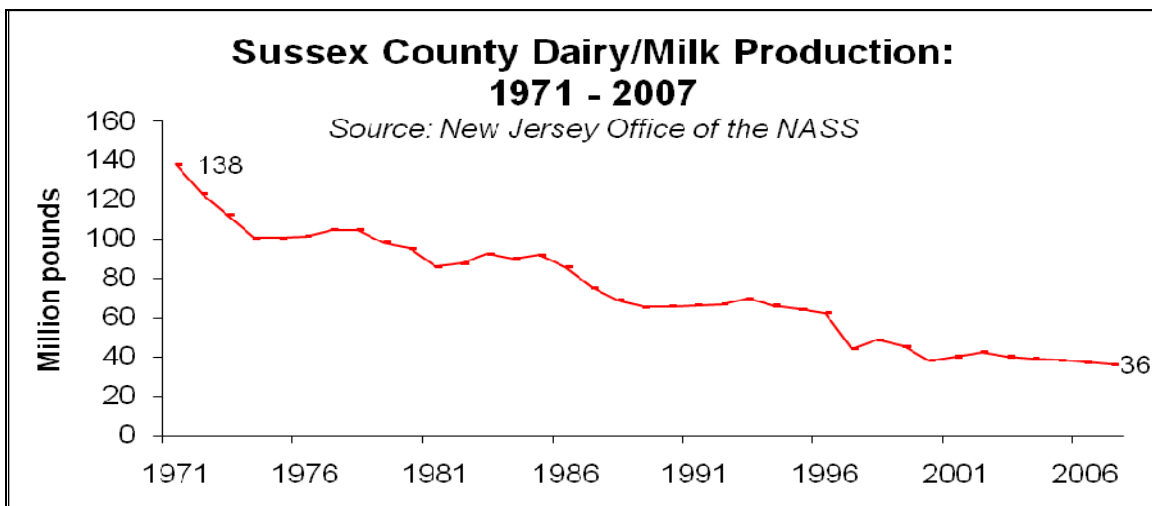
Overall acreage dedicated to crops in Green Township has declined significantly in the past 25 years. Since 1983 the acres of vegetables in Green Township has declined by 63% from 336 acres down to 126 acres. Despite these declines, Green Township ranks second in Sussex County in the number of acres devoted to vegetables. The leader in Green Township vegetable crops is sweet corn, at 64 acres in 2009. However, acres of sweet corn have declined almost as rapidly as overall acres dedicated to vegetable crops, down from 184 acres in 1990. Acres dedicated to tomatoes have virtually disappeared, from 88 in 1983 to only four in 2009. Conversely, pumpkins have seen an increase in dedicated acres, from eight in 1983 to 43 acres in 2009. Total acres dedicated to fruit crops have decreased by almost 82% since 1983 and now comprise 5 acres of Green Township land. Acres of land dedicated to berries and cover crops have also decreased significantly. Nursery crops are the only product in which dedicated acreage has increased since 1983. Within the County, Green ranks fifth in number of nursery acres. (See *Vegetable and Other Crops* chart below)

Green Township Vegetable and Other Crops- Selected Data by Acre											
	1983	1990	2000	2002	2004	2005	2006	2007	2008	2009	% Change
Christmas Trees	47.9	132	34	37	32	41	44	45	42	49	2
Trees/ Shrubs	6	35	20	24	4	33	30	33	38	38	533
Total Nursery	61.3	169	58	65	41	83	78	87	87	99	61
Tomatoes	87.9	24	12	2	3	2	1	1	3	4	-95
Pumpkins	8	21	11	9	17	13	10	22	31	43	438
Sweet Corn	144.5	184	88	41	32	39	49	35	13	64	-56
Total Vegetables	336	320	178	95	99	110	61	60	93	126	-63
Apples	6.8	4	3	2	2	2	2	3	5	5	-26
Total Fruit	27.3	7	3	2	7	5	5	6	9	5	-82
Total Berry	7.4	1	16	15	11	16	4	11	13	7	-5

Source: NJ Farmland Assessment Data

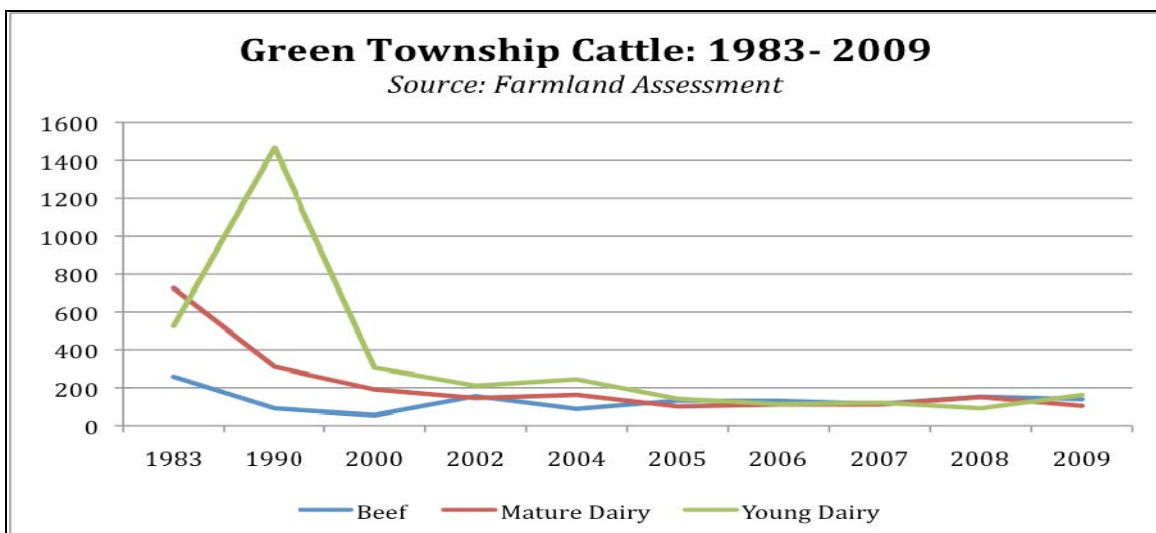
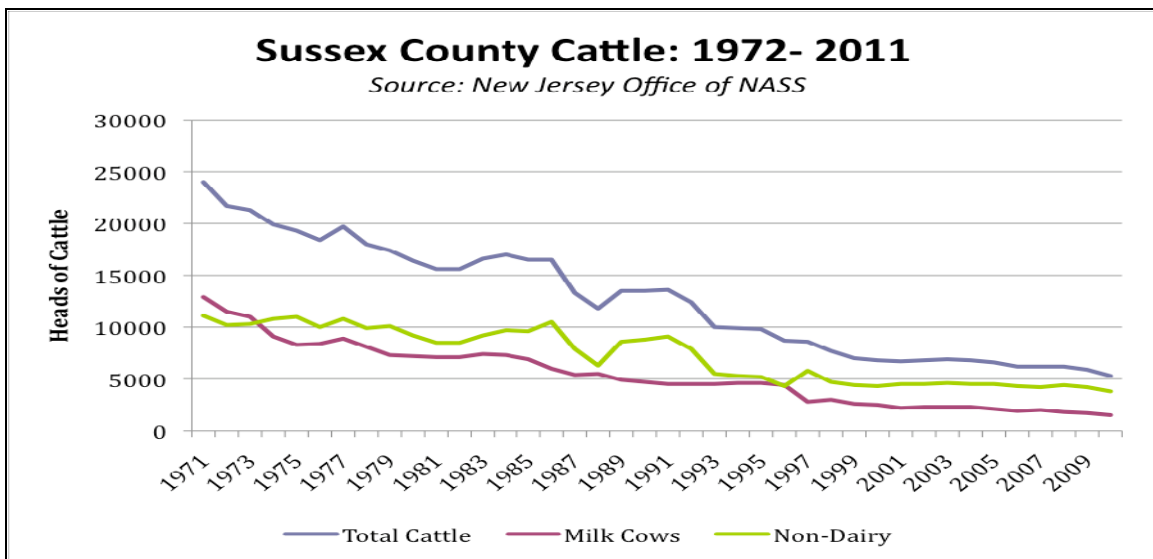
Livestock

The dairy and livestock industries in Green Township and Sussex County have experienced significant declines since the 1970s; although Sussex County still ranks third in the State for number of milk cows at 2,000 head in 2007, and second in terms of milk production at 36.1 million pounds (see *Milk Production* chart below). Decreasing demand for their products and other unfavorable market conditions has left only one dairy farmer in Green Township. A combination of high input costs, historically low milk prices, and weather related losses in 2005 created a scenario that the New Jersey Department of Agriculture likened to “a perfect storm.” (2006 Annual Report of the NJDA)⁶ Although milk prices rebounded somewhat in 2007, this was offset by record-high feed, fuel and fertilizer costs. (2009 Economic Development Strategies)⁷ Among the most significant input costs faced by New Jersey’s dairy farmers are high land prices and property taxes. Dairy farms require more extensive plots of land than most agricultural operations, and rising land prices and property taxes have made other uses of dairy land more attractive to many farmers.

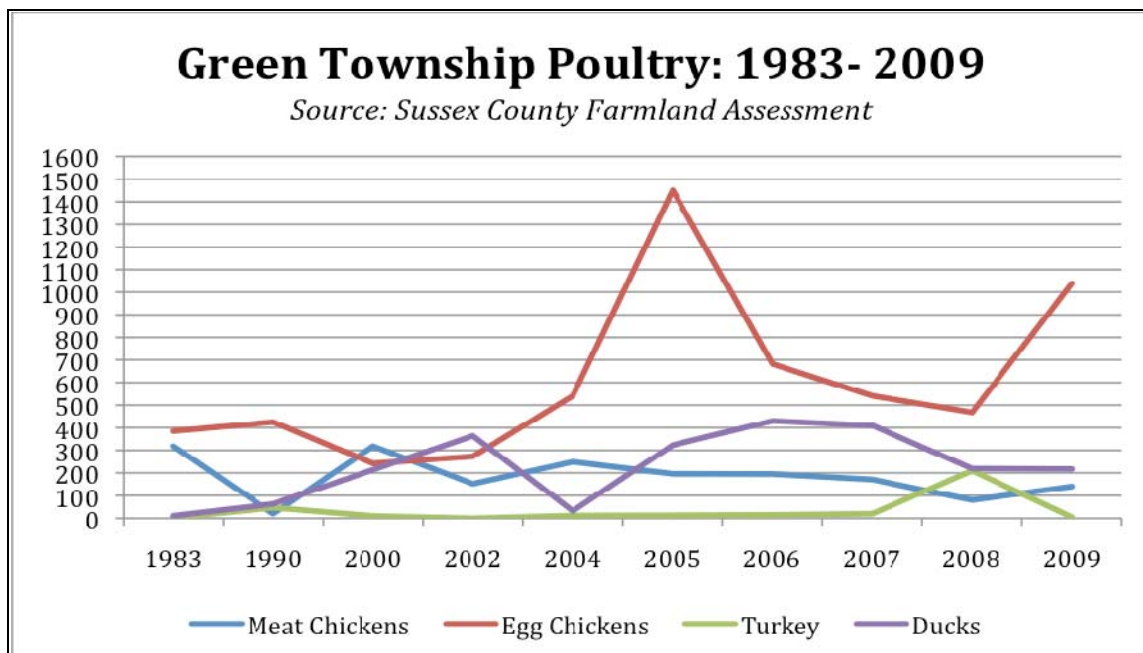
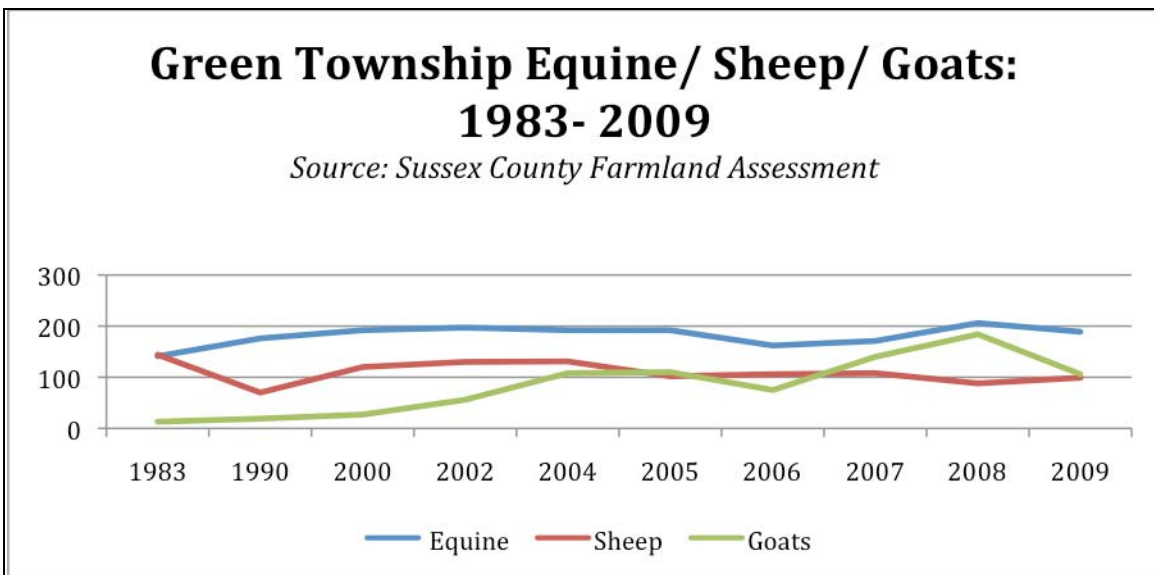


Erosion of the local supporting infrastructure has impacted dairy producers as well. After the demand from New York and Philadelphia for New Jersey dairy products dropped during the 1960s, many dairy support businesses relocated or closed, which forces dairy producers to ship their products over considerable distances to be processed. This shipping, along with the spike in fuel prices for 2008, cost dairy farmers additional monies, cutting into their profit margins. Additionally, the shortage of large animal veterinarians in the region has made keeping livestock less feasible.

The expenses incurred by dairy farmers due to poor market conditions and inadequate support services have influenced the agriculture decisions for those that wish to remain in agriculture. Thus, many have transitioned their operations towards less infrastructure-intensive practices, such as field crop production or nursery operations. Many former dairy farmers have decided to discontinue farming, opting instead to sell their farms. This breakdown in the overall support structure presents significant risks to the future success of the dairy farms in and around Green Township (see *Dairy Cattle* chart below).



With the exception of a spike in young dairy cattle surrounding 1990, overall cattle trends have been in decline since 1983. The spike in young dairy number in 1990 is due to a veal production operation on Pequest Road which operated at that time.⁸ In 1983, Cattle was the largest category of livestock, with 259 heads of beef cattle, 726 heads of mature dairy cattle and 526 heads of young dairy cattle. In 2009, beef cattle had dropped to 139 heads, while total dairy cattle numbered 264. Over that same time period, egg chicken inventory rose approximately 170%, from 385 heads in 1983 to 1,039 in 2009; however the number of egg chickens peaked at 1,451 in 2005, declined until 2008 and then rose again in 2009. Turkey and beehive numbers have remained relatively constant with slight fluctuations over the years. Inventories of equine and swine have been on the rise, although the largest increases in numbers from 1983 to 2009 have been seen in goats and ducks. Sheep and meat chickens have declined in inventory. (See charts below). (*Farmland Assessment*)



Agricultural Support Services and Related Industries

Agricultural support businesses are scarce in Sussex County, according to the *2008 Sussex County Comprehensive Farmland Preservation Plan*. Sussex Borough in Wantage has a small concentration of agriculture-oriented businesses, as does Newton. However, farmers primarily rely on out-of-state and mail order businesses for their supplies. Processing facilities are limited within Sussex County as well.

Hackettstown, in Warren County, contains another notable concentration of agricultural support firms, including the largest agricultural auction house in New Jersey – the Livestock Cooperative Auction – where local farmers can sell or trade their products, as well as general farm supply stores such as Tickner’s. (*2008 Warren County Comprehensive Farmland Preservation Plan*)

Some farmers have found that reliance upon out-of-state suppliers and non-local processing facilities impose transportation costs that cut deeply into their operations profitability, though mail order is often an option that minimizes transportation costs. Local farmers generally are adept at minimizing the need for many outside repair services by addressing a variety of mechanical problems themselves. Also, farmers tend to specialize in certain types of agricultural repair, supplementing their incomes by offering their services to other farmers.

Farmers in Green Township are fortunate to have the Tranquility Large Animal Hospital located within Green Township and servicing a large part of the region; as well as Sam Castimore, a horse veterinarian in nearby Frankford Township.

Sussex County farmers benefit from a variety of non-business support services that work to maintain agricultural viability in the County, such as the Sussex County Agriculture Development Board, Sussex County Board of Agriculture, Sussex County Office of Conservation and Farmland Preservation, New Jersey Farm Bureau, Rutgers Cooperative Extension, 4-H, Future Farmers of American, Sussex County Soil Conservation District, Natural Resources Conservation Service and the Sussex County Farm and Horse Show/New Jersey State Fair. *Chapter 8* discusses these organizations in more detail. Agri-tourism is a growing business in Sussex County, and provides support to many of the growing initiatives discussed earlier, such as organic production, direct to individual sales and harvesting for fresh market rather than for processing.

Despite the loss of many support businesses from the region, local farmers still benefit from the wide range of these services throughout Sussex County, northern New Jersey, and eastern Pennsylvania. The Rutgers Cooperative Extension of Salem County has compiled a comprehensive listing of all the agriculture-related businesses, organizations, and markets in the State of New Jersey called the *Green Pages*. (*Green Pages*)⁹ The agricultural businesses listed in these Green Pages that are located in, or around, Sussex County are provided on the following pages.

Agricultural Businesses Servicing Sussex County and Green Township

*Sources: Rutgers Cooperative Extension of Salem County, Sussex County CFPP, New Jersey
(<http://salem.rutgers.edu/greenpages/service.pdf>)*

Animal Removal

Day & Nite Animal Recovery Svc
Bartley Rd.
Long Valley, NJ 07853
(908) 876-3341

Certified Public Accountants

New Jersey Society of Certified Public
Accountants
425 Eagle Rock Avenue
Roseland, NJ 07068-1723
Phone: (973) 226-4494
Fax: (973) 226-7425

Construction

Barn Works
Phone: (973) 300-5146
Description: Serve Northern and Central
New Jersey.

Morton Buildings, Inc.
PO Box 126
Phillipsburg, NJ 08865-0126
Phone: (908) 454-7905
Website: <http://www.mortonbuildings.com>

Parker Landscaping Construction Inc.
Califon, NJ
Phone: (973) 638-3483
Phone: (908) 832-9007

Tim Terry
Washington, NJ 07882
Phone: (908) 689-6934

Crop Insurance Agents

GS Newton Associates
7 Maple Ave.
Flemington, NJ 08822
Phone: (908) 788-9080

Equipment (New, Used, Parts, Service)

4-T's Farm
1 Stone Sign Post Road
Flemington, NJ 08822
Phone: (908) 782-0688
Fax: (908) 782-2913
Description: Horse Trailers, (Aluminum,

Power Fence Systems, Inc
3490 Route 22 West
Somerville, NJ 08876
Phone: (908) 823-0393
Fax: (908) 823-3378

Warren County Service Center, Inc.
228 Route 94
Columbia, NJ 07832
Phone: (908) 362-6916

D&R Equipment Inc.
Rt. 579
Ringoos, NJ 08551
Phone: (908) 782-5082
Description: Used equipment, tractors.

Feed

Agway Feed Mill
1127 S. Main St.
Phillipsburg, NJ 08865
Phone: (908) 454-1127

Agway-Belle Mead Farmers Co-Op Assn.
100 Township Line Road
Hillsborough, NJ 08844-3857
Phone: (908) 359-5173

Bergen County Garden Center
West Railroad Ave.
Hillsdale, NJ 07642
Phone: (201) 664-5150

Brodhecker Farm
2 Branchville-Lawson Rd
Newton, NJ 07860
Phone: 973-383-3592¹⁰

Coebler's Mill
3 Washington Ave.
High Bridge, NJ 08829-2108
Phone: (908) 638-5577

Country Feed & Grain
400 Union Ave
Haskell, NJ 07420
Phone: (973) 835-0201

Country Road Feed Store
580 Lafayette Rd
Sparta, NJ 07871
Phone: (973) 383-3334

Dover Pet Shop
112 E. Blackwell St.
Dover, NJ 07801-4102
Phone: (973) 361-2322

Falkena Hardware Inc.
20 Manchester Ave.
Haledon, NJ 07508-2610
Phone: (973) 427-1653

Farmside Supplies Inc.
15 Loomis Ave.
Sussex, NJ 07461-2213
Phone: (973) 875-3777

Harmony Dale Farms
166 Brainards Rd
Phillipsburg, NJ 08865
Phone: (908) 859-2616
Phone: (908) 859-4275

Hoffmans Supply
35E Mill Road
Long Valley, NJ 07853-3193
Phone: (908) 876-3111

J & G Discount Pet Foods
4 E Clinton Street
Newton, NJ 07860
Phone: (973) 579-3411

K & D's Feed and Tack Emporium
324 State Route 24
Chester, NJ 07930-2631
Phone: (609) 654-4312

Mike's Feed Farm
140 Furler Street
Totowa, NJ 07512
Phone: (973) 256-8081

Mikes Feed Farm
90 Hamburg Tpke
Riverdale, NJ 07457-1156
Phone: (973) 839-7747

Neshanic Station Farm Home & Garden
Center
101 Fairview Drive
Neshanic Station, NJ 08853
Phone: (908) 369-5131

New Village Farms
11 Stewartsville Road
Stewartsville, NJ 08886
Phone: (908) 859-3381

Nischwitz & Company Oil & Feed
223 Front St.
South Plainfield, NJ 07080
Phone: (908) 756-0947

Northern Valley Feed & Turf
207 Closter Dock Rd.
Closter, NJ 07624
Phone: (201) 768-5445

Roy Company Inc
P.O. Box 456
Branchville, NJ 07826
Phone: (973) 948-3400
Fax: (973) 948-2072

North Warren Farm & Home Supply
Blairstown, NJ 07825
Phone: (908) 362-6117

Outlaw Outfitters
530 US Highway 206 S
Newton, NJ 07860-6003
Phone: (973) 300-5939

Penwell Mills Feed
448 Penwell Rd
Port Murray, NJ 07865
Phone: (908) 689-3725

Pequannock Feed & Pet Supply
85 Marshall Hill Road
West Milford, NJ 07480
Phone: (973) 728-5151

Pro Plan Pet Foods
4E Clinton St.
Newton, NJ 07860-1802
Phone: (973) 579-3411

R Industries Incorporated
109 Stanton Rd
Flemington, NJ 08822
Phone: (908) 236-2861

Ralph's Feed
52 8th Ave
Paterson, NJ 07524
Phone: (973) 278-0205

Roddy MacR Feed
109 Stanton Rd
Flemington, NJ 08822
Phone: (908) 236-2861

Crop Production Services

127 Perryville Rd.
 Pittstown, NJ 08867
 Phone: (908) 735-5545
 Fax: (908) 735-6231
 E-mail: cpsjutland@agriumretail.com
 Website:
 www.cropproductionservices.com

Faesy & Besthoff Incorporated
 143 River Rd
 Edgewater, NJ 07020
 Phone: (201) 945-6200
 Description: Pesticides

Growmark FS, Inc
 PO Box 116
 Bloomsbury, NJ 08804
 Phone: (908) 479-4500 or (800) 248-4649

Financial Services

First Pioneer Farm Credit, ACA
 North Jersey Division
 9 County Road 618
 Lebanon, NJ 08833-3028
 Phone: (908) 782-5011
 NJ: 1-800-787-FARM (3276)
 Fax: 908-782-5229
 Website: www.firstpioneer.com

FSA: Warren-Morris-Sussex Counties
 Hackettstown Commerce Park
 101 Bilby Road, Bldg. 1-H
 Hackettstown, NJ 07840
 Phone: (908) 852-2576
 Fax: (908) 852-4666

U.S. Small Business Administration
 Phone: (973) 645-2434
 Website: www.sba.gov

Wachovia
 2W. Washington Avenue
 Washington, NJ 07882
 Phone: (908) 689-0661
 Website: www.wachovia.com

Hoof Trimmers and Farriers

Bedminster Forge
 Box 348
 Bedminster, Somerset County, NJ 07921
 Phone: (908) 879-5627
 Bpethick@aol.com

International Consulting Services
 Certified Journeyman Farrier
 AFA Examiner, Judge, Clinician
 Steve Bostwick
 Serving: NJ, PA
 Phone: (908) 537-7596

Troy Brighton
 Phone: (908) 303-7625

Harvey Clark
 Augusta, NJ 07822
 (973) 948-6140

Doug Craig
 Chester, NJ
 Phone: (908) 879-2793

Melissa Dodd
 Serving: Sussex Co. NJ
 Phone: (973) 209-2830

Fairweather Forge
 37 Cromwell Drive
 Mendham, Morris County, NJ 07945
 Phone: (908) 619-6798
 Boxer1203@aol.com

Carl Felts
 Boonton Twp. NJ
 Phone: (973) 263-1094

Horseshoes Are Us
 Westfield, Union County, NJ 07090
 Phone: (908) 654-9057
 benquesada@hotmail.com

Michael McClain
Serving: NJ
Phone: (973) 887-1962

Richard Moglia
Home Phone: (201) 866-2393
Cell: (201) 988-2964

Bob Pethick
Bedminster Forge
Bedminster, NJ
Serving Northern NJ.
Phone: (908) 879-5627

J.D. Vanderhoof
Boonton Twp, NJ
Phone: (973) 335-9788

V & G Equine Services
162 Mudtown Road
Wantage, Sussex County, NJ 07461
Phone: (973) 702-1176
Fax: (973) 702-1485

Vcuppari@aol.com
Matt Watson
Millburn, New Jersey
Phone: (973) 467-3946

Livestock Artificial Insemination
Acorn Embryos-Semex U.S.A.
Jon E. Higgins VMD
Phone: (908) 359-3846

Bovine Breeders Service
Alta Genetics U.S.A. Inc.
Walter Haves – Technician/Dealer
41 Havens Road
Sussex, NJ 07461
Phone: (973) 875-4641

Livestock Haulers
Sussex County
Ackerman & Son Livestock Hauling
Phone: (973) 383-4240

Poultry
Kuhl Corporation
Kuhl Road
P.O. Box 26
Flemington, NJ 08822-0026
Phone: (201) 782-5696

Seed Suppliers
Alliance Seed Incorporated
6 Mathews Drive
Flemington, NJ 08822
Phone: (908) 237-1361

Belle Mead Co-Op
100 Township Line Road
Belle Mead, NJ 08844
Phone: (908) 359-5173

Best Buys Direct, Inc.
1044 Route 23 North
Wayne, NJ 07470

Erosion Control Technologies, Inc
P.O. Box 5383
North Branch, NJ 08876
Phone: (908) 707-0800
Phone: (800) 245-0551
Fax: (908) 707-1445

Farmer's Brokerage & Supply,
Greenway Seed Company
4-21 Banta Place
Fair Lawn, NJ 07410
Phone: (201) 791-1122

Penwell Mills, LLC
448 Penwell Road
Port Murray, NJ 07865
Phone: (908) 689-3725
Phone: (800) 273-5201

The Terre Company of NJ, Inc.
P.O. Box 1000
206 Deawanna Ave.
Clifton, NJ 07014-1000
Phone: (973) 473-3393

Sheep Shearers

Christian Bench
Annandale, NJ
Phone: (908) 730-7189

Rebecca Gunther
Hillsborough, NJ
Phone: (908) 369-4088
Description: Only small local flocks.

Jeremy Mills
Westfield, NJ
Phone: (908) 232-1776

Custom Slaughter Houses

Louie Chiu Slaughterhouse
40 Montana Road
New Village, NJ 08886
Phone: (908) 859-6635
Buyer: No
Description: Slaughters beef. No sheep or goats.

Halal Fresh Meat, Inc.
Karim Elmoheli
Buyer: Yes
Phone: (973) 817-7172

Halal Packing, Inc.
Mehmet or Ali
368 Swartswood Road
Newton, NJ 07860
Phone: (973) 383-4291
Buyer: Yes

V. Roche & Son
9 High Street
Whitehouse Station, NJ 08889
Phone: (908) 534-2006
Fax: (908) 534-8498

Dealaman Enterprises, Inc.
George and Bruce Dealaman
218 Mt. View Road
Warren, NJ 07059
Phone: (908) 755-1780
Fax: (908) 647-5735
Buyer: Yes

Whippany Meatpacking, Inc.
Ali Kucukkarca
66 North Jefferson Road
Whippany, NJ 07981
Phone: (201) 386-9120
Buyer: Yes

Starter Plant Sources

Cross Country Greenhouses
P.O. Box 170
199 Kingwood-Locktown Rd
Rosemont, NJ 08556
Phone: (908) 996-4646
Fax: (908) 996-4638
Email: www.chileplants.com

Bergen County Garden Center
West Railroad Ave.
Hillsdale, NJ 07642
Phone: (201) 664-5150
Buyer: Yes

Large Animal Veterinarians

Animal Hospital of Sussex County
169 Route 206
Augusta, NJ 07822
Phone: (973) 579-1155¹¹

Brockbrader, Nordstrom & Ellis
Tranquility Large Animal Vet
Andover, NJ
Phone: (908) 852-1300

Sam Castimore, DVM
Animal General Hospital
112 US-206,
Augusta, NJ 07822
Phone: (973) 579-1224

Cokesbury Equine
Andie Butler, D.V.M
177 Old Cokebury Rd.
Lebanon, NJ 08833
Phone: (908) 236-8097

Frey
Alpha Veterinary Care
Alpha, NJ 08865
Phone: (908) 454-8384

Dr. Grodkiewicz
Washington Animal Hospital
Washington, NJ 07882
Phone: (908) 689-3267

Higgins Acorn Embryo, Jon
8 Ludlow Ave.
Belle Mead, NJ 08502
Phone: (908) 359-3846
Fax: (630) 604-3846
E-mail: jonh@acornemb.com

Dr. Howard
Howard Veterinary Services
Mendham, NJ
Phone: (973) 543-6665

Dr. Reynolds
Pittstown, NJ 08867
Phone: (908) 735-9332

Dr. Roeing
Glen Manor Veterinary Hospital
Glen Gardner, NJ 08826
Phone: (908) 537-7663

Dr. Smith
Spring Mills Veterinary Hospital
Milford, NJ
Phone: (908) 995-4959
Dr. Wasser
Brass Castle Animal Hospital
Washington, NJ
Phone: (908) 689-0773

Dr. Wessel & Zaccheo
Warren Animal Hospital
Phillipsburg, NJ
Phone: (908) 859-0702

Aerial Applications
Emergi-Clean Inc
P.O. Box 2136
Linden, NJ 07036
Phone: (908) 587-0980

Green Township Farmers Participating in Direct Sales or Agri-tourism^{12, 13}

Cahill Farm
311 Pequest Rd
Andover, NJ 07821
973-786-5429
Available: tomatoes, pumpkins,
vegetables

Dark Moon Miniature Horses
165 Hibler Rd
Newton, NJ 07860
973-300-0802
www.darkmoonfarms.com
Available: breeding, rescue, and sale of
miniatures

The Goodhand Farm

110 Brighton Rd
Andover, NJ 07821
973-786-0135
Available: Heirloom tomatoes, garlic,
asparagus

Havenwood Farms

67 Henry Rd
Newton, NJ 07860
973-383-3630
Available: eggs, broilers, turkey, pork,
cheese, yogurt, jam, jellies, bread

Honey Lady

21 Hunts School Rd
Newton, New Jersey 07860
973-579-5864
Available: honey, beeswax ornaments
and candles

LL Pittenger Farm

143 Creek Rd
Andover, NJ 07821
973-786-6147
Available: Hay, beef, pork, goat, and
lamb meat

Pequest Valley Farms

239 Pequest Rd
Andover, NJ 07821
973-786-6953
Available: raspberries

Tranquility Alpacas

114 Creek Road
Andover, NJ 07821
973-786-7565

Yellow Iris Farm

147 Wintermute Rd
Newton, NJ 07860
973-579-9537
www.helpinghorse.org
Available: Therapeutic riding; boarding,
training, and lessons

Farmers Markets that may sell Green Township agricultural products

Sussex County Farmers Market at the Fairgrounds

37 Plains Road, Barn Building
Augusta, NJ 07822
Contact: Dave Klemm, President, SC Board of Agriculture, 129 Morris Turnpike, Newton,
NJ 07960, www.daveklemm2@embarqmail.com
Mid May– October, Saturdays, 9:00am – 2:00pm

Olde Lafayette Village Farmers Market

Route 15
Lafayette, NJ
973-383-8323
Late June– October; Sundays, 10:30am – 3:00pm

Sparta Farmers Market

65 Main St.
Sparta Municipal Building parking lot
Sparta, NJ
973-670-1509
June- October, Saturday 9:30 am - 1:00 pm

-
- ¹ Open Space and Recreation Plan Update – 2009 for the Township of Green, County of Sussex. Compiled by The Land Conservancy of New Jersey with the Township of Green Open Space Committee. May 2009.
- ² New Jersey Department of Agriculture, State Agriculture Development Committee. New Jersey Farmland Assessment. 2009 (tax year 2010). Sussex County – Green Township.
- ³ Rutgers New Jersey Agricultural Experiment Station. Evaluating Changes in the Eligibility Provisions for Farmland Assessment in New Jersey. October 8, 2008.
http://www.foodpolicy.rutgers.edu/docs/news/Farmland%20assessment%20report_2008.pdf. Accessed September 29, 2011.
- ⁴ New Jersey Department of Agriculture, State Agriculture Development Committee. New Jersey Farmland Assessment. 1983 (tax year 1984), 1990 (tax year 1991), 2000 (tax year 2001), 2002 (tax year 2003), 2004 (tax year 2005), 2005 (tax year 2006), 2006 (tax year 2007), 2007 (tax year 2008), 2008 (tax year 2009), and 2009 (tax year 2010). Sussex County – Green Township.
- ⁵ New Jersey Office of the National Agriculture Statistics Service.
http://www.nass.usda.gov/Statistics_by_State/New_Jersey/index.asp. Accessed October 6, 2011.
- ⁶ New Jersey Department of Agriculture. New Jersey Agriculture 2006 Annual Report.
www.state.nj.us/agriculture/pdf/06AnnualReport.pdf. Accessed October 6, 2011.
- ⁷ New Jersey Department of Agriculture. 2009 Economic Development Strategies.
<http://www.state.nj.us/agriculture/conventions/2009/strategies.html>. Accessed October 6, 2011.
- ⁸ Personal Communication with Richard Vohden. October 2011.
- ⁹ Rutgers Cooperative Extension of Salem County. Green Pages: An Agricultural Resource Guide. Online at: <http://saalem.rutgers.edu/greenpages/index.html> . Accessed September 29, 2011.
- ¹⁰ Brodhecker Farm website: <http://brodheckerfarms.com/>. Accessed April 2011.
- ¹¹ Animal Hospital of Sussex County website (<http://www.caringvets.com/>) and personal communication. April 20, 2011.
- ¹² Sussex County. Four Seasons of Agriculture. <http://www.sussexfarmvisits.com/index.htm>. Accessed October 14, 2011.
- ¹³ Local Harvest. www.localharvest.org. Accessed September 30, 2011.

CHAPTER 3: LAND USE PLANNING CONTEXT



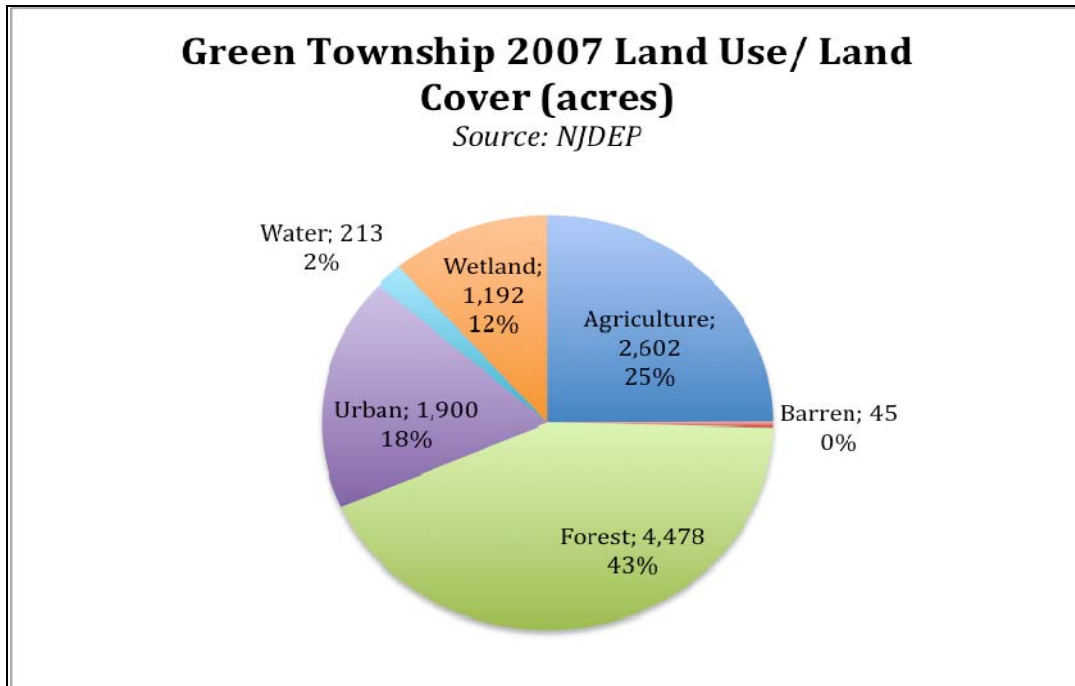
Land Use Patterns

Farms dotted the Sussex County landscape and the Green Township area as early as the beginning of the 18th century. Settlements such as Brighton, Greensville, Brandy Hook, Pettits' Mill, Kennedytown, and Whitehall; as well as Yellow Frame, Dark Moon, and Lake Tranquility¹ began as trading posts to support the agricultural community, with creameries, gristmills, lime kilns, general stores, houses of worship and schools. But mining became a main focus of Sussex County's economy, spurred by the advent of the railroad in the mid-1800s. Agriculture replaced mining as the driving economic force in Sussex County during the late 1800s. The County's proximity to the growing markets of New York prompted demand for perishable agricultural goods, especially dairy products. The railroad hubs, such as Greendell, that once served the mining operations now served the New York markets, getting dairy products and other perishables to their destinations before they spoiled. The growth of the dairy market in Green Township and other Sussex County communities, spurred the growth of field crops as well, to support the dairy industry.

This agrarian, centers-based land use pattern, with development around transportation hubs, such as Branchville and Sussex and Newton and in the agricultural or natural areas surrounding them, continued to be the prevalent pattern through the mid-twentieth century. However, in Green Township, the Greendell Station on the Lackawanna cutoff was abandoned in 1930². The lake communities that once served as vacation destinations increasingly became the focus of year-round homes, gaining in popularity between 1972 and 1984. In the latter part of the 20th century and early 21st century, large land areas were converted to residential development along the border of Allamuchy, as well as along Route 517, Kennedy and Creek Roads. Other than the Lake Tranquility community and these isolated developments, much of the residential character of Green Township is farms and single family homes lining stretches of relatively rural roads. Large portions of Green Township remain either active agricultural lands, private woodlands, or public lands; including portions of Dark Moon Preserve, Whittingham Wildlife Management Area, and Allamuchy Mountain State Park..

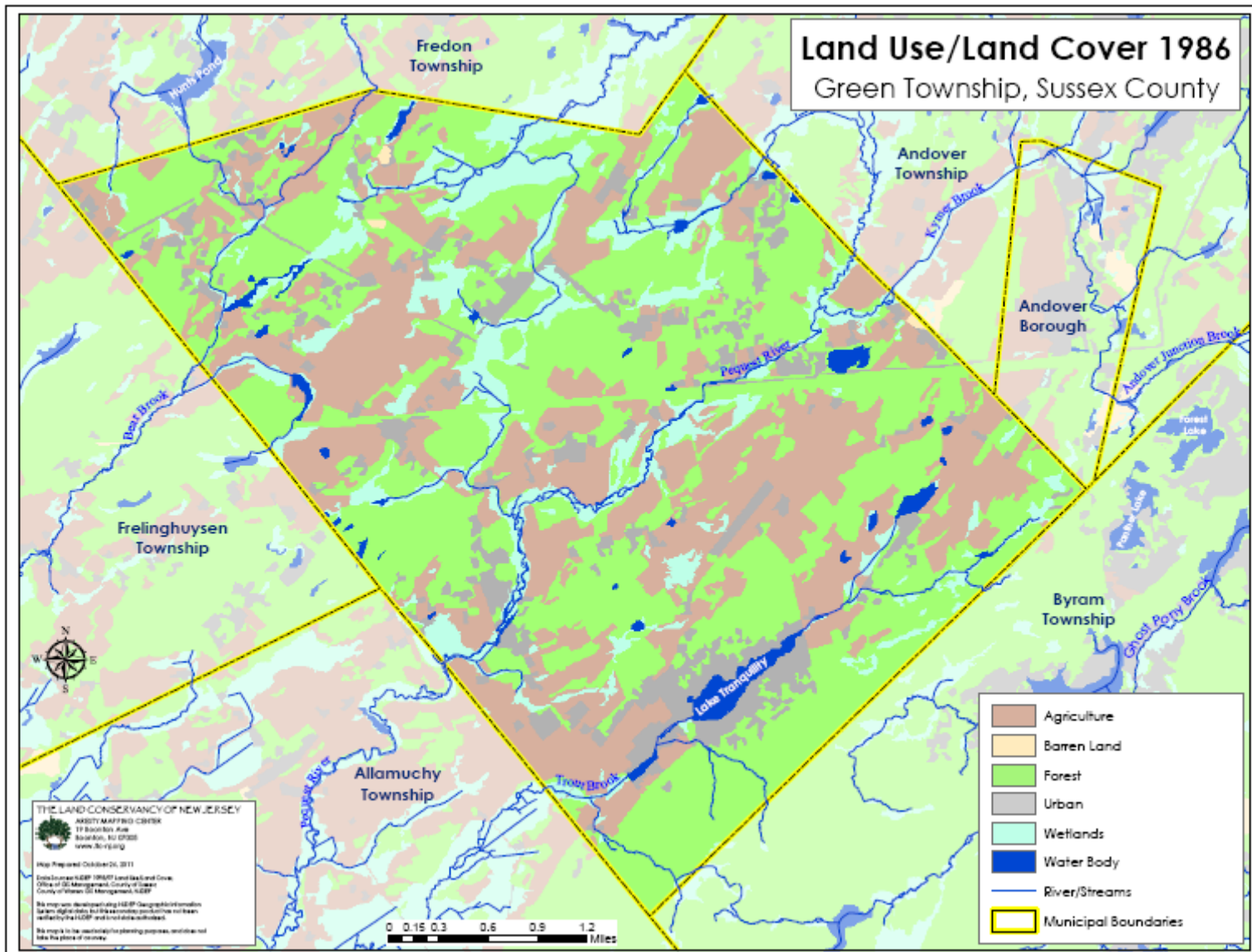
Green Township has expressed interest in creating a Town Center adjacent to the Borough of Andover's current town center to take advantage of the logical extension of proposed infrastructure, sewer capacity, and services. In the 2005 *Land Use Plan*, the Township of Green adopted a Rural Business zoning designation for this area to encourage new, mixed use development and revitalize existing commercial uses in this area.³

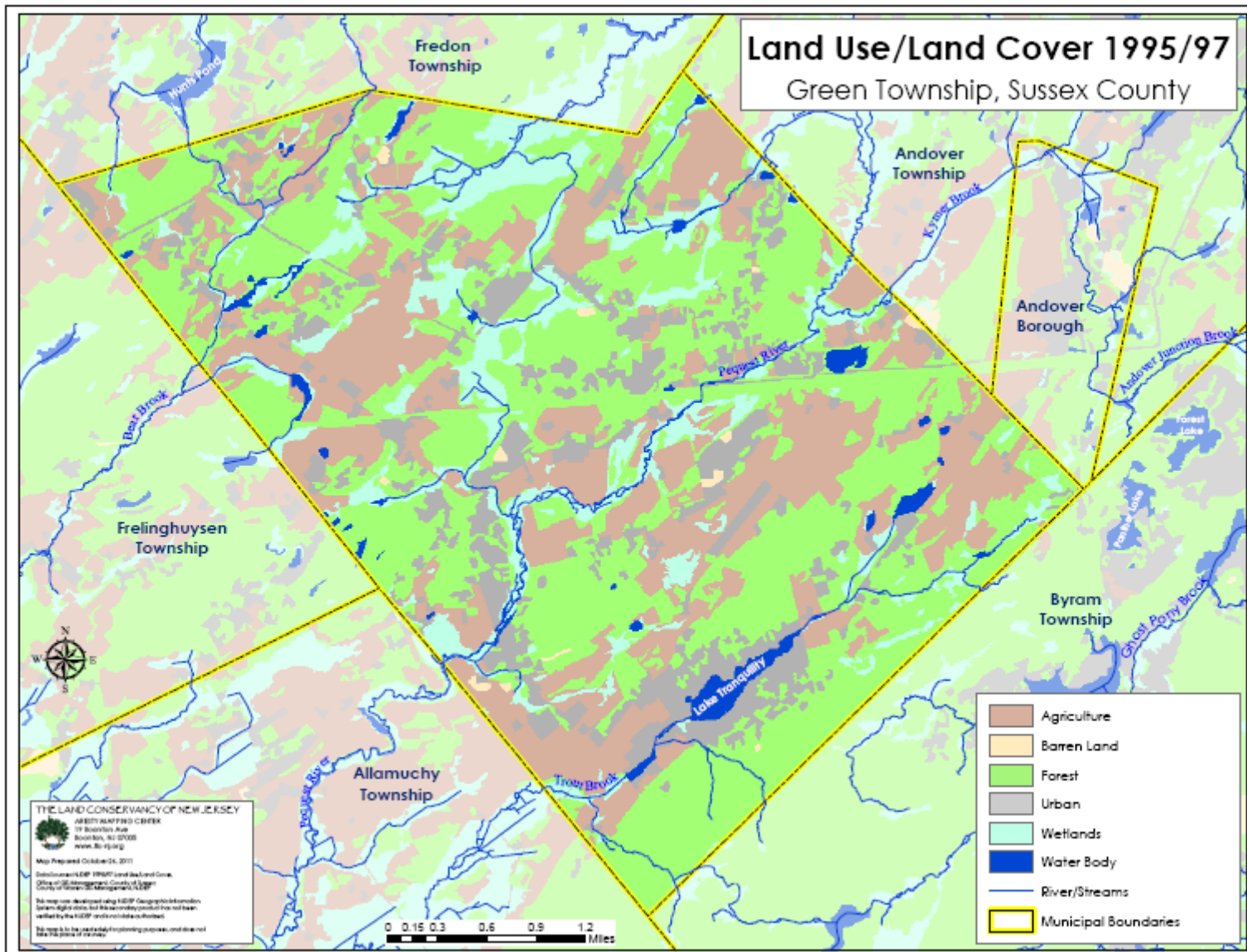
According to the 2007 Land Use/Land Cover data, a large portion of Green Township is forested (43%), with agricultural use second (25%), and urban land third at (18%). Wetlands cover 12% of the Township. Since 1986, the Township has lost 21% of its land used for agriculture and increased its urban land by 92%. On an acre for acre basis, the losses in agriculture (678), forest (258) and wetlands (14) are offset by the gains in urban land (908) and barren lands (33 acres). (See *Land Use/Land Cover* charts and maps, below).

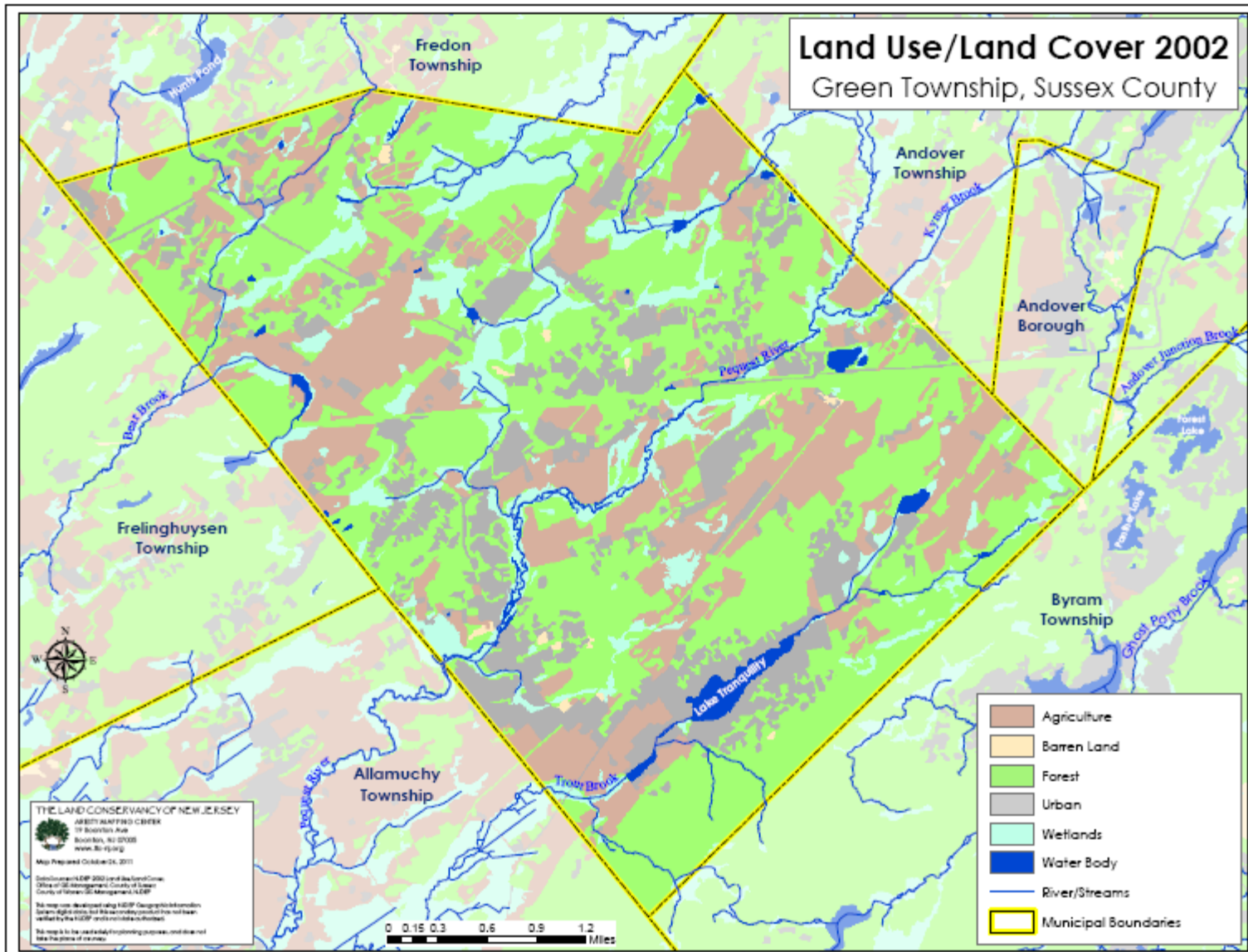


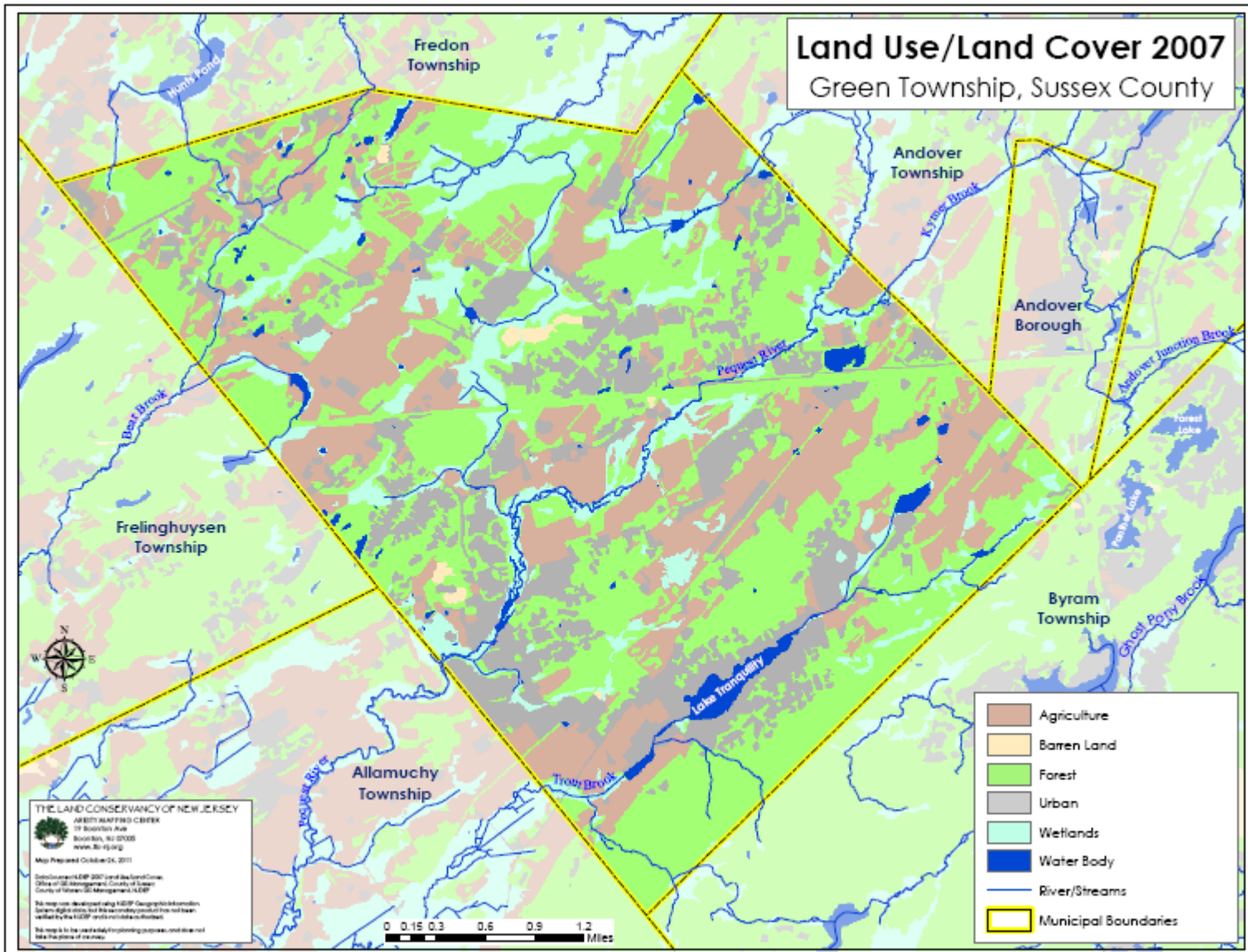
Land Use/Land Cover Trends in Green Township									
	1986		1995/97		2002		2007		'86-'07
	Acres	%	Acres	%	Acres	%	Acres	%	Change
Agriculture	3,280	31%	2,862	27%	2,574	25%	2,602	25%	-21%
Barren	12	0%	34	0%	31	0%	45	0%	288%
Forest	4,736	45%	4,757	46%	4,732	45%	4,478	43%	-5%
Urban	992	10%	1,369	13%	1,696	16%	1,900	18%	92%
Water	203	2%	198	2%	164	2%	213	2%	5%
Wetland	1,206	12%	1,208	12%	1,233	12%	1,192	11%	-1%
	10,429		10,429		10,429		10,429		

Source: NJDEP Land Use/Land Cover Data









Development Pressure

In 2010, Green Township had a population of 3,601 residents living within its 16.31 square miles, giving it a density of 222.56 persons per square mile of land area, similar to neighboring Allamuchy (205.86), but higher than Frelinghuysen (92.92) and Fredon (193.52), and lower than Andover Borough (415.07), Andover Township (313.13), and Byram (396.30). (U.S. Census) In every census year from 1930 through 2010, Green’s population represented between 1.7 and 2.4% of the County population, which totaled 149,265 in 2010. (U.S. Census Bureau)

The population history below shows that there was substantial, double-digit growth in every 10-year period from 1940 on, with the biggest increases occurring between 1960 and 1970 and between 1970 and 1980. The period 1980-1990 shows the slowest growth of any 10-year period since 1950.

Years	1930	1940	1950	1960	1970	1980	1990	2000	2010
Population	539	540	596	854	1343	2450	2,709	3,220	3,601
% Change		0.19%	10%	43%	57%	82%	11%	19%	12%
<i>Source: U.S. Census Bureau</i>									

Figures prepared in January 2004 by the Sussex County Planning Division for the *Strategic Growth Plan* projected a rise in Green Township’s population to 4,000 in 2020, an 11% increase from 2010. (Strategic Growth Plan)⁴

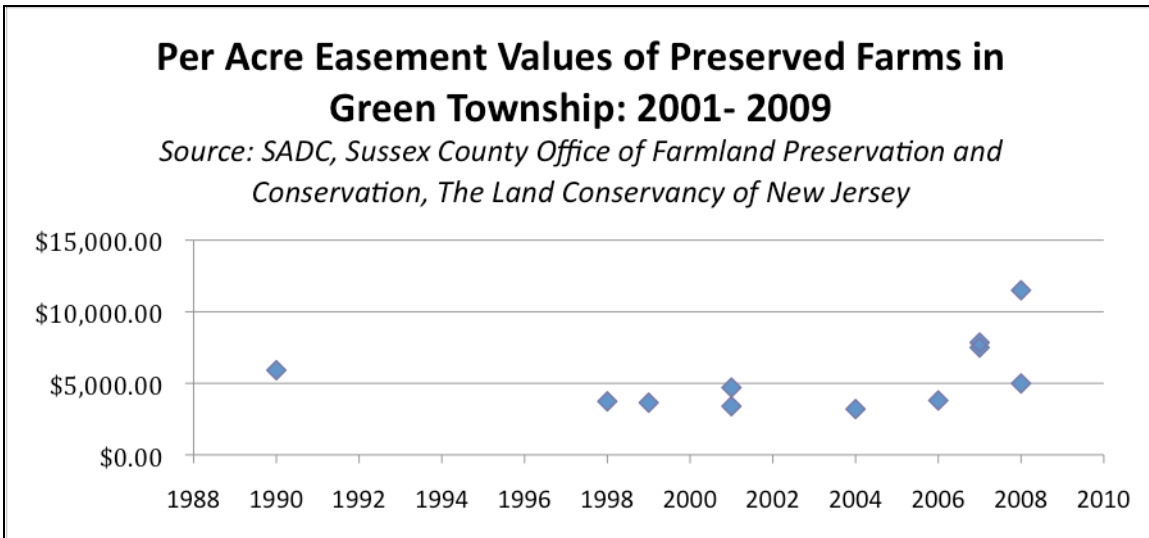
A comparison of development saturation in Sussex County for the years 1972/1984/1995/2001 shows the most significant change occurring between 1972 and 1984, which tracks with the population growth pattern. This development occurred predominantly around Lake Tranquility, and along Route 517, Kennedy Road and Creek Road in the southern part of town near the border with Allamuchy Township in Warren County. Between 1984 and 2001 development density continued to increase in these areas and to fill in along already established roadways. (*Rutgers Center for Remote Sensing and Spatial Analysis*)⁵

During the late 1980’s, County wide growth accelerated as can be seen by the large number of building permits issued in this time period, including permits for multi- family homes. While there was a slight increase in the number of building permits issued in Green Township during this time, trends within the Township do not represent those of the county as a whole, with the percentage of county permits being issued in Green representing only 1% of Sussex County in 1985, 1986, and 1988, and coinciding with the lowest rate of growth for any ten year period since 1950 in the Township. In the late 1990’s a surge in building permits issued in Green Township accounts for 8.5 and 7.5% of the County’s total issued permits in 1998 and 1999 respectively. County wide there is also an increase in building permits during the late 1990’s and early 2000’s, although not as great as the building permit increase during the late 1980’s. (*State of New Jersey Department of Labor and Workforce Development*)⁶

Residential Building Permits 1980- 2010						
	Green Township			Sussex County		
Year	Total	Single	Multi	Total	Single	Multi
1980	12	12	0	369	354	15
1981	6	6	0	273	273	0
1982	10	10	0	397	364	33
1983	13	13	0	649	641	8
1984	24	24	0	914	895	19
1985	17	17	0	1263	1147	116
1986	25	25	0	1691	1530	161
1987	38	38	0	1576	1488	88
1988	20	20	0	1381	1150	231
1989	16	16	0	542	530	12
1990	16	16	0	337	307	30
1991	11	11	0	282	262	20
1992	14	14	0	447	384	63
1993	14	14	0	356	356	0
1994	16	16	0	469	458	11
1995	17	17	0	382	382	0
1996	24	24	0	515	515	0
1997	21	21	0	473	473	0
1998	47	47	0	552	552	0
1999	51	51	0	687	599	88
2000	26	26	0	719	719	0
2001	22	22	0	808	621	187
2002	16	16	0	679	667	12
2003	19	19	0	587	547	40
2004	16	16	0	612	558	54
2005	16	16	0	668	666	2
2006	20	20	0	603	551	52
2007	32	32	0	360	324	36
2008	17	17	0	302	196	106
2009	1	1	0	182	163	19
2010	17	17	0	210	203	7

Source: State of New Jersey Department of Labor and Workforce Development web site. Data from U.S. Bureau of the Census

From the perspective of agricultural land values, there has been a recent trend upward in the per-acre easement values paid to preserve farms. The average easement value for the seven farmland preserved parcels between 1990 and 2006 was \$4,057 per acre, but the average easement value for the four parcels preserved in 2007 and 2008 was \$7,960 per acre (see *Per Acre Easement Values* chart below).



Public Infrastructure – Sewer and Water

The Township is unsewered, depending on septic systems. Currently, there are no plans to develop a public water system in Green Township. The only existing private wastewater treatment facilities are located at the Garden State Academy School, owned by the 7th Day Adventists in the southeastern portion of the town, and Crossed Keys Inn Banquet Hall⁷. The Township depends on groundwater for its water supply. The Tranquility Springs Water Company, servicing the Forest Knolls community as well as a few surrounding homes, is the only water supply company in the town. (2009 Green Township Open Space and Recreation Master Plan Update)

Land Use Planning Initiatives

Green Township and its farmers can look to extensive and sustained land use planning efforts undertaken by all levels of government to guide its land use planning decisions. These tools include the 2001 State Development and Redevelopment Plan and the 2007 Sussex County Strategic Growth Plan, as well as municipal tools such as the Township Master Plan, zoning regulations and other planning and resource documents, including this Farmland Preservation Plan.

State Development and Redevelopment Plan

The New Jersey State Planning Commission has drafted the *State Development and Redevelopment Plan* (SDRP) that outlines general policy objectives concerning land use and future development in the State. (2001 NJ State Development and Redevelopment Plan)⁸ The SDRP identifies five Planning Areas within the State where different sets of goals and guidelines are considered appropriate to determine development activities (see NJ State Development and Redevelopment Plan map below). These Planning Areas are labeled as Metropolitan, Suburban, Fringe, Rural and Environmentally Sensitive lands.

The SDRP also identifies Designated Centers where future development and redevelopment activities are most appropriate and 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.

Metropolitan Planning Areas (PA1) comprise the most intensely developed regions in the state. The goals in this planning area category 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. Green Township does not contain land within the Metropolitan Planning Area. There is no Metropolitan Planning Area in Sussex County.

Suburban Planning Areas (PA2) 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. Green Township does not contain land within the Suburban Planning Area. The only Suburban Planning Area in Sussex County is in Stanhope Borough in the southeastern corner of the County.

Fringe Planning Areas (PA3) serve as an appropriate interface between suburban and rural areas. They are not as developed as metropolitan and suburban areas, but support more development activity than nearby rural lands. Fringe Areas play the important role as a buffer between these largely incompatible 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. Neither Green Township nor Sussex County contain any land within the Fringe Planning Area.

Rural Planning Areas (PA4A) 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.

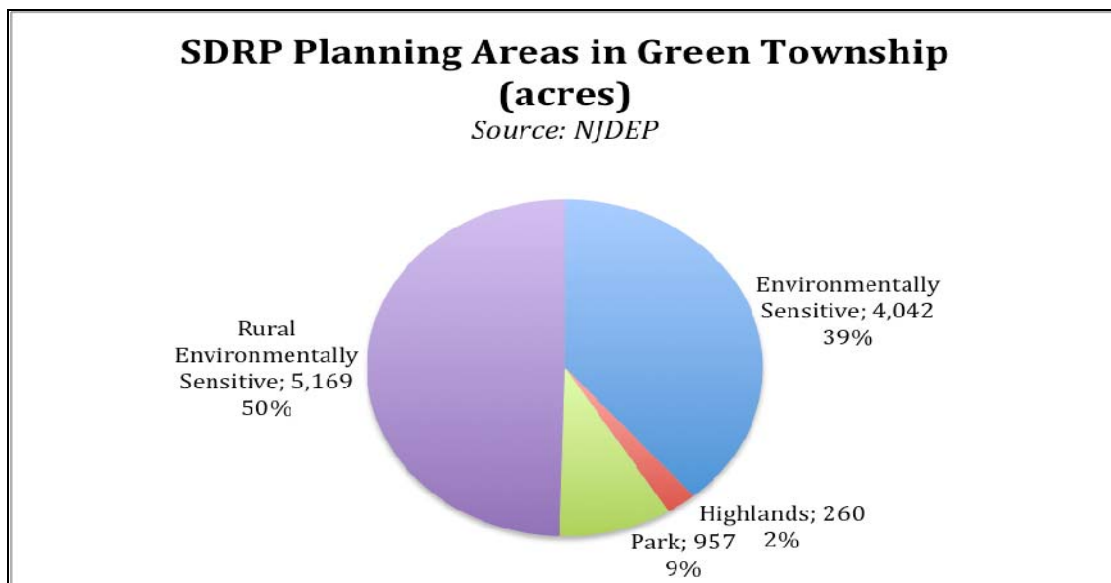
The *Rural-Environmentally Sensitive Planning Area (PA4B)* is a subset of the Rural Planning Area and separately identified on the Policy Map (see below). Lands in this Planning Area are suitable for agriculture but also contain environmentally sensitive features that must be taken into account, such as steep slopes or critical wildlife habitats. These areas number approximately 4,042 acres (39%) in Green Township and are located in the farmland belt along the Pequest River and extend below Route 603.

Environmentally Sensitive Planning Areas (PA5) contain lands where natural resource preservation should be the primary planning consideration. This Planning Area occupies

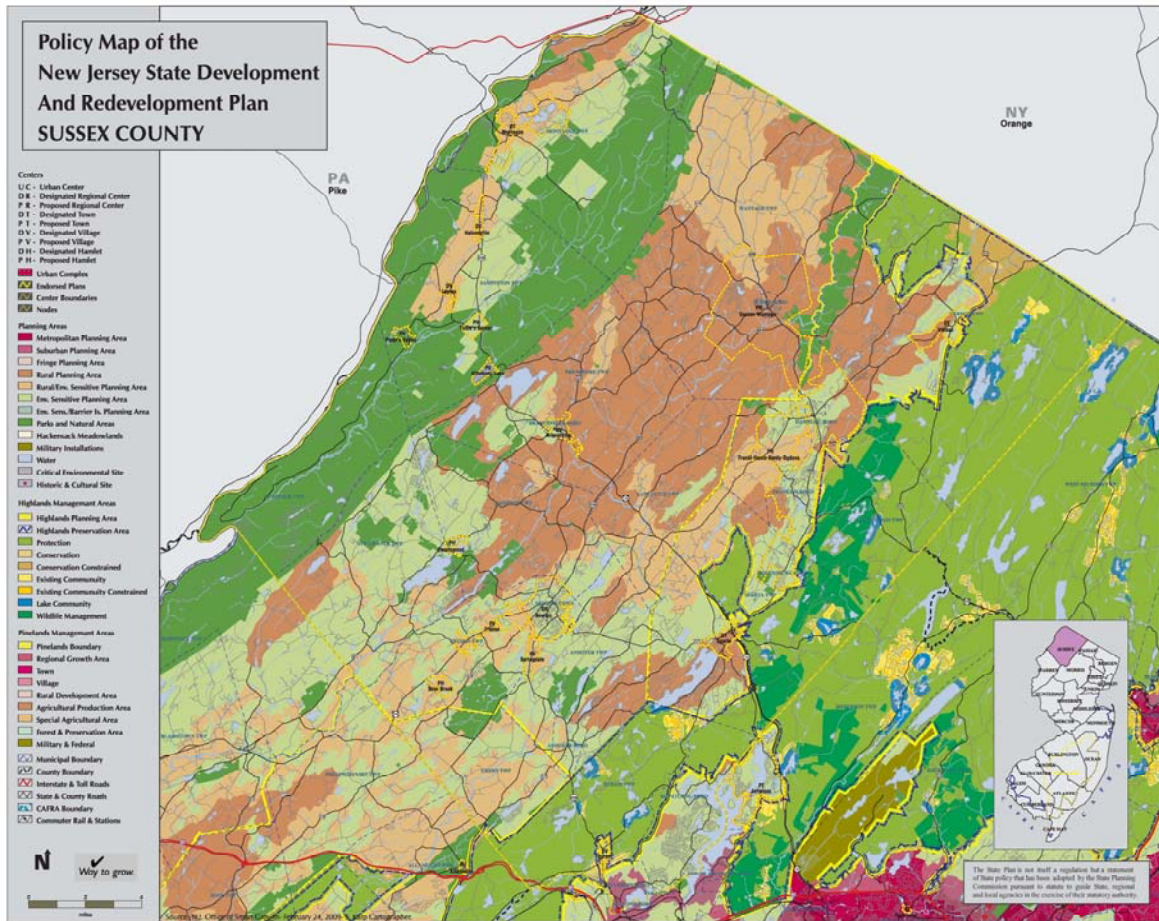
approximately 5,169 acres (49.6%) of Green Township and consists of areas identified as Natural Heritage Priority sites and lands that provide connectivity between sites.

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.” (*SDRP*) Centers become *proposed* and then *designated* after the municipalities or counties that encompass them submit development plans to the State Planning Commission, which are subsequently endorsed by the Office of Smart Growth. (*SDRP*) In Green Township, the New Jersey State Plan identifies two existing hamlets; Greendell and Tranquility. “A hamlet is defined as a small scale, compact residential settlement with one or more community related functions that accommodates development”(Green Township OSRP Update 2009) In the State Plan, Green Township also has an identified village center in Lake Tranquility. Villages are defined as “a small, compact center of predominately residential character but with a core of mixed-use commercial, residential, and community services. Often local economic and social functions are integrated with housing in a village.” (Green Township OSRP Update 2009)

Green Township contains a number of public lands, including a portion of Allamuchy Mountain State Park and Whittingham Wildlife Management Area, which are classified on the State Plan Policy Map as Park and Recreation Areas. (Green Township OSRP Update 2009) These lands total 957 acres (9%) of Green Township.



The discussion above references the adopted 2001 *State Development and Redevelopment Plan* (SDRP) and the official State Plan Policy Map from June 16, 2010 (see below).



Source: New Jersey State Planning Commission.

New Jersey State Development and Redevelopment Plan. March 2001 Policy Map Update: June 16, 2010.

State Strategic Plan

In October 2011, Governor Chris Christie introduced the proposed *State Strategic Plan* as the new revised State Development and Redevelopment Plan, and focusing on sustainable economic growth. This plan intends to focus economic growth in targeted industry cluster regions, thus healthier communities can be created and natural resources will be preserved. Several of the objectives and values put forth in this Plan are consistent with the farmland preservation program in Green Township. The State Plan Policy Map as discussed above will be used in the beginning stages of this new plan to identify areas for planned growth and investment with plans for its use to be phased out by 2013.⁹

Objective 1.3 “*Support of Land and Water Based Industries*” calls for state agencies to “*reconsider regulations that restrict the growth of farming, fishing and appropriately scaled green energy infrastructure*” as well as committing to advocate for legislation that expands protections for farming. (*State Strategic Plan*) Farmers in Green Township and throughout the state would benefit from expanded protections for their industry.

A set of principles known as “*Garden State Values*” are identified in the *State Strategic Plan* to advise “*Priority Growth Investment Area*” criteria and fulfill requirements of the State Planning Act. *Garden State Value #8: Provide for Healthy Communities through Environmental Protection and Enhancement* calls for an increase in the quantity and quality of preserved land to ensure healthy places. Green Township’s efforts to preserve farmland and open space are in line with this value. *Garden State Value #9: Protect, Restore and Enhance Agricultural, Recreational and Heritage Lands* intends to “*Support agriculture and locally-grown food consumption through protection and preservation of farmland. Protect agricultural, historic sites and landscapes. Provide accessible neighborhood parks and recreational systems.*” (*State Strategic Plan*) If executed properly, this value will prove beneficial to the Green Township farming community through its support not only of preserving farmland and agriculture, but also of local food systems.

Highlands Regional Master Plan

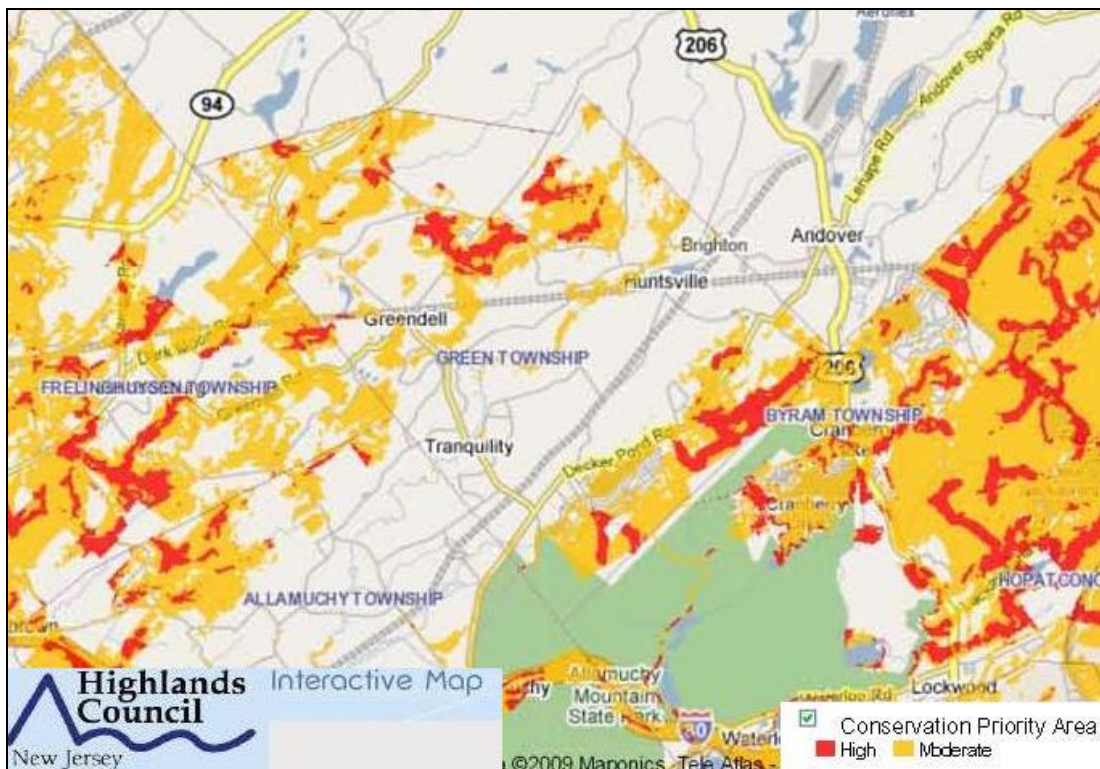
The State Plan supports the recognition of Special Resource Areas (SRA). SRAs are defined as having “*unique characteristics or resources of statewide importance which are essential to the sustained well being and function of its own region and other regions or systems—environmental, economic, and social—and to the quality of life for future generations.*” The Highlands Region is the first, and currently the only, SRA, although a petition has been presented for consideration of a Sourland Mountains SRA. To ensure the continued uniqueness of such areas, or regions, which straddle counties and municipalities, the State Planning Commission seeks to foster regional planning initiatives for these areas. Other areas that are similarly acknowledged as planning regions, established by statute, include the New Jersey Meadowlands and Pinelands (both overseen by commissions), and coastal areas of New Jersey (under the auspices of the Coastal Area Facilities Review Act. (*Office of Smart Growth*). Additionally, nine municipalities in Monmouth County began working in 2006 with the Office of Smart Growth, among other agencies, to establish a Bayshore Regional Strategic Plan for the Raritan Bay, and several counties are participating in a regional initiative called the Liberty Corridor, which focuses on economic development through transportation improvements and brownfield reuse, among other objectives.¹⁰

The New Jersey State Legislature enacted the Highlands Water Protection and Planning Act (HWPPA) on August 10, 2004. The Act identified areas within the Highlands Region as either Preservation or Planning Areas. In an effort to ensure the integrity of northern New Jersey’s drinking water resources, the HWPPA imposes strict land use controls within the Highlands Preservation Area, which encompasses large parts of the 88-municipality region. Lands within the Preservation Area are subject to heightened restrictions on development, water use and activities that affect water quality, or environmentally sensitive lands. The HWPPA expands mandatory buffers around the region’s streams and water bodies, sets limits on impervious coverage for individual properties and requires *Highlands Regional Master Plan* (RMP) conformance from Preservation Area municipalities, among other criteria. Lands in the Highlands Planning Area are not subject to the strict land use controls of the Preservation Area. However, municipalities can opt in to the stricter

standards if they choose to, and are offered planning grants by the N.J. Highlands Council to help align Municipal Master Plans with the RMP. The Council passed the final RMP in July 2008, it was then ratified via a September 5, 2008 Executive Order by the Governor.

The Highlands region covers 13% of state’s land area. Within the Township, 10,198 acres (97% of the municipality) fall within the Planning Area, where conformance with the RMP is voluntary. The remaining 281 acres (3% of Green) fall within the Preservation Area. All Green Township land in the Preservation Area is located within Allamuchy State Park (*Highlands Regional Master Plan, page 22*). The *Regional Master Plan* highlights areas of ecological importance in both the Planning Area and Preservation Zones through the Land Use Capability Zone Map. This map assigns an overlay zone that “best represents the requirements of the Highlands Act.” (*Highlands RMP, page 110*) The Highlands Council developed three primary overlay zones (the Protection Zone, Conservation Zone, and Existing Community Zone) and four subzones (Wildlife Management Sub-Zone, Conservation Zone – Environmentally Constrained, and Lake Community Zone) that apply within both the Preservation and Planning Areas. (*Highlands RMP, page 110*)

The land area of Green Township falls predominately within the primary overlay zones of both the Protection Zone and Conservation Zone. Additionally, a significant portion of the land base has been designated as within the Conservation – Environmentally Constrained Sub-Zone. The area along Kennedy Road, through Tranquility has been designated as an Existing Community Zone, and the area surrounding Lake Tranquilly has been designated as a Lake Community Zone. Land within the Whittingham WMA is designated as a Wildlife Management Subzone. (Highlands RMP Land Use Capability Zone Map below)



Source: N.J. Highlands Council

As identified in the *Regional Master Plan*, these zones are described as follows:

Protection Zone: consists of high natural resource value lands that are important to maintaining water quality, water quantity and sensitive ecological resources and processes. Land acquisition is a high priority in the Protection Zone and development activities will be extremely limited; any development will be subject to stringent limitations on consumptive and depletive water use, degradation of water quality, and impacts to environmentally sensitive lands.

Conservation Zone: consists of areas with significant agricultural lands and interspersed with associated woodlands and environmental features that should be preserved when possible. Non-agricultural development activities will be limited in area and intensity due to infrastructure constraints and resource protection goals.

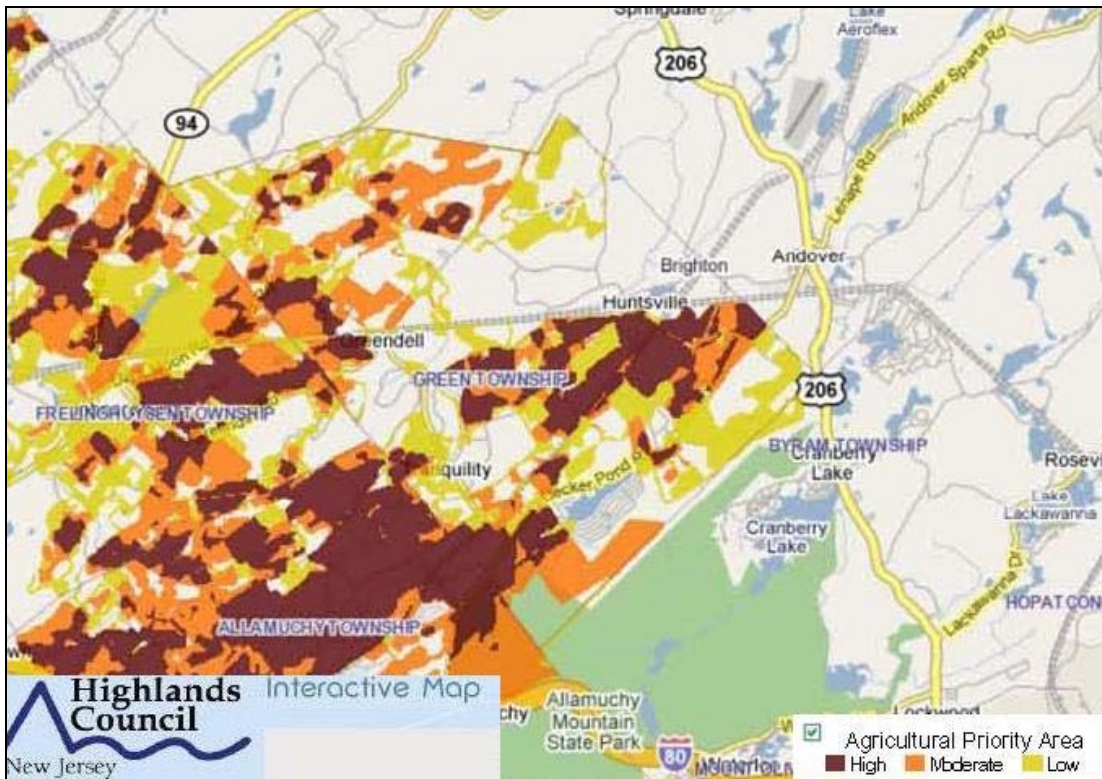
Existing Community Zone: consists of areas with regionally significant concentrated development signifying existing communities. These areas tend to have limited environmental constraints due to previous development patterns, and may have existing infrastructure that can support development and redevelopment provided that such development is compatible with the protection and character of the Highlands environment, at levels that are appropriate to maintain the character of established communities.

Wildlife Management Sub-Zone: consists of both areas managed by the United States Fish and Wildlife Service as part of the National Wildlife Refuge System and Wildlife Management Area System administered by the NJDEP Division of Fish & Wildlife's Bureau of Land Management. These areas are part of a network of lands and waters for conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and their habitats and permit compatible wildlife-dependent recreational uses such as hunting, fishing, wildlife observation and photography, and environmental education and interpretation. There is no minimum mapping threshold for the delineation of the Wildlife Management Sub-Zone.

Conservation – Environmentally Constrained Sub-Zone: consists of significant environmental features within the Conservation Zone that should be preserved and protected from non-agricultural development. Development activities will be limited and subject to stringent limitations on consumptive and depletive water use, degradation of water quality, and impacts to environmentally sensitive lands.

Lake Community Sub-Zone: consists of patterns of community development that are within the Existing Community Zone within 1,000 feet of lakes. The Highlands Council focused on lakes that are 10 acres or greater and delineated lake management areas consisting of an area of up to 1,000 feet (depending on the protection focus) from the lake shoreline in order to protect water quality, resource features, shoreline development recreation, scenic quality and community character. A future management area is planned, encompassing the full lake watershed, for protection of the lake water quality. This zone has unique policies to prevent degradation of water quality, and watershed pollution, harm to lake ecosystems, and promote natural aesthetic values within the Existing Community Zone (*Highlands Regional Master Plan, pages 111-112*).

Much of the land in Green Township is also classified as an Agricultural Resource Area (ARA). ARAs are defined as areas that contain contiguous farm belts and quality agricultural soils. Furthermore, within these ARAs are large sections defined as moderate to high Agricultural Priority Areas, based on their suitability to agricultural production and other criteria such as development potential, local commitment, contiguity with other farm parcels, and size (See Highlands Region Agricultural Priority Areas map below). (*Highlands Regional Master Plan*)¹¹



Highlands Agricultural Priority Areas, Green Township (Source: Highlands Regional Master Plan)

Sussex County Strategic Growth Plan

The *2007 Sussex County Strategic Growth Plan* 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 five different Sussex County Landscapes in which the Plan's policies will be differentially applied: Rural/Agricultural, Parks/Wildlife Areas, Lake Communities, Job Centers, and Town Centers. For instance, housing construction is actively encouraged in Town Centers and accepted in low density clusters within the Rural/Agricultural landscape. The majority of Green Township falls within the Agricultural/ Rural Landscape. This area is described as:

Areas of low density residential development, active and fallow farmlands and small commercial service groupings (often configured as strips along highway frontage), natural resource development (quarries), golf courses, and ski areas. Large areas of land are

preserved as agricultural properties or open space. The road network is generally comprised of two-lane County roads and older municipal streets with scattered direct access to homes and businesses. There is a combined sense of openness and human presence (2007 Sussex County Strategic Growth Management Plan, page 10).

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 (*2007 Sussex County Strategic Growth Management Plan, page 76*)

The areas of Green Township within the Whittingham Wildlife Management Area and the Allamuchy Mountain State Park fall within the Parklands and Wildlife Management Area. This landscape is described as:

More than one-third of the total County land area, they are expansive, with minimal disturbance and are used for camping, hunting, hiking, wildlife appreciation and other low intensity activities. They are home to threatened and endangered species of plants and animals, pristine streams, and are a place isolated from the fast pace of daily living (2007 Sussex County Strategic Growth Management Plan, page 15)

In Sussex County, these areas are non-developable and often provide a source of recreational opportunities. The following are land use policies recommended by the *Strategic Growth Plan* for the Parklands and Wildlife management Landscape:

- In concert with the State and Federal park managers, publicize the recreational opportunities available in the parks and wildlife management areas.
- With the municipalities and nonprofit corporations, indentify wildlife corridors and green belts.
- Employ the open space systems mapping from the County Open Space and Recreation Plan to prioritize land and easement acquisition. Rank criteria by overall importance. For example, aquifer protection versus acquisition of an in-holding.

- With assistance from the State and Federal governments, establish Gateway Information Centers to inform the public of the numerous opportunities available in the parks and wildlife management areas.
- Preserve and interpret the county's significant historic and cultural resources.
- Preserve and interpret State identified Natural Heritage Priority Sites.
- Preserve and interpret examples of the County's rich bedrock and surficial geologic past.
- Add to external boundaries where resource protection, buffer establishment, or recreational potential is evident.
- Determine the need for recreational opportunities.
- Analyze the character of various recreation uses in order to ensure that only low impact uses are permitted in this landscape. (*Sussex County Strategic Growth Management Plan, pages 78-79*).

Lake Tranquility and the surrounding area are designated as within a Lake Community Landscape in the Sussex County Strategic Growth Management Plan. Many Lake Communities began as summer retreats that were accessible via train with limited provision for automobiles. As the railways were dismantled, provisions were made for vehicular traffic. While they have retained their small lot and small building character, most of these lake cottages were converted to year round residences. This conversion necessitated creating support systems to deal with higher waste disposal loads and traffic volumes. Additionally, as people began living in these homes year round, substantial increases in building size occurred without a corresponding increase in lot areas or improvements to service infrastructure (*Sussex County Strategic Growth Management Plan, pages 15-16*):

These lake communities face special challenges, and their specialized needs require the support of the larger community and its governing bodies. In particular, the quality of the water is of primary concern. Water quality can be adversely impacted by a number of factors, including the degree of development surrounding the lake, the condition of adjacent septic systems, and untreated storm water runoff. Thus, in order to effectively address these issues, lake associations and communities must allocate considerable attention and dollars to restore and maintain the quality of their lakes.

The goals and subsequent recommendations of the *Strategic Growth Plan* are aimed at the long term preservation of a lake community's water quality, both above and below ground, which is consistent with Green Township's preservation objectives as outlined in the *Master Plan*.

Sussex County Open Space and Recreation Plan (2003)

The *Sussex County Open Space and Recreation Plan* is a guide for preserving open space and recreational lands in Sussex County. Its objective is to provide direction and resources to accomplish land conservation in a manner identified by Sussex County's residents and leaders. Among the goals of the SCOSRP is to preserve agricultural resources and farming communities and to preserve historic value and encourage cultural resource protection and historic sites that provide the basis upon which Sussex County has developed.

Municipal Planning

The Green Township *Master Plan* includes among its goals to:

- Make certain that the development which does occur in Green Township takes place in areas and at densities which are appropriate considering environmental factors such as potential ground water supply, septic suitability of soils, steep slopes, floodplains and prime agricultural soils
- Encourage innovation in the development of larger tracts so that land can be preserved for conservation purposes, for agricultural use, and for recreation
- Preserve all wetlands and flood prone areas, all wooded steeply sloping areas, and ridgelines, at least one-half of all mature woodlands and as much viable agricultural land as possible.
- Protect the rural/agricultural character of the area
- Retain open space
- Encourage farmland preservation
- Promote current statewide objectives for agricultural land retention and open space preservation
- Promote the local, regional and statewide interest in retaining land in agricultural use

Municipal Zoning

The majority of Green Township is zoned AR 5/2, Agricultural- Residential, with a minimum lot size of 2 acres, this zone permits agricultural and single- family dwellings at an overall density of five acres per home as a method to maximize low density and thereby preserve the rural character of the Township. The other officially adopted zones in Green Township include two other residential zones, two business zones and one light industrial/ agricultural zone. The *Green Township Zoning Districts* chart below shows the minimum lot size and the number of acres and parcels in each zone.

Green Township Zoning Districts by Lot Size, Acres and Parcels				
Zone	Min. Lot Area	Acres	Parcels	% of Land
AR-5/2 Agricultural Residential	2 acres	8,901	893	84.1
R1 Residential	1 acre	224	81	2.1
R1.5 Residential	1.5 acres	301	425	2.9
RB Rural Business	5 acres			
NC Neighborhood Commercial	1.5 acres	352	61	3.3
AI- 10 Agricultural Industrial	10 acres	807	39	7.6
Total		10,585	1,499	
<i>Sources: New Jersey Association of County Tax Boards; Green Township Zoning Map Dated December, 2008</i>				

The AR-5/2 Agricultural Residential Zone is a recent combination of the older, smaller AR- 3.5/2 and AR- 5/3 zones as well as the AR- 5/2 zone. This zone is the largest in Green

Township and provides for agriculture and single family homes on an overall five acre density with a two acre minimum lot size.

The smaller residential zones R1 and R1.5 were intended for the existing Lake Tranquility and Forest Knolls communities with the assumption that these areas will continue to develop with adequate septic and well systems.

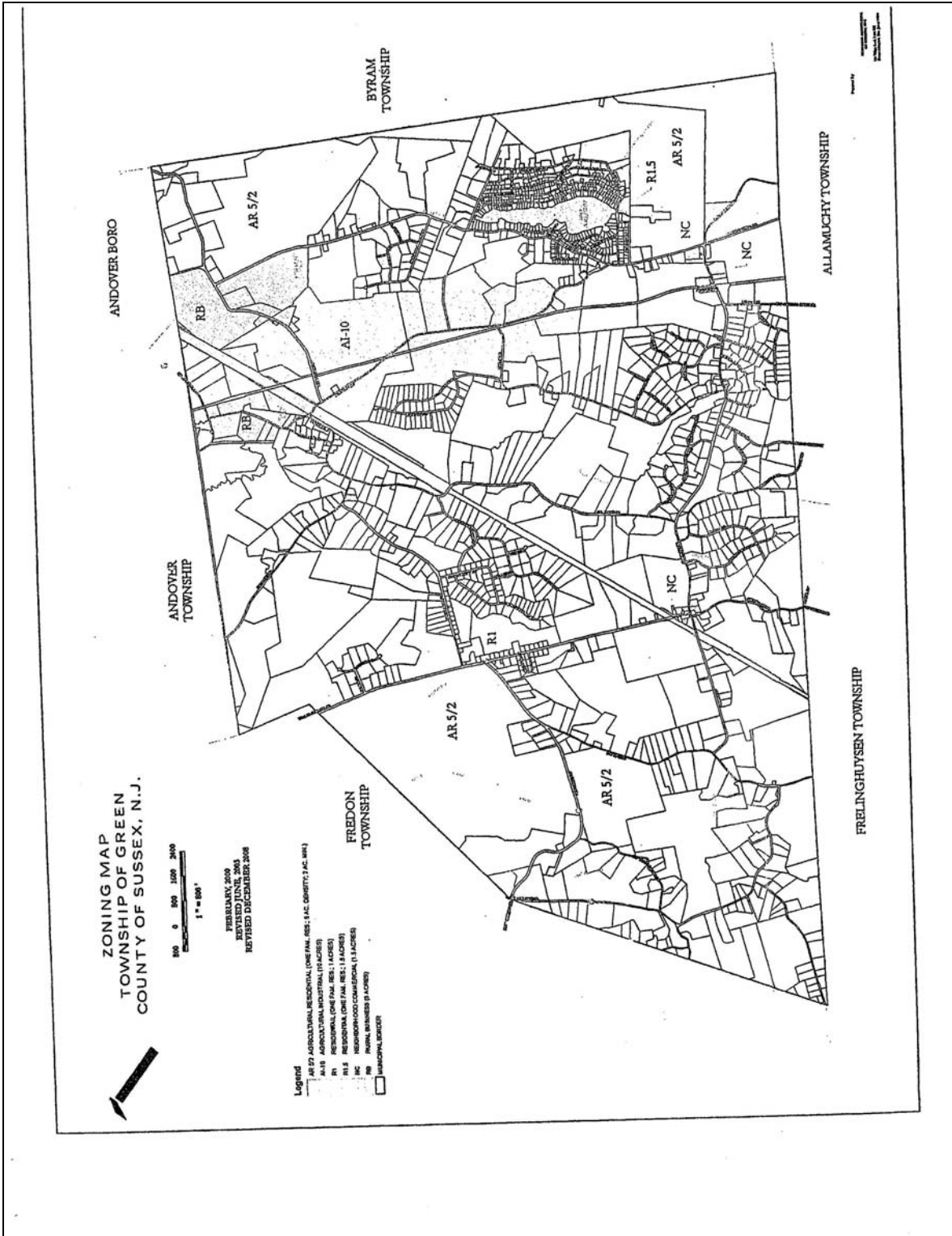
In addition to controlling density and offering options to preserve farmland and open space, Green Township’s zoning regulations makes other allowances for agricultural needs, such as:

- Right to Farm Ordinance (see *Chapter 8* for more details)
- Excluding farm accessory buildings from maximum size requirements.
- Allowing agriculture in all zoning districts.
- Allowing horses and large animals on properties with a minimum lot size of 3.5 acres.
- Allowing for manure stockpiling.

Below is a list of Permitted, Conditional and Accessory Uses by Zone as they may apply to agricultural purposes. In addition, below is the zoning map dated December 2008 for Green Township.

SCHEDULE A: PERMITTED (P), CONDITIONAL (C) AND ACCESSORY (A) USES AND STRUCTURES <i>Uses Related to Agricultural Land Use or Agri-Tourism</i> Township of Green, Sussex County, New Jersey						
USES	AR- 5/2	R-1	R-1.5	RB	NC	AI-10
Accessory uses; customary	A	A	A	A	A	A
Agriculture/Farm	P	P	P	P	P	P
Banquet/ catering halls				P		
Bed and Breakfasts				P		
Boarding Stable	P	A	A			
Farmers markets and Farmstands				P		
Inns				P		
Ground Mounted Solar Array	C					C
Home Occupation	A	A	A			
Professional/ Medical Office	A	A	A	P	P	
Nursery (agricultural)	C	C	C			
Riding Academy/Stables	P					
Restaurants				P	P	
<i>Source: Green Township Code. Accessed December 2010.</i>						

**All uses permitted in the AR zone are likewise permitted in the CR zone.



Mandatory vs. Voluntary Options

Contiguous clustering, noncontiguous clustering and lot size averaging are planning tools municipalities can use to control density. The Agricultural Advisory Committee would work with the Planning Board to implement these tools to increase the inventory of preserved land in the municipality.

Cluster zoning provides a method of developing land that sets aside desirable open spaces, farmland, conservation area, floodplains, recreation areas and parks. Permitting the reduction of lot sizes without increasing the overall number of lots brings about the protection of these areas. The effectiveness of clustering can be increased when open space set asides on adjacent properties are linked in a coordinated fashion. This requires pre-planning, but can yield excellent results.

Non-contiguous cluster zoning, in contrast to regular cluster zoning, permits the transfer of development density between parcels instead of only within parcels. First, a “sending” parcel (where the permitted development density is reduced) and a “receiving” parcel (where the permitted development density is increased) are designated. Then, the total development potential on both properties is calculated. In a case where two fifty-acre parcels are undergoing non-contiguous clustering under ten-acre zoning, there are five permitted units on each lot and ten permitted units overall. Finally, the overall development potential (10 units in this case) is applied to the receiving parcel while the sending parcel is permanently protected from future development. Non-contiguous clustering allows for development to be moved out of prime agricultural areas and concentrated into more appropriate and desirable locations.

In general, *lot size averaging* maintains the net allowable zoning density on a site, but does not enforce uniform lot size requirements or setbacks. This allows for some development lots to be very small in order to accommodate affordable housing units, neighborhood commercial stores, or “village” development densities, while other lots can be very large in order to encompass active farms or natural areas.

The above tools are voluntary options that a town can use when determining maximum lot sizes and mandatory set asides for resource protection. If the Township turns to mandatory cluster provisions or a mandatory transfer of development rights (TDR) program, the Agricultural Advisory Committee will work the Planning Board to ensure agriculture resources and land are set aside in a manner to ensure viability of the farm in the future.

Transfer of Development Rights

Transfer of Development Rights (TDR) is a growth management tool that allocates development rights from one location (the preservation or “sending” area) to another (the development or “receiving” area). These development rights are purchased by developers, and allow them to build at higher densities within the receiving zone than existing zoning permits. Viewed as an equity protection mechanism, transfer-of-development rights

provides for the preservation of important agricultural lands while fully compensating landowners and minimizing public expenditures.

The New Jersey State Transfer of Development Rights Act (*N.J.S.A. 40:55D-140*)¹² 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*)

Alternatively, *inter-municipal* TDR programs establish sending areas in one municipality and receiving areas in another. Some form of tax-based revenue sharing may be necessary with inter-municipal TDR programs.

Regional programs are an alternative that may be proposed at the regional or state level, such as the program introduced as part of the Highlands Regional Master Plan in 2008 and pilot programs being facilitated statewide through local or County TDR banks and grants and technical assistance available from the State TDR Bank Board and the New Jersey Office of Smart Growth (OSG).

The New Jersey TDR Bank and the OSG are facilitating TDR activities statewide. They offer Planning Assistance Grants and technical assistance 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. In the future, Green Township may benefit from participating in a TDR program, primarily as a Township with sending areas.

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- ¹ Eco Systems Environmental Consultants. Historical and Cultural Inventory: Green Township, Sussex County, New Jersey. 1998.
- ² Township of Green Open Space and Recreation Plan. Compiled by the Morris Land Conservancy and the Green Township Open Space Committee. September 2001.
- ³ Green Township Master Plan Reexamination Report. Prepared by Heyer, Gruel, & Associates. September 2008.
- ⁴ Sussex County Planning Division. Strategic Growth Plan Appendix : Plan Foundation Elements. <http://www.sussex.nj.us/documents/planning/strategicgrowth/Appendix%20A.doc>. Accessed October 10, 2011.
- ⁵ Rutgers Center for Remote Sensing and Spatial Analysis. Land Use Change Research. <http://www.crssa.rutgers.edu/projects/lc/index.html>. Accessed November 2010.
- ⁶ State of New Jersey Department of Labor and Workforce Development http://lwd.dol.state.nj.us/labor/lpa/industry/bp/bp_index.html. Data from U.S. Bureau of the Census. Accessed September 30, 2011.
- ⁷ Sussex County Board of Chosen Freeholders. Sussex County Wastewater Management Plan Update. http://www.sussex.nj.us/documents/planning/wmp/SC_DRAFT_WMP_20071107.pdf. Accessed November 2011.
- ⁸ New Jersey State Development and Redevelopment Plan. March 2001.
- ⁹ New Jersey State Strategic Plan. http://www.state.nj.us/state/planning/docs/dfplan_proposed.pdf. Accessed November 28, 2011.
- ¹⁰ New Jersey Department of Transportation. Liberty Corridor. <http://www.state.nj.us/transportation/works/libertycorridor/>. Accessed November 2010
- ¹¹ New Jersey Highlands Council. <http://www.state.nj.us/njhighlands/>. Accessed November 2010.
- ¹² New Jersey Statutes Annotated 40:55D: Municipal Land Use Law.

CHAPTER 4: FARMLAND PRESERVATION PROGRAM - OVERVIEW



Farmland is an irreplaceable natural resource that contributes to the economic and ecological value of a community. Farmers have been land stewards throughout most of history with agricultural uses contributing food and fiber, clean air, storm water management, groundwater recharge, wildlife habitat, and valued open vistas. In addition to providing employment, agriculture contributes to the local economy through the sale of produce and the purchase of equipment and other materials. Increasingly, farms are providing value-added products that serve the growing agri-tourism industry, which benefits both the municipality and the region. Among the popular agri-tourism attractions in Green Township are its riding programs and fall hayrides, which help bring visitors to the region throughout the year. Productive farmland is beneficial to a municipality in that it helps keep municipal taxes down, increases property values, adds to the community's character, and creates a sense of open space.

There are 5,522 acres of farm-assessed land in Green Township, including 2,602 acres devoted to active agricultural use as defined by NJEP land use/land cover analysis (see *Chapter 1*).^a The first farm preserved was the Kirby Farm in 1990 (partially located in Andover Township), the 482-acre TriFarms property closed in 2010. Farms in the Township have been preserved using the County Easement Purchase program and County Planning Incentive Grants. The Green Township Agricultural Advisory Committee was formed in 2011 to support farmland protection and the preservation of agricultural land throughout the Township.

Sussex County Agricultural Development Areas (ADAs)

The Sussex County Agriculture Development Board (CADB) developed the Sussex County Agricultural Development Area (ADA) based upon both statutory and county criteria. The ADA designates land that has the potential for long-term agricultural viability. ADA agricultural use would be the preferred, but not the exclusive, use.

^a *Note:* These numbers are determined by GIS parcel data analysis and thus differ slightly from the Farmland Assessment statistics referenced in *Chapters 1 and 2*, which derive from reports compiled by the New Jersey Division of Taxation based on filings from Township Tax Assessor.

Statutory Criteria:

- The land must be agriculturally productive or have future production potential. Also, zoning for the land must permit agriculture, or permit it as a nonconforming use.
- Suburban and/or commercial development must be reasonably non-existent in the proposed ADA area.
- The land must comprise no greater than 90% of the agricultural land mass of the County.
- Any attributes deemed appropriate by the Board must also be incorporated.

Prior to 2007, the County had designated ADAs on a voluntary, case-by-case basis, including properties with a minimum of 40 acres or within a project area or reasonably contiguous to another application for farmland preservation. In 2007, utilizing the state's regulatory criteria for designating ADA and existing farmland assessment data, the Sussex CADB designated an ADA on a county-wide basis that does not exceed 90% of the County's agricultural land base. A map of the location of the ADA in Green Township is included within the *Maps Section* in this Plan.

County Criteria:

- All farm assessed property in Andover, Frankford, Fredon, Green, Hampton, Hardyston, Lafayette, Montague, Sandyston, Sparta, Stillwater, Vernon, and Wantage Townships as cited by tax assessments as of July 2006.
- The ADA does not include farm assessed property that is in an existing sewer service area or designated Center as per State Development and Redevelopment Plan.
- Land is currently in agricultural production or has strong potential for agricultural production or is farm assessed through a woodland management plan.
- Agriculture is the preferred, but not necessarily the exclusive use.
- Agriculture is permitted by current municipal zoning ordinance or is a protected, pre-existing, non-conforming use. (*2008 Sussex County Comprehensive Farmland Preservation Plan Update*)¹

Overall, there are 5,522 acres of farm assessed parcels in Green Township, all of which are included within the Sussex County ADA with the exception of the property owned by the 7th Day Adventists in the southern corner of the Township. The *Farmland Map* in this Plan shows the farm assessed lands in the Township, including all preserved farms.

Farmland Preserved to Date by Program

In 1983, the New Jersey State Legislature adopted the State Agriculture Retention and Development Act, and created the State Agriculture Development Committee (SADC), which provides funding for farmland preservation programs, establishes farmland preservation policy statewide, and oversees program administration. That same year, the Sussex County Board of Chosen Freeholders created the Sussex County Agriculture Development Board. The Sussex CADB is composed of seven voting members and three

ex-officio members, including the County Agriculture Agent, a representative of the County Planning Department, and Sussex County Soil Conservation District. By law, a simple majority of the voting members must be farmers. The members are appointed by the Board of Chosen Freeholders.

The Sussex County Open Space and Farmland Preservation Trust fund was established in 2000, with the support of 73% of voters. This trust was initially set at two cents, with 90% of the income from the Trust allocated towards farmland preservation. In 2005, Sussex County voters approved a second dedicated fund of one and one-half cents. This second source of funding is competitive and is shared between open space and farmland preservation. (2008 Sussex County Farmland Preservation Plan Update) In January 2008, the Board of Chosen Freeholders approved a one cent reduction in the 2005 tax collected for the Open Space and Farmland Preservation Trust Fund. In 2009, the 2000 tax sunset, and the County collects open space and farmland funding through the 2005 tax. The County allocates the funding at an approximate 90 (farmland):10 (open space) split.^b

As of December 2011, there are 11 farms, totaling 1,280^c acres, preserved in Green Township. New Jersey has spent \$2,532,796, approximately 40% of the total cost share in Green. The County has spent a total of \$3,874,098, or approximately 60% of the total cost share. Federal funding has been allocated towards one farm in Green Township through the Federal Farm and Ranchland Protection Program (FRPP) (filtered through the SADC). If successful, the FRPP funding will contribute \$250,650 of the total cost share towards the preservation of this farm, which is still in the process of preservation.

The below tables identify the farms preserved in Green Township, their location, closing date and financing. This information was provided by the SADC (December 2011) and Sussex County Planning Department.

Original Owner	Acres	Block	Lot	Closing Date
Kirby, C*	63.15	22; 25	11.01, 19, 21; 3	07/27/90
Mooney, C. R.	294.07	19; 27; 30; 31; 32	16; 2; 1; 2; 2	01/08/01
Cahill, R.	36.05	22; 24; 26	1; 6; 3	06/11/01
Nature Conservancy, Tranquility Farms	90.50	15;113	3; 3	12/13/01
Hoitsma, J.&A.	74.70	10	1.01	07/12/02
Luckey, J., Jr. & N.	81.83	9	5	11/03/05
Hunt, R. & M.*	15.55	1	6	08/18/06
Chirip, J.	18.01	19	20	05/07/09
Frascella	27.24	10	1	2/08/10
Washer*	81.96	27	6.02	7/01/10
TriFarms*	481.59	28; 31; 34	1, 1.02; 7, 7.01; 13, 13.01, 33	8/05/10
TOTAL:	1,264.65			

^b Effective as of December 2011.

^c Source: SADC and Sussex County data, which differs slightly from the GIS calculated acreage in this Plan.

Original Owner	Total Cost	State Cost	County Cost	Cost/Acre	State %	Type
Kirby, C*	\$ 324,498	\$ 259,598	\$ 64,900	\$ 5,915	80.00%	Cty EP
Mooney, C. R.	\$1,099,245	\$ 777,176	\$322,069	\$ 3,738	70.70%	Cty EP
Cahill, R.	\$ 131,521	\$ 93,334	\$ 38,187	\$ 3,648	70.96%	Cty EP
Nature Conservancy, Tranquility Farms	\$ 341,038	\$ 307,697	\$33,342	\$ 3,400	90.22%	Cty EP
Hoitsma, J.&A.	\$ 351,068	\$ 240,519	\$110,549	\$ 4,700	68.51%	Cty EP
Luckey, J., Jr. & N.	\$ 261,859	\$ 189,848	\$ 72,011	\$ 3,200	72.50%	Cty EP
Hunt, R. & M.*	\$ 52,479	\$ 37,011	\$ 15,467	\$ 3,800	70.53%	Cty EP
Chirip, J.	\$ 141,363	\$ 69,331	\$ 72,032	\$ 7,850	49.04%	Cty PIG
Frascella	\$ 204,300	NA	\$ 204,300	\$ 7,500	0%	
Washer *	\$1,038,105	\$ 558,282	\$ 479,823	\$ 11,500	60%	Cty PIG
TriFarms *	\$2,461,418		\$2,461,418	\$ 4,990	0%	

*joint with other municipalities; acres and costs are Green Township only

Costs and Program Type for Frascella, Washer and TriFarms will be confirmed for Final Farmland Plan

Cty EP = County Easement Purchase

Cty PIG = County Planning Incentive Grant

Seven farms in Green Township have been protected through the County Easement Purchase program. Two projects in Green Township have been protected through the County Planning Incentive Grant (PIG) with the SADC.

County Easement Purchase

County Easement Purchases (CEP) involve the sale of farmland development rights to the county by the landowner. By selling their development rights to the county, the landowner agrees to restrict their land to agricultural use. The landowner still retains ownership of his or her farm and can sell it on the open market at any time, but the land is deed-restricted in perpetuity for agricultural use.

To be eligible for the County Easement Purchase program, the land must be in an Agricultural Development Area and be eligible for farmland assessment. A landowner must complete an application, which is reviewed by the CADB and then approved applications are forwarded to the SADC. In the past, these applications were distributed once a year. With the new County Planning Incentive Grant program there will no longer be an annual application date for the County Easement Purchase program.

Following review of the application and a site visit by the CADB, two independent appraisals must be conducted. Each appraisal should determine the land's fair market value and agricultural value. The SADC will certify an easement value somewhere between the values presented by the two appraisals; this easement value is the price of the farm's development rights. The County presents this value to the landowner, who submits an asking price to the SADC for review by the SADC and the CADB. If the application receives final approval by the SADC and CADB, the County presents a written offer to the landowner. If the landowner accepts this offer, the County has title work and a survey done

for farms receiving final State, County and Municipal approvals, and then schedules a closing. The landowner still retains ownership of his or her farm and can sell it on the open market at any time, but the land is deed-restricted, in perpetuity, for agricultural use.

In Green Township, seven farms have been preserved through the County Easement Purchase program, protecting 651 acres of farmland.

County Planning Incentive Grants

The goal of County Planning Incentive Grants (PIGs) is to protect and preserve a significant area of reasonably contiguous farmland that will promote the long term viability of agriculture in a municipality or county through the purchase of development easements. The SADC has updated their rules (N.J.A.C. 2:76-6.3 through 2:76-17A.17), effective July 2, 2007, to promote County PIGs to streamline and expand the farmland preservation program throughout the state. Applications are now accepted year round. In order to qualify for PIGs, an agricultural advisory committee, for which the CADB functions for the county, is necessary. Additionally, the county must maintain a dedicated source of funding or alternative means for funding farmland preservation. Sussex County developed their *2008 Comprehensive Farmland Preservation Plan* in order to bring it into compliance with the newly adopted guidelines, and qualify for the County Planning Incentive Grant program.

Both county and municipal applications should correlate with county comprehensive farmland preservation plans. The *2008 Sussex County Comprehensive Farmland Preservation Plan Update* utilized the 2005 Sussex County Soil Survey produced by the Natural Resource Conservation Service (NRCS).

In Green Township, two farms have been preserved through a County Planning Incentive Grant totaling 108 acres of preserved farmland.

Municipal Planning Incentive Grants

Municipal Planning Incentive Grants (PIGs) are very similar to the County PIGs in their goals, requirements, and implementation. Like the County PIGs, Municipal PIGs require a local financial commitment for preserving farmland. Upon the completion of a municipal Farmland Preservation Plan and application to the SADC, grants are provided by the SADC in order to purchase development easements. In order to qualify for this program, the municipality must have an Agricultural Advisory Committee and a source of funding for farmland preservation.

Farms to be preserved through a municipal PIG need to be approved by the CADB but only in the case where the CADB is contributing funds towards the farm. The CADB has the opportunity to comment on the application, but if the town is purchasing the property through the PIG program without the County's funds there is no requirement for the County's approval. The County will hold the farmland preservation easement if County funding is involved, but the SADC can hold the easement if County funding is not

included. Frankford Township and Green Township are enrolled in the Municipal PIG program in Sussex County.

The municipality may apply annually for funding through the Municipal PIG program, but it must “*expend its funding eligibility within three years from the date the funds were appropriated or risk the loss of those funds or funds to be allocated in subsequent funding cycles.*” (N.J.A.C. 2:76-17A.8)

The Township has three proposed municipal Planning Incentive Grant Project Areas as part of this *Farmland Preservation Plan*. These can be seen on the Project Area Map in this plan and are described in detail in *Chapter 5*. The Whittingham Project Area includes 878 acres targeted for preservation, the Pequest Valley Project Area includes 662 acres, and the Tranquility Valley Project Area includes 349 acres targeted for preservation.

Municipal Farmland Preservation Program

In some cases, a municipality may choose to purchase a development easement or farmland in fee simple prior to submitting an application to the SADC or the CADB. This may occur if the municipality feels it is at risk of losing the opportunity for preservation of a particular parcel if it waits to go through the entire application process before acquiring the land. However, the SADC states that “*Counties and municipalities that pre-acquire a development easement or farmland in fee simple without Green Light approval proceed at their own risk.*” If a municipality does not carefully adhere to SADC guidelines and regulations, it may “*jeopardize chances of qualifying for subsequent reimbursement.*” [N.J.A.C. 17A.9]

In addition the SADC may provide a grant to a municipality to pay up to 80% of a fee simple purchase of farmland from a willing seller. The municipality is obligated to offer these lands for resale or lease with agricultural restrictions and dedicate any proceeds from the resale shall be dedicated for farmland preservation, with the SADC receiving pro rata compensation for their portion of the original purchase price. (N.J.A.C. 2:76-8.11)

State Farmland Preservation Program

Also important to Green Township farmers is the SADC. The SADC is the lead agency in administering the state’s Farmland Preservation Program. The SADC:

- Provides cost share funding for the purchase of development easements;
- Directly purchases farms and development easements from landowners;
- Administers grants to landowners in the Farmland Preservation Program to fund up to 50% of soil and water conservation projects;
- Administers the Right to Farm Program (discussed in *Chapter 8*);
- Administers the Transfer of Development Rights Bank; and,
- Operates the Farm Link Program, which helps connect owners of both preserved and unpreserved farms with potential purchasers and tenant farmers.

SADC Direct Easement Purchase Program

The SADC Direct Easement Purchase is a program that allows a landowner to apply directly to the SADC for the sale of development rights. In most cases, the State will pay up to 100% of the certified appraised easement value in the direct easement purchase program. By participating in this program, the landowner still retains ownership of their land, but agrees to restrict land use to agricultural purposes. The Direct Easement Program applications do not usually receive contributions from the County or the municipality, but in some situations can include local cost share.

No farms have been preserved in Green Township using this program.

SADC Fee Simple

A fee simple acquisition involves an entire property being purchased directly by the state. The SADC pays the survey and title costs, the landowner is exempt from paying rollback taxes for farmland assessment, and the transaction can be completed in a matter of months. The SADC negotiates a purchase price subject to recommendations of two independent appraisers and review by a state review appraiser. The land becomes restricted so that it becomes permanently preserved for agriculture. In this type of acquisition, the landowner does not retain any rights. The property is then resold at auction, and the SADC can, but does not usually, retain ownership of farmland preserved through the Fee Simple Program. To participate in this program, the farmland must be within an ADA, and be eligible for Farmland Assessment.

No farms in Green Township have been preserved using this method.

Nonprofit Grant Program

Grants are provided to nonprofit organizations by the SADC. These grants fund up to 50% of the fee simple or development easement values on farms. Generally these transactions involve properties with both agricultural and environmental significance. The grants are obtained through an application process in which the land is valued by independent appraisers.

No farms in Green Township have been preserved using this method..

Transfer of Development Rights

The transfer of development rights is a growth management tool that transfers development rights from one location, a sending or preservation area, to another, an identified growth or receiving area. The development rights, purchased by a developer, are used to allow for development at a higher density than previous zoning of the receiving area allowed. To date, this program has not been used by Green Township to preserve farmland.

Consistency with SADC Strategic Targeting Project

The purpose of the SADC Strategic Targeting Project is to prioritize farmland to be preserved by targeting farms for preservation based on specific criteria, including the prioritization of prime and statewide soils in agricultural production outside sewer service areas. According to the SADC, the Strategic Targeting Project has three primary goals:

- *“To coordinate farmland preservation / agricultural efforts with proactive planning initiatives,*
- *To update / create maps used to target preservation efforts, and*
- *To coordinate farmland preservation efforts with open space, recreation and historic preservation investments.”²*

Through the use of the Strategic Targeting Project, the SADC hopes to more efficiently target and designate farmland for preservation and, by doing so, strengthen the State’s agricultural industry. Green Township, through the completion of its *Comprehensive Farmland Preservation Plan*, meets each of the goals as outlined in the Strategic Targeting Project. As a participant in the Municipal Planning Incentive Grant program, Green’s Agricultural Advisory Committee (AAC) will coordinate directly with the Sussex CADB to identify and target farms for preservation in Green Township.

Eight Year Programs

The 8-Year Farmland Preservation Program and the Municipally Approved 8-Year Farmland Preservation Program are programs in which farmland owners agree to voluntarily restrict nonagricultural development for a period of eight years in exchange for certain benefits. Landowners enrolled in the program receive no direct compensation for participating but are eligible to apply to the SADC for grants that fund up to 50% of the costs of approved soil and water conservation projects. Additionally, those in the program enjoy greater protection against nuisance complaints, emergency fuel and water rationing, zoning changes and eminent domain actions. In return, the farmer signs an agreement that restricts the land to agricultural use for 8 years. For entrance into these programs and to qualify for benefits, a farm must be located within the county ADA, be eligible for Farmland Assessment, and meet appropriate program criteria. Technical assistance for the soil and water practices comes through the Natural Resource Conservation Service. Over 100 acres of farmland in Green Township have been preserved using farmland preservation cost share funds.³ However, there are currently no farms in Green Township enrolled in or applying for farmland preservation cost share (Eight-Year Program) funds. (*Dan Mull, NRCS*)⁴

Soil and water conservation projects include projects designed to control and prevent soil erosion and sediment damages; control pollution on farmland; impound, store and manage water for agricultural purposes; or improve management of land and soils to achieve maximum agricultural productivity. Examples of eligible projects include: terrace systems; diversions; stream protection; water impoundment reservoirs; irrigation systems; sediment retention, erosion or water control systems; drainage systems; animal waste control.

Coordination with Open Space Preservation Initiatives

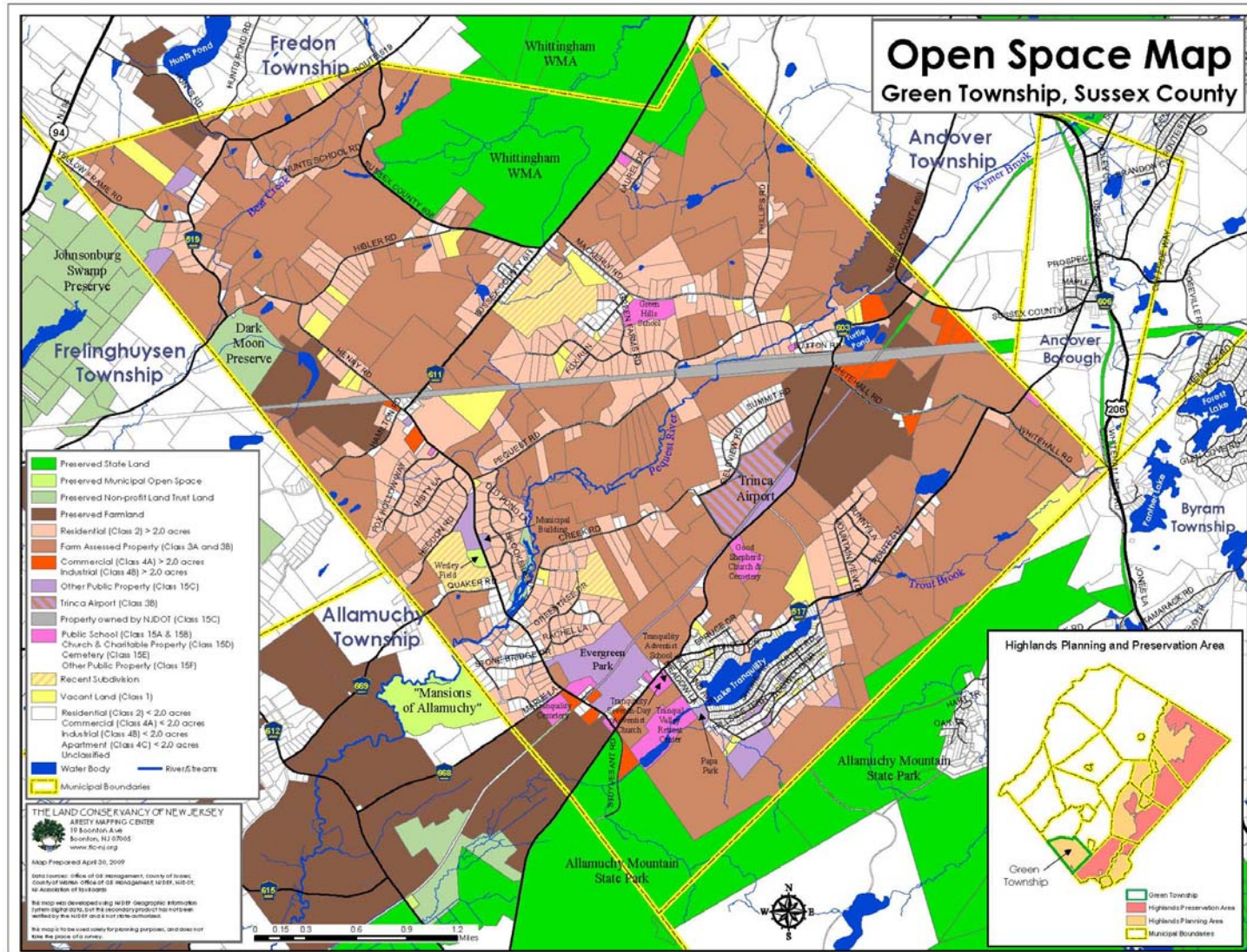
This kind of project leverages farmland preservation dollars and makes use of open space funds, and is an opportunity to use traditional open space funds, where appropriate, to help preserve farm properties, especially where those properties are a mixture of cropland and woodland areas. The use of open space funds is becoming increasingly important to preserving agricultural landscapes.

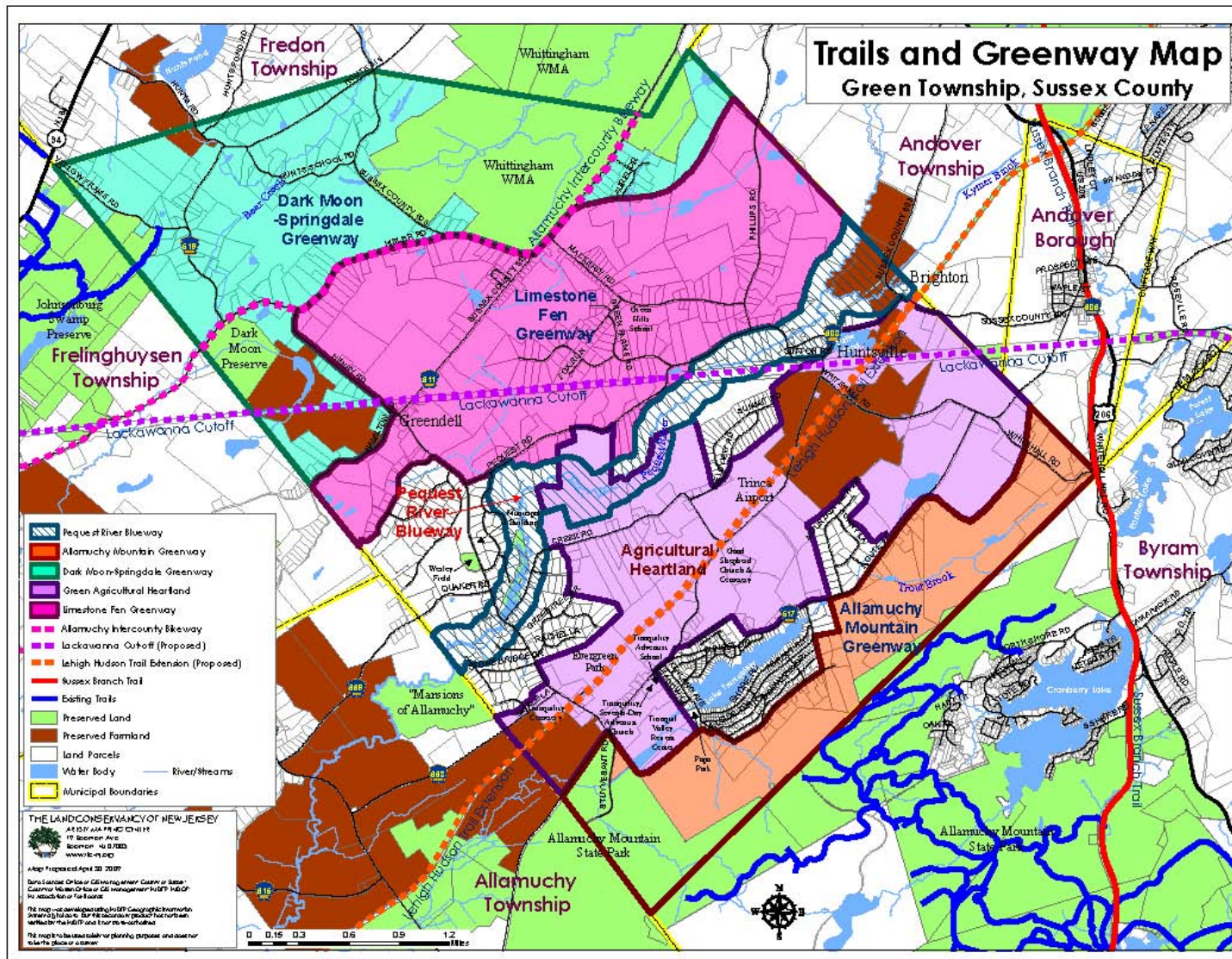
Farmland preservation and the identification of targeted farms should be coordinated with open space planning efforts. Trail easements and adjacency to proposed and existing active recreational facilities are potential areas of concern for farmers. Green Township has a reserve in the general capital fund to be used to preserve farmland and open space. The Agricultural Advisory Committee (AAC) is supported by the membership of Open Space Committee, providing expertise and advice regarding farmland preservation.

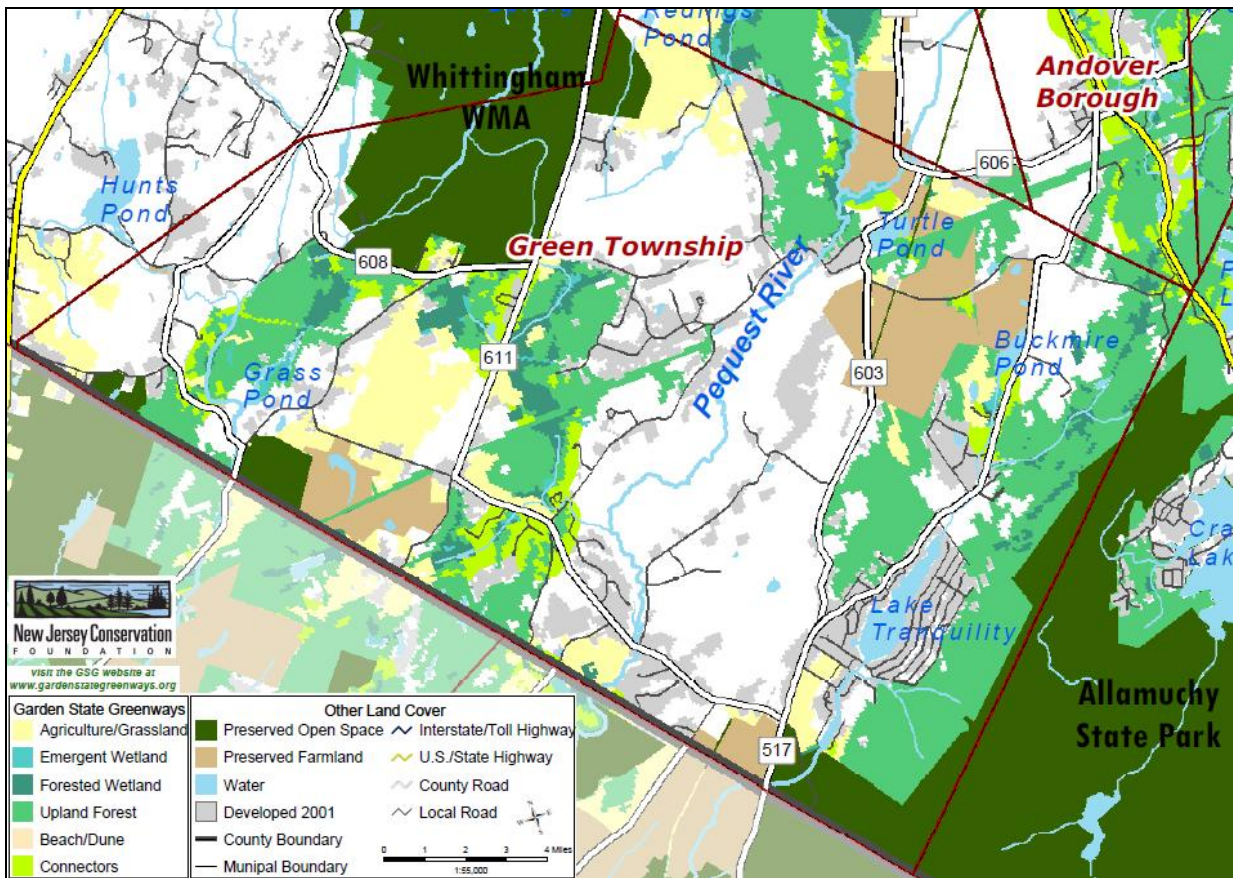
The criss-crossing network of abandoned railways throughout Green Township has the opportunity to provide a substantial trail network system for its residents. The Township can capitalize on these railways as the foundation to creating a multi-use trail network for walking and cycling that will provide connectivity to already established trail systems in adjacent towns and on State parklands. While the municipality owns the majority of the Lehigh Hudson Railway, many sections need significant investment into vegetation removal and establishing an adequate traveling surface. However, by investing in a system of trail networks that provides multiple access points, interconnectivity with other trail systems and multiple recreation facilities, the visitation rate and usage of *all* resources is likely to be significantly higher

In Green Township, the Agricultural Advisory Committee and the Open Space Committee are guided by this *Comprehensive Farmland Preservation Plan* as well as the Township's *Open Space and Recreation Plan*. The *Open Space and Recreation Plan* was updated in 2009 and includes a presentation and discussion of tillable land and farm assessed property in the municipality.

The *Open Space and Greenway Maps* from the *Open Space and Recreation Plan* are included on the following page and identify priority areas for open space preservation and potential locations for trails. *Garden State Greenways*, a collaborative project of the NJDEP and The New Jersey Conservation Foundation, provides a regional planning tool that identifies areas of natural resource value and suggested connectors between this. It provides an interactive mapping system that details the location of local and regional open space and recreational lands, forested areas and agricultural and wetlands in and around Green Township and may be used in conjunction with the *Project Area Map* to identify land for open space and farmland protection.







Source: Garden State Greenways

Farmland Preservation Program Funding Expended to Date by Source

In November 1997, the residents of Green Township voted in favor of a municipal Open Space Trust Fund, making them the first municipality in Sussex County to do so. Following the passage of the Trust Fund referendum, the Green Township Committee adopted Ordinance No. 24-97 establishing a reserve in the general capital fund to be designated as the “reserve for open space acquisition.”

Funds collected by the municipality are to be used for the preservation of open space, recreation, and farmland and/or historic preservation in Green Township. The fund is supported through a municipal tax levy, not to exceed three cents per \$100 of assessed valuation. Collections for the fund began in 1998 at \$0.015. In 1999, the Township Committee authorized this levy at the full rate of three cents per \$100 of assessed valuation, and collections continue today at the three cent rate. For the 2011 tax year, it is anticipated that the fund will generate \$166,710; bringing the fund’s balance to \$1,279,000.

Monitoring the Easements

The easement holder is responsible for the monitoring of preserved farms, depending on the program option. That is, the SADC is responsible for the monitoring of farms preserved through the Fee Simple and Direct Easement. The farms under easement through the County program in Green Township are monitored by Sussex County. The County monitors the property to verify that compliance with the deed restrictions on the preserved property is taking place. Generally, for farms preserved through the municipal PIG program, the County will hold the easement, but the SADC may hold the easement in cases where County funding is not involved. Nonprofit organizations who hold easements on preserved farms are responsible for monitoring the easement and reporting to the SADC on an annual basis in compliance with N.J.A.C. 2:767-16.5. The Township and the AAC will notify the responsible agency if violations are suspected.

The Sussex County Office of Conservation and Farmland Preservation performs annual inspections of the preserved farmland property. The inspectors take note of the following:

- Change in ownership since the previous inspection
- Evidence of non-agricultural development (approved or otherwise)
- Use of the premises for agricultural activities
- Expansion of non-agricultural activity since the previous inspection
- If the non-agricultural practice has been abandoned
- Evidence of mining or removing of materials such as sand, gravel, rock, etc.
- Evidence of dumping
- Whether or not the farm has an approved conservation plan
- Any improvements to farm buildings and residences
- Any new agricultural buildings erected

Coordination with Transfer of Development Rights Programs

Transfer of Development Rights (TDR) may be used in conjunction with the traditional Purchase of Development Rights (PDR) program; these two programs are not mutually exclusive. As previously discussed, Green Township is not currently enrolled in a TDR program.

¹ Sussex County Agriculture Development Board. Sussex County Comprehensive Farmland Preservation Plan Update. May 2008.

² SADC/CADB Farmland Preservation Program. Strategic Targeting Project Preliminary Report. March 2003. <http://www.state.nj.us/agriculture/sadc/home/preservation/>. Accessed August 2010.

³ Sussex County Farmland Preservation Plan Update- 2008. Compiled by the Morris Land Conservancy and with the Sussex County Agriculture Development Board.

⁴ Personal communication with Dan Mull, District Conservationist, Natural Resources Conservation Service. December 2010.

CHAPTER 5: FUTURE FARMLAND PRESERVATION PROGRAM



Preservation Goals

Green Township is 16.31 square miles (10,560 acres) in size. Of this, **5,522 acres** are under farmland assessment, which includes croplands, woodlands, farm structures and wetlands/waterways that occur on an agricultural property.^a Since 2000, Green Township has preserved **1,300 acres** of farmland. Of the total farm assessed acres in Green, **2,602 acres** are in active agricultural land, as identified in the NJDEP Land Use/Land Cover database and 2,833 acres as reported in the New Jersey Farmland Assessment data. Based upon the State's Minimum Eligibility Criteria for productive soils and tillable land, **1,833 acres** are potentially eligible for farmland preservation in Green Township. Thus approximately 70% of the active agricultural lands are potentially eligible for preservation through the State program.

Based upon the available funding to purchase and preserve farmland, and the amount of farmland potentially eligible for preservation, the following preservation goals are identified for Green Township:

One year target:	150 acres
Five year target:	675 acres
Ten year target:	1,300 acres

Public Participation

For the development of this *Comprehensive Farmland Preservation Plan*, Green Township hosted a public meeting seeking input and direction from local residents, farmers, officials, and representatives of agencies and nonprofit organizations interested in farmland preservation.

^a *Note:* For the ADA and Project Area analyses the farmland assessed data is derived from the GIS digital data, which is slightly different from that reported for 2007 in the Farmland Assessment Data Report (see *Chapter 1*). Preserved farm acreage for this chapter is also derived from the GIS digital data, which also differs slightly from the historical data on individual farm preservation (see *Chapter 4*).

Public Hearing November 10, 2011

The public meeting was held on November 10, 2011 at the Green Township municipal building. This meeting was held as part of the regularly scheduled meeting of the Planning Board and noticed in advance of the meeting in the local newspapers. The purpose of the meeting was to present and discuss the proposed plan to the public, the Planning Board, the Open Space Committee and Agricultural Advisory Committee, and to seek input from the Committees on the maps identifying project areas and parcels for preservation.

The timeline for the Plan was reviewed and questions answered by the members of the Agricultural Advisory Committee, Township Committee, and The Land Conservancy of New Jersey, which is working with the Township to prepare the plan.

The notice and agenda for this public meeting is included in the *Appendix*.

Project Area Summaries

As part of its *2008 Comprehensive Farmland Preservation Plan Update*, the Sussex CADB identified ten project areas within the County's ADA for farmland preservation. Green Township is part of the Western Highlands Project Area.

The Western Highlands Project Areas (1 and 2) are the southernmost project areas in Sussex County. They are located to the northeast of the border of Sussex and Warren County and northwest of the border of Sussex and Morris County. These project areas extend east to Route 15 and west to Route 94. Byram, Green, Andover, Fredon, Stanhope, Hopatcong, Newton, Hampton, Lafayette and Sparta are located within these project areas. Green Township is located within the Western Highland Project Area 1. This project area falls within the Ridge and Valley and contains higher quality agricultural soils and fewer steep slopes than the Highlands region. Located within the Upper Delaware River watershed, these project areas are also home to forested woodland and wetland areas. The Musconetcong and Pequest Rivers flow through the region.

The Green Township Agricultural Advisory Committee (AAC) further identified three municipal project areas within the municipality focusing on agricultural lands that are productive, tillable, and enlarge existing preserved farm belts in the community. These project areas are described below and shown on the *Project Area Map* included within this plan.

- Whittingham Project Area: Encompasses much of the northern portion of the town. The project area borders Andover Township, Fredon, Frelinghuysen, the Whittingham Wildlife Management Area, the Johnsonburg Preserve, and the Dark Moon Preserve. The southern boundary is Route 611 in the west and Mackerley Road to Pequest Road in the east. This project area contains six preserved farms totaling **300 acres**.
- Pequest Valley Project Area: Located in the center of Green Township, this project area is bordered to the north by the former Lehigh-Hudson Railway bed, Trinca

Airport to the east, and residential neighborhoods including Lake Tranquility. This project area contains one preserved farm parcel totaling 22 acres.

- Tranquility Valley West Project Area: Located along the southeastern boundary of the town, this project area contains all lands bordering Allamuchy Mountain State Park, Byram, and Andover Borough with the exception of the property owned by the 7th Day Adventists, which falls outside of the County ADA. It contains three preserved farms, totaling **883 acres**.

The below table summarizes the acreage and farm parcels within each of the Projects Areas in Green Township:

	Farm Assessed Land (Acres)	Unpreserved Farmland (Acres)	Preserved Farmland (Acres)
Green Township:	5,522	4,223	1,300
Project Areas:			
Whittingham	2,502	2,203	300
Pequest Valley	923	901	22
Tranquility Valley	1,543	660	883
Total within Project Areas:	4,968	3,763	1,204

**Note: These numbers are from the GIS Parcel Data Analysis and include the entire parcel as “preserved.” Thus this number is slightly higher than the actual recorded data shown in Chapter 4.*

Project Area Inventory

For each project area, an analysis was completed to identify the amount and density of preserved farmland, soils and size of the area. The following data was determined:

- i. The total acreage of targeted farms;
- ii. The total acreage of farms with final approval (pending applications);
- iii. The total acreage of preserved farmland;
- iv. The total acreage of other deed restricted farmland;
- v. The total acreage of farms enrolled in the eight-year farmland preservation program or municipally-approved farmland preservation program;
- vi. The total acreage of preserved open space compatible with agriculture.

For each of the above categories, the land area within each project area is expressed as a ratio between the total acreage for each category and the total acreage of the project area. Also included is the percentage of each category expressed as a percentage of the total project area.

Note: There are no “*other deed restricted farmlands*” in Green Township. All farmland has been preserved through the farmland preservation program. “*Open space compatible with agriculture*” excludes property with active recreational facilities or buildings upon them. The “*Density of the Project Area*” is presented as the sum of the acreages of items (ii)

through (vi) (*see above*), as compared to the total acreage of the project area. These tables are presented below.

WHITTINGHAM PROJECT AREA	Acreage	Density Ratio*	Percentage
i. Targeted Farms	878	878 : 4175	21%
ii. Farms with Final Approval (Pending Applications)	-	- : 4175	0%
iii. Preserved Farmland	300	300 : 4175	7%
iv. Other Deed Restricted Farmland	-	- : 4175	0%
v. Farms Enrolled in 8 Year Program	-	- : 4175	0%
vi. Preserved Open Space Compatible with Agriculture	892	892 : 4175	21%
Aggregate Size of Project Area:	4175		%
<i>Total Project Area Inventory: Items (i) through (vi):</i>	2070	2070 : 4175	50%
<i>(Selected) Density of the Project Area (without targeted farms): Items (ii) through (vi):</i>	1192	1192 : 4175	29%

PEQUEST VALLEY PROJECT AREA	Acreage	Density Ratio*	Percentage
i. Targeted Farms	605	605 : 1367	44%
ii. Farms with Final Approval (Pending Applications)	58	58 : 1367	4%
iii. Preserved Farmland	22	22 : 1367	2%
iv. Other Deed Restricted Farmland	-	- : 1367	0%
v. Farms Enrolled in 8 Year Program	-	- : 1367	0%
vi. Preserved Open Space Compatible with Agriculture	19	19 : 1367	1%
Aggregate Size of Project Area:	1367		
<i>Total Project Area Inventory: Items (i) through (vi):</i>	704	704 : 1367	51%
<i>(Selected) Density of the Project Area (without targeted farms): Items (ii) through (vi):</i>	99	99 : 1367	7%

TRANQUILITY VALLEY PROJECT AREA	Acreage	Density Ratio*	Percentage
i. Targeted Farms	349	349 : 2090	17%
ii. Farms with Final Approval (Pending Applications)	-	- : 2090	0%
iii. Preserved Farmland	883	883 : 2090	42%
iv. Other Deed Restricted Farmland	-	- : 2090	0%
v. Farms Enrolled in 8 Year Program	-	- : 2090	0%
vi. Preserved Open Space Compatible with Agriculture	322	322 : 2090	15%
Aggregate Size of Project Area:	2090		
<i>Total Project Area Inventory: Items (i) through (vi):</i>	1554	1554 : 2090	74%
<i>(Selected) Density of the Project Area (without targeted farms): Items (ii) through (vi):</i>	1205	1205 : 2090	58%

For all Project Areas, the summary total is as follows:

ALL PROJECT AREAS	Acreage	Density Ratio*	Percentage
i. Targeted Farms	1,833	1,833 : 7,632	24%
ii. Farms with Final Approval (Pending Applications)	57	57 : 7,632	1%
iii. Preserved Farmland	1,204	1,204 : 7,632	16%
iv. Other Deed Restricted Farmland	-	- : 7,632	0%
v. Farms Enrolled in 8 Year Program	-	- : 7,632	0%
vi. Preserved Open Space Compatible with Agriculture	1,233	1,233 : 7,632	16%
Aggregate Size of Project Area:	7,632		
<i>Total Project Area Inventory: Items (i) through (vi):</i>	4,327	4,327 : 7,632	57%
(Selected) Density of the Project Area (without targeted farms): Items (ii) through (vi):	2,494	2,494 : 7,632	33%

Minimum Eligibility Criteria

Minimum Eligibility Criteria are based upon the SADC's rules for farmland preservation and project eligibility (adopted *May 21, 2007*). In order to be eligible for preservation the site must be developable, have soils capable of supporting agricultural or horticultural production, and meet minimum tillable land standards. (N.J.A.C. 2:76-6.20) In summary:

For all lands less than or equal to 10 acres:

- The land must produce at least \$2,500 worth of agricultural or horticultural products annually; and
- At least 75% or a minimum of 5 acres of the land (whichever is less) must be tillable; and
- At least 75% or a minimum of 5 acres of the land (whichever is less) must be capable of supporting agriculture or horticulture; and
- The land in question must exhibit development potential as defined by the SADC (based upon zoning, ability to be subdivided, less than 80% wetlands, less than 80% slopes of 15% or more); or
- The land must meet the above criteria or be eligible for allocation of development credits pursuant to a Transfer of Development Credits (TDR) program.

For lands greater than 10 acres:

- At least 50% or a minimum of 25 acres of land (whichever is less) must be tillable; and
- At least 50% or a minimum of 25 acres of land (whichever is less) must have soils capable of supporting agriculture or horticulture; and
- The land in question must exhibit development potential as defined by the SADC; or
- The land must meet the above criteria or be eligible for allocation of development credits pursuant to a Transfer of Development Credits (TDR) program.

For a farm application to qualify for SADC cost share, the farm must have at least one parcel listed on the targeted farm list; comprise an assemblage of substandard parcels which together meet SADC minimum standards; or have sufficient justification by the Township Agricultural Advisory Committee (AAC) and the Sussex CADB that the parcels were not identified as targeted due to a specific mapping issue or other error.

The Township may proceed without State funding on projects that do not meet these Minimum Eligibility Standards. In all cases, the Green Township AAC will work closely with the Sussex CADB to review and process applications from landowners for farmland preservation. The Green Township AAC will follow all County and State procedures to ensure consistency in application review and processing.

Within the identified project areas, Green Township has identified candidate farms (or “targeted farms” as referenced in the May 21, 2007 rules) that meet the tillable land and soils minimum eligibility standards. In order to determine farms that are potentially eligible for preservation, a series of queries were made utilizing the ArcGIS 9.2 digital mapping software for soils and tillable land. These are described in further detail below.

Farmland that meets the SADC Criteria for Agricultural Soils

Agricultural soils as defined by the SADC are those soils capable of supporting agricultural or horticultural production. The use of the NRCS Soil Survey identifying prime, statewide and unique agricultural soils is the first and best indication of the farmland soils. The interpretation of the tillable land layer from the NJDEP Land Use/Land Cover data (including pastureland) is the second screen for soils capable of supporting agriculture with the following provisions:

- It is best to make determination of soils capable of supporting agriculture on a site specific basis (that is for individual submitted applications);
- For farmland planning, on a municipal and county basis, the tillable land layer can also be used to show general areas of farmland potentially eligible for preservation as long as it is noted that this picture of farmland would need to be confirmed on an individual basis by studying:
 - Practices the individual farmer has made to farm the land (Conservation Plans, Drainage Plans, etc.)
 - Amount and location of steep slopes on the farm
 - Amount of stony/gravelly soils on the farm

In summary, the SADC has agreed that soils capable of supporting agricultural production are those classified as agricultural by the NRCS Soil Survey or identified as tillable by the NJDEP Land Cover/Land Use mapping. (*Robert Baumley*)¹

Farm parcels are sorted on size based on the SADC Minimum Eligibility Criteria for soils:

<u>Farm Size</u>	<u>Requirements</u>
0-6.667 acres	75% soils capable of supporting agricultural production
6.667-10 acres	5 acres of soils capable of supporting agricultural production
10-50 acres	50% soils capable of supporting agricultural production
50+ acres	25 acres of soils capable of supporting agricultural production

Farmland that meets the SADC Criteria for Tillable Land

Tillable acreage was determined using the N.J. Department of Environmental Protection 2007 Land Use/Land Cover mapping for agricultural lands. The land categories that are defined as the “tillable land” based on the 2007 NJDEP Land Use/Land Cover are as follows:

- Agricultural Wetlands (Modified)
- Confined Feeding Operations
- Cropland and Pastureland
- Former Agricultural Wetland
- Orchards/Vineyards/Nurseries/Horticultural Areas
- Other Agriculture

Farm parcels were sorted on size based upon the SADC Minimum Eligibility Criteria for tillable land:

<u>Farm Size</u>	<u>Requirements</u>
0-6.667 acres	75% tillable
6.667-10 acres	5 acres tillable
10-50 acres	50% tillable
50+ acres	25 tillable acres

Farmland that meets SADC Criteria for both Tillable Land and Soils

Utilizing the tillable acreage and soil acreage, farm parcels were sorted on size based upon the SADC Minimum Eligibility Criteria for tillable land and soils.

The Project Area Summaries and Minimum Eligibility Criteria analysis for each project area are presented in the tables below and GIS Maps (included within the *Maps Section* of this Plan). As stated earlier, for each category, the land area within each project area is expressed as a ratio between the total acreage for each category and the total acreage of the project area. Also included is the percentage of each category expressed as a percentage of the total project area.

WHITTINGHAM PROJECT AREA	Acreage	Density Ratio	Percentage
Aggregate Size of Project Area:	4,175		
Soil Acreage using data from NRCS Soil Survey			
i. Total Acreage of Prime Farmland Soils	593	593 4,175	14%
ii. Total Acreage of Farmland Soils of Statewide Importance	27	27 4,175	1%
iii. Total Acreage of Unique Farmland Soils	370	370 4,175	9%
Qfarm Parcel Analysis for Soils and Tillable Land			
i. Qfarm Parcels meeting SADC Criteria for Agricultural Soils	1,287	1,287 4,175	31%
ii. QFarm Parcels meeting SADC Criteria for Tillable Land	878	878 4,175	21%
iii. QFarm Parcels meeting SADC Criteria: Soils & Tillable Land	878	878 4,175	21%

Minimum Eligibility Criteria analysis for each project area: (continued)

PEQUEST VALLEY PROJECT AREA	Acreage	Density Ratio		Percentage
Aggregate Size of Project Area:	1,367			
Soil Acreage using data from NRCS Soil Survey				
i. Total Acreage of Prime Farmland Soils	536	536	1,367	39%
ii. Total Acreage of Farmland Soils of Statewide Importance	-	-	1,367	0%
iii. Total Acreage of Unique Farmland Soils	3	3	1,367	0.2%
Qfarm Parcel Analysis for Soils and Tillable Land				
i. Qfarm Parcels meeting SADC Criteria for Agricultural Soils	735	735	1,367	54%
ii. QFarm Parcels meeting SADC Criteria for Tillable Land	605	605	1,367	44%
iii. QFarm Parcels meeting SADC Criteria: Soils & Tillable Land	605	605	1,367	44%

TRANQUILITY VALLEY PROJECT AREA	Acreage	Density Ratio		Percentage
Aggregate Size of Project Area:	2,090			
Soil Acreage using data from NRCS Soil Survey				
i. Total Acreage of Prime Farmland Soils	481	481	2,090	23%
ii. Total Acreage of Farmland Soils of Statewide Importance	-	-	2,090	0%
iii. Total Acreage of Unique Farmland Soils	21	21	2,090	1%
Qfarm Parcel Analysis for Soils and Tillable Land				
i. Qfarm Parcels meeting SADC Criteria for Agricultural Soils	429	429	2,090	21%
ii. QFarm Parcels meeting SADC Criteria for Tillable Land	349	349	2,090	17%
iii. QFarm Parcels meeting SADC Criteria: Soils & Tillable Land	349	349	2,090	17%

For all project areas, the summary total is as follows:

ALL PROJECT AREAS SUMMARY	Acreage	Density Ratio		Percentage
Aggregate Size of Project Area:	7,632			
Soil Acreage using data from NRCS Soil Survey				
i. Total Acreage of Prime Farmland Soils	1,610	1,610	7,632	21%
ii. Total Acreage of Farmland Soils of Statewide Importance	27	27	7,632	0.4%
iii. Total Acreage of Unique Farmland Soils	395	395	7,632	5%
Qfarm Parcel Analysis for Soils and Tillable Land				
i. Qfarm Parcels meeting SADC Criteria for Agricultural Soils	2,451	2,451	7,632	32%
ii. QFarm Parcels meeting SADC Criteria for Tillable Land	1,833	1,833	7,632	24%
iii. QFarm Parcels meeting SADC Criteria: Soils & Tillable Land	1,833	1,833	7,632	24%

Based on the Farmland Assessment data, there are **5,522 acres** of total assessed farmland (QFarm Parcels) in Green Township, of which 2,602 acres, or 47%, are active agricultural land and 1,833 acres, or 70%, meet both the Minimum Eligibility Criteria for soils and tillable land. Included within the *Appendix* is the complete list of potentially eligible parcels.

In addition to the State's new Minimum Eligibility Criteria, the SADC has also identified an "Eligible Farm" standard as defined in section 17.2 of the newly adopted rules. In this case, grant funding will be based upon an individual farm having a rank score that is "equal to or greater than 70% of the county's average quality score of all farms granted preliminary approval by the SADC through the county easement purchase program and/or the county planning incentive grant program within the previous three fiscal years." The SADC has released this rank score for Fiscal Year 2011 for Sussex County; the minimum score for an Eligible Farm is 39. A detailed score listing is included within the *Appendix*.

County and Municipal Ranking Criteria

The Sussex CADB calculates the rank of each farm based upon the State's criteria. The Sussex CADB supplements this ranking with an on-site visit for each applicant. A copy of the State ranking criteria is included within the *Appendix*.

The Sussex CADB utilizes the SADC ranking criteria, which examines the size, boundaries and buffers, local commitment, percent of tillable acres, soil type and density of a farm. The request for exceptions (and their location) is also discussed. The Sussex CADB wants there to be a housing opportunity attached to each preserved farm.

The Sussex CADB conducts a field inspection for each farmland preservation application. The field visit allows for interaction between the farmer and the board members. This results in a better understanding of the farm for the members of the CADB and of the program and its implications for the landowner. This also allows the Board to see the type of operation, the potential for improving and/or expanding the operation and how this farm may fit into the overall farming economy of the municipality and County. The Sussex CADB carefully evaluates farms based on both SADC criteria, site inspections and how the farm, once preserved, will fit into the overall agricultural picture of Sussex. (*Sussex County Comprehensive Farmland Preservation Plan Update – May 2008*)²

Green Township's ranking criteria are consistent with the County and State Ranking Criteria. The Township's Agricultural Advisory Committee and Township Committee is committed to preserving as much of the Township's agricultural land base as possible and support innovative funding mechanisms and preservation tools. The focus of the Township's farmland preservation program is to preserve the productive agricultural landscape of the community.

Municipal and County Policies Related to Farmland Preservation Applications

Green Township follows the policies established by Sussex County regarding housing opportunities, division of premises, and exception areas. These policies are documented in the *2008 Sussex County Comprehensive Farmland Preservation Plan*. The Sussex CADB follows the SADC's policies regarding these issues and below is a brief summary of the state policies for each issue.

Approval of Housing Opportunities

Agricultural labor housing: Agricultural labor housing is not currently protected under the Right to Farm Act in the State of New Jersey. However, the State Agriculture Development Committee understands the need for this type of housing and does have a policy that a landowner must refer to in order to construct labor housing. These applications are reviewed by the State Agriculture Development Committee and the County Agriculture Development Board. The Sussex CADB recognizes that, currently, agricultural labor housing is not protected under the Right to Farm (RTF) Act. It may be permitted on a preserved farm, with the approval of the CADB and SADC, but that does not give it RTF protection.

House replacement: The policy of the State Agriculture Development Committee on house replacement is that requests for replacement of a residence on permanently preserved land must be reviewed and approved on an individual basis by the CADB and the SADC, in order to minimize the impact on the agricultural operation. This is supported by the CADB and AAC for Green Township.

Residual dwelling site opportunity allocation: Residual Dwelling Site Opportunities (RDSOs) are potential housing prospects located within a deed-restricted farm. By designating an area as an RDSO, the landowner is implying that the land will be used for a residential unit or other structure as referred to in N.J.A.C. 2:76-6.17. The maximum RDSO density is one residence per 100 acres. The purpose of the building in question must be for "single-family residential housing and its appurtenant uses." (*2007 SADC Appraiser Handbook*)³ To qualify as an RDSO, the SADC requires that the use of the residential unit be for agricultural purposes and "at least one person residing in the residential unit shall be regularly engaged in common farm site practices." This is supported by the Green Township AAC and Sussex CADB. The Sussex CADB does not regularly approve RDSO's.

Division of the Premises

The goal of the SADC, supported by the Sussex CADB and Green Township AAC, is to preserve large tracts of farmland. Therefore, a division of the premises is not an encouraged practice; however when division occurs it must be for agricultural purposes and must result in agriculturally viable land parcels. A landowner wishing to divide permanently preserved farmland must submit a written request. The application must be

approved, in writing, by both the State Agriculture Development Committee and the CADB. Many landowners are currently utilizing this practice for estate planning purposes.

Approval of Exception

Exceptions are defined by the SADC as “acres within a farm being preserved” which are “not subject to the terms of the deed of easement.” When an exception is made, the landowner does not receive any compensation in the excepted area. Exceptions are not a practice that is encouraged by the SADC and, when they occur, it is recommended that they should be as small as possible. There are two types of exceptions that can occur; severable and non-severable.

Severable: A severable exception is defined by the SADC as an “area which is part of an existing Block and Lot owned by the applicant which will be excluded from the restrictions of the Deed of Easement and may be sold as a separate lot in the future.” (2007 SADC Appraiser Handbook) A severable exception is made “if a landowner wants to be able to sell the excepted area separate from the deed-restricted farm.”

Non-severable: Non-severable exceptions are defined by the SADC as “area which is part of an existing Block and Lot owned by the application that will not be subject to the restrictions of the Deed of Easement but cannot be sold separately from the remaining premises.” (2007 SADC Appraiser Handbook) Unlike a severable exception, a non-severable exception is “always attached to the protected farm.”

Exceptions made to farmland have the potential to impact the value of the property. When an appraisal occurs, both severable and non-severable exceptions are considered in the determination of the restricted/after value of the property. The Sussex CADB and Green Township AAC follow the exception policies as identified by the SADC.

Funding Plan

Installment Purchases and Donation/Bargain Sales

Green Township is supportive of donation/bargain sales and installment purchases. Both of these tools serve to leverage limited funding resources and are described below:

Donation and Bargain Sale: This mechanism for preserving a farm involves a donation by the landowner. If the landowner donates a portion of the value of the development rights when an easement is sold, this is called a bargain sale. A bargain sale can result in substantial tax savings for the landowner and can stretch municipal and County preservation funds. The landowner donation is a reduction in the amount of gain that is subject to the capital gains tax, and the landowner can take a tax deduction for the amount donated against his or her federal and state income taxes.

Installment Purchase: Through an installment purchase agreement, development rights may be acquired by the Sussex CADB through a payment plan that provides payments to

the landowner over time. Receiving the income from the sale in installments may provide the landowner with financial management and/or tax advantages.

Overview of Sussex County Trust Fund and Municipal PIG requirements

In 2009, the Sussex County Open Space Recreation Farmland Preservation Trust Fund generated approximately \$3 million annually, a decrease in funding due to the sunset in 2008 of the original \$.02/\$100 tax levy. In 2010, with the tax set at \$0.65 per \$100 of assessed value, the levy will generate approximately \$1.2 million. Traditionally, this split 90% towards farmland preservation and 10% toward open space. (*Donna Traylor*)⁴ To date, there have been no municipalities in Sussex County participating in the Municipal Planning Incentive Grant program. The County does not currently have a policy in place regarding a cost share for the non-SADC portion of an acquisition. Such a policy would need to be considered, set and adopted by the CADB. Until such a policy is established, the municipality would most likely bear the entire non-SADC cost of any acquisition through the municipal PIG program. (*Traylor*) This can be accomplished using federal funding through the Farm and Ranch Lands Protection Program (FRPP), if the farm meets the federal requirements.

Overview of SADC “sliding scale”

As part of the municipal PIG program, the SADC will cost share on an easement that has been, or is being, acquired by a municipality. The SADC will not authorize a grant for greater than 80% of the SADC’s certified fair market value of the development easement. If the landowner’s asking price is greater than the certified fair market value, the SADC’s cost share grant shall be based upon the SADC’s certified fair market value. The landowner can ask for a higher price but the transaction cannot be for an amount higher than the higher of two independent appraisals for the SADC to participate. If the landowner accepts less than the certified value, the SADC will apply its cost share “sliding scale” formula to the discounted per acre value and share in a portion of the discount. The SADC percent cost share is based upon the following sliding scale:

Landowner's Asking Price	Percent Committee Cost Share
From \$0.00 to \$1,000	= 80% above \$0.00
From > \$1,000 to \$3,000	= \$800 + 70% above \$1,000
From > \$3,000 to \$5,000	= \$2,200 + 60% above \$3,000
From > \$5,000 to \$9,000	= \$3,400 + 50% above \$5,000
From > \$9,000 to \$50,000	= 60%
From > \$50,000 to \$75,000	= \$30,000 + 55% above \$50,000
From > \$75,000 to \$85,000	= \$43,750 + 50% above \$75,000
Landowner's Asking Price	Percent Committee Cost Share
From > \$85,000 to \$95,000	= \$48,750 + 40% above \$85,000
From > \$95,000 to \$105,000	= \$52,750 + 30% above \$95,000
From > \$105,000 to \$115,000	= \$55,750 + 20% above \$105,000
From > \$115,000	= \$57,750 + 10% above \$115,000

Description of Municipal Funding Sources

In 1997 Green Township established a municipal Open Space Trust Fund for the preservation of open space, recreation, and farmland and/or historic preservation. In 1999, the Township Committee authorized this levy at the full rate of three cents per \$100 of assessed valuation, and collections continue today at the three cent rate. For the 2011 tax year the fund will generate \$166,710; bringing the fund’s balance to \$1,279,000, which can be used for farmland preservation.

Cost Projections and Funding Plan Associated with Preservation Goals

The Green Township municipal Open Space Trust Fund will generate \$166,710 in 2011. The financial analysis is based on the assumption the municipality will direct the balance in its Open Space Trust Fund towards farmland preservation projects over the next ten years.

To complete the cost projections the following additional assumptions were made for the Township:

1. The Trust Fund allocation is \$166,700 in 2011 (Year 1)
2. The Trust Fund grows by 2% annually
3. The Trust Fund is reduced by 5% for due diligence (administrative costs) each year
4. The Township spends the annual allocation in the Trust Fund and does not carry a balance from one year to the next
5. The Trust fund is not encumbered by prior acquisitions
6. Average price per acre is \$6,500 in 2011
7. The average price per acre will increase 5% annually
8. The Township is purchasing land in partnership with County and State (no direct purchase by Township)
9. The municipal cost share is on average 15%, but for this analysis a variety of cost shares are calculated, using 15% as the minimum participation
10. The balance in the Trust Fund as of December 2011 is \$1,279,000

Based upon the above assumptions, the following analysis was completed to calculate the funding available to Green for farmland preservation and the average cost per acre:

Year	Annual Funding Available	Funding Available Less Administrative Costs	Average Cost per Acre
1	\$166,700.00	\$158,365.00	\$ 6,500.00
2	\$170,034.00	\$161,532.30	\$ 6,825.00
3	\$173,434.68	\$164,762.95	\$ 7,166.25
4	\$176,903.37	\$168,058.20	\$ 7,524.56
5	\$180,441.44	\$171,419.37	\$ 7,900.79
6	\$184,050.27	\$174,847.76	\$ 8,295.83
7	\$187,731.28	\$178,344.71	\$ 8,710.62
8	\$191,485.90	\$181,911.61	\$ 9,146.15
9	\$195,315.62	\$185,549.84	\$ 9,603.46
10	\$199,221.93	\$189,260.83	\$10,083.63

Using the above funding matrix, and the average cost per acre in Green Township, an analysis was completed to calculate the amount of land that could be purchased in Green. The analysis was run at 15%, 17%, and 20% cost-share.

Year	15% Township Cost Share (acres preserved)	17% Township Cost Share (acres preserved)	20% Township Cost Share (acres preserved)
1	162	143	122
2	158	139	118
3	153	135	115
4	149	131	112
5	145	128	108
6	141	124	105
7	136	120	102
8	133	117	99
9	129	114	97
10	125	110	94
Total	1,431	1,262	1,073

If the Township cost share is 15%, they will be able to preserve 1,431 acres over a ten year period, in partnership with the County and State. Utilizing the estimated cost per acre and the SADC sliding scale, the actual Township cost share will most likely be approximately 17% resulting in 1,262 acres preserved over a ten year period.

Cost Projections Associated with Preservation Goals

An estimate was also completed to determine the cost share funding from the County and State between 15% and 20% municipal cost share. County funding is limited and this analysis is based on an assumption of County participation which may or not be available at the time the project is completed.^b

Using this as a basis, and assuming the available funding from the Township is limited as determined above, the following analyses were completed for Green Township.

^b Donna Traylor, Coordinator, Sussex County Office of Conservation and Farmland Preservation (March 6, 2012).

Year	Average Cost per Acre	Acres Preserved at 15% Township Cost Share	15% Township Cost Share	15% County Cost Share	70% State Cost Share	Total Project Cost
1	\$ 6,250.00	83	\$ 158,365.00	\$ 158,365.00	\$ 739,036.67	\$1,055,766.67
2	\$ 6,562.50	82	\$ 161,532.30	\$ 161,532.30	\$ 753,817.40	\$1,076,882.00
3	\$ 6,890.63	81	\$ 164,762.95	\$ 164,762.95	\$ 768,893.75	\$1,098,419.64
4	\$ 7,235.16	80	\$ 168,058.20	\$ 168,058.20	\$ 784,271.62	\$1,120,388.03
5	\$ 7,596.91	80	\$ 171,419.37	\$ 171,419.37	\$ 799,957.06	\$1,142,795.79
6	\$ 7,976.76	79	\$ 174,847.76	\$ 174,847.76	\$ 815,956.20	\$1,165,651.71
7	\$ 8,375.60	78	\$ 178,344.71	\$ 178,344.71	\$ 832,275.32	\$1,188,964.74
8	\$ 8,794.38	77	\$ 181,911.61	\$ 181,911.61	\$ 848,920.83	\$1,212,744.04
9	\$ 9,234.10	77	\$ 185,549.84	\$ 185,549.84	\$ 865,899.24	\$1,236,998.92
10	\$ 9,695.80	76	\$ 189,260.83	\$ 189,260.83	\$ 883,217.23	\$1,261,738.90
	Total Acres:	793	\$1,734,052.57	\$1,734,052.57	\$8,092,245.31	\$11,560,350.44

Year	Average Cost per Acre	Acres Preserved at 17% Township Cost Share	17% Township Cost Share	17% County Cost Share	66% State Cost Share	Total Project Cost
1	\$ 6,250.00	73	\$ 158,365.00	\$ 158,365.00	\$ 614,828.82	\$ 931,558.82
2	\$ 6,562.50	72	\$ 161,532.30	\$ 161,532.30	\$ 627,125.40	\$ 950,190.00
3	\$ 6,890.63	72	\$ 164,762.95	\$ 164,762.95	\$ 639,667.91	\$ 969,193.80
4	\$ 7,235.16	71	\$ 168,058.20	\$ 168,058.20	\$ 652,461.27	\$ 988,577.68
5	\$ 7,596.91	70	\$ 171,419.37	\$ 171,419.37	\$ 665,510.49	\$1,008,349.23
6	\$ 7,976.76	70	\$ 174,847.76	\$ 174,847.76	\$ 678,820.70	\$1,028,516.21
7	\$ 8,375.60	69	\$ 178,344.71	\$ 178,344.71	\$ 692,397.12	\$1,049,086.54
8	\$ 8,794.38	68	\$ 181,911.61	\$ 181,911.61	\$ 706,245.06	\$1,070,068.27
9	\$ 9,234.10	68	\$ 185,549.84	\$ 185,549.84	\$ 720,369.96	\$1,091,469.63
10	\$ 9,695.80	67	\$ 189,260.83	\$ 189,260.83	\$ 734,777.36	\$1,113,299.03
	Total Acres:	700	\$1,734,052.57	\$1,734,052.57	\$6,732,204.08	\$10,200,309.21

Year	Average Cost per Acre	Acres Preserved at 20% Township Cost Share	20% Township Cost Share	20% County Cost Share	60% State Cost Share	Total Project Cost
1	\$ 6,250.00	62	\$ 158,365.00	\$ 158,365.00	\$ 475,095.00	\$ 791,825.00
2	\$ 6,562.50	61	\$ 161,532.30	\$ 161,532.30	\$ 484,596.90	\$ 807,661.50
3	\$ 6,890.63	61	\$ 164,762.95	\$ 164,762.95	\$ 494,288.84	\$ 823,814.73
4	\$ 7,235.16	60	\$ 168,058.20	\$ 168,058.20	\$ 504,174.61	\$ 840,291.02
5	\$ 7,596.91	60	\$ 171,419.37	\$ 171,419.37	\$ 514,258.11	\$ 857,096.85
6	\$ 7,976.76	59	\$ 174,847.76	\$ 174,847.76	\$ 524,543.27	\$ 874,238.78
7	\$ 8,375.60	59	\$ 178,344.71	\$ 178,344.71	\$ 535,034.13	\$ 891,723.56
8	\$ 8,794.38	58	\$ 181,911.61	\$ 181,911.61	\$ 545,734.82	\$ 909,558.03
9	\$ 9,234.10	58	\$ 185,549.84	\$ 185,549.84	\$ 556,649.51	\$ 927,749.19
10	\$ 9,695.80	57	\$ 189,260.83	\$ 189,260.83	\$ 567,782.50	\$ 946,304.17
	Total Acres:	595	\$1,734,052.57	\$1,734,052.57	\$5,202,157.70	\$8,670,262.83

In summary, the total estimated project costs and partnership costs (Township, County and State) to achieve the 1, 5, and 10 year goals for the Green Township farmland preservation program are as follows at 15%, 17% and 20% of municipal funding:

	Acres Preserved at 15% Township Cost Share	15% Township Cost Share	15% County Cost Share	70% State Cost Share	Total Project Cost
Year 1	162	\$ 158,365.00	\$ 158,365.00	\$ 739,036.67	\$1,055,766.67
Years 1-5	767	\$ 824,137.82	\$ 824,137.82	\$3,845,976.49	\$5,494,252.13
Years 1-10	1,431	\$1,734,052.57	\$1,734,052.57	\$8,092,245.31	\$11,560,350.44

	Acres Preserved at 17% Township Cost Share	17% Township Cost Share	17% County Cost Share	66% State Cost Share	Total Project Cost
Year 1	143	\$ 158,365.00	\$ 158,365.00	\$ 614,828.82	\$ 931,558.82
Years 1-5	677	\$ 824,137.82	\$ 824,137.82	\$3,199,593.89	\$4,847,869.53
Years 1-10	1,262	\$1,734,052.57	\$1,734,052.57	\$6,732,204.08	\$10,200,309.21

	Acres Preserved at 20% Township Cost Share	20% Township Cost Share	20% County Cost Share	60% State Cost Share	Total Project Cost
Year 1	122	\$ 158,365.00	\$ 158,365.00	\$ 475,095.00	\$ 791,825.00
Years 1-5	575	\$ 824,137.82	\$ 824,137.82	\$2,472,413.46	\$4,120,689.10
Years 1-10	1,073	\$1,734,052.57	\$1,734,052.57	\$5,202,157.70	\$8,670,262.83

Using the above funding matrix, and the average cost per acre in Green Township, it is anticipated that the municipal cost share will be 17.5% with the county and state, based on the SADC Sliding Scale. Based on these assumptions, the Township could preserve 143 acres in the first year, 677 acres within five years, and 1,262 acres after ten years. Once land value rise above \$9,000 an acre, it is likely that the state will contribute approximately 60% of the funding on a municipal PIG project based on the SADC Sliding Scale.

Farmland Preservation Program Administrative Resources

Staff resources

The Township of Green has an Agricultural Advisory Committee (AAC) that meets as needed. The Land Conservancy of New Jersey serves as the municipal open space and farmland preservation “advisor” for the Township of Green and assists the staff and volunteers with their farmland and open space program.

Legal support

Legal support for Green Township’s farmland preservation program is provided by the Township attorney, up to the point of contract signature, after which the county attorney is used.

Database Development and Geographic Information System Resources

The Land Conservancy of New Jersey has provided Geographic Information System mapping services for Green Township for the *Comprehensive Farmland Preservation Plan* and Planning Incentive Grant Application. This was originally based upon GIS data provided to the Township by the County of Sussex Office of GIS Services and updated in 2009 for the Green Township *Open Space and Recreation Plan Update*.

Factors Limiting Farmland Preservation Implementation

Green Township has a strong commitment to preserve its farmland. This is evidenced by the support for farmland preservation outlined in the Township’s *Open Space and Recreation Plan Update*. Green Township supports implementation of a municipal PIG program, recognizing that funding from the state is critical to the integrity of the municipal PIG program. Due to the uncertainty in state funding for farmland preservation after 2011, Green Township’s program faces financial challenges as it moves forward in purchasing and preserving land during the next ten years.

In addition, there is concern among farmland owners in Green Township that there will be inadequate state funding to purchase and preserve land, if they chose to preserve their land in the future.

¹ Personal Communication with Robert Baumley, Deputy Executive Director, State Agriculture Development Committee, August 8, 2008.

² *Sussex County Comprehensive Farmland Preservation Plan Update – May 2008*
<http://www.sussex.nj.us/cit-e-access/webpage.cfm?TID=7&TPID=5513>. Accessed November 2010.

³ State Agriculture Development Committee, New Jersey Farmland Preservation Program Appraiser Handbook. May 24, 2007. www.state.nj.us/agriculture/sadc/appraiserhandbook.pdf

⁴ Personal Communication with Donna Traylor, Director, Sussex County Agricultural Development Board, August 2010.

CHAPTER 6: ECONOMIC DEVELOPMENT



With 5,493 acres in farmland assessment devoted to croplands, equine operations, horticultural and woodland use in 2009, Green Township ranked ninth in farm operations out of 24 municipalities in Sussex County. (*New Jersey Farm Assessment Data*) Field crops form the heart of the agricultural land base in Green Township, but vegetables, nurseries, and poultry operations contribute on a smaller scale.

The marketing and profitability of the agricultural industry receives support at the State and County levels. The New Jersey Department of Agriculture identifies agriculture as New Jersey's third largest industry and identifies areas of focus each year through resolutions put forth at its annual convention. Sussex County has been a leader in the promotion of agriculture and agri-tourism, with active participation by the Sussex County Agriculture Development Board and Board of Agriculture. Each of these agencies recognize that the farmland preservation program is a critical component of the farming industry, and the success of the farmland preservation program at the state and county level and in individual municipalities such as Green Township is measured not just by acres preserved but also by the programs put in place to support the farmers and their businesses. In order to be a full partner in a successful farmland preservation program, agriculture as an industry must be vibrant, self-sustaining, and innovative.

New Jersey offers Green Township farmers a number of support agencies and programs ranging from technical advice to farm loans. The New Jersey Department of Agriculture (NJDA) *Smart Growth Tool Kit* provides information to support municipal and county government, businesses, nonprofit groups, and local citizens in their efforts to achieve the goals and objectives outlined in the NJDA *Agricultural Smart Growth Plan for New Jersey, 2006*. (*Agricultural Smart Growth Tool Kit*)¹ (*2006 Agricultural Smart Growth Plan*)² The Tool Kit embraces the five linked components that have been identified by NJDA as critical for the future of farming: Farmland Preservation, Innovative Conservation Planning, Economic Development, Agriculture Industry Sustainability, and Natural Resource Conservation.

As part of this emphasis on the business of agriculture, the NJDA annually sets "Economic Development Strategies" to expand and strengthen various sectors of the agriculture industry in New Jersey, including produce, horticulture, dairy, livestock and poultry, field crops, organic, equine, wine, and agri-tourism. The NJDA observes that "*local access to large affluent markets has long been an advantage for the marketing of...products. While our markets are still there, competition for those markets has become tougher.*" Thus, New Jersey farmers "*must continually work to rediscover its competitive advantages improving access to nearby markets and strengthening consumer loyalty.*" (2011

Economic Development Strategies)³ Green Township farmers continue to look for ways to explore new markets, promote their products, and increase the profitability of their agricultural operations, including increasing direct marketing operations, participation in the Hackettstown Livestock Auction Market, and promoting visibility through attendance at regional events, including the annual State Fair and local events including weekly farmers markets. Websites such as the Jersey Fresh website and the Sussex County website also help promote locally grown produce.

The trends in agriculture in Sussex County indicate that farmers continue to be challenged, and support on all levels, financial, educational, promotional, regulatory, improved farming techniques, continues to be necessary to support the sustainability and viability of farming. The chart below presents an overview of trends in agricultural statistics for Sussex County over the past two decades. In general, overall sales, expenses and number of farms have risen, while acreages, sales and income per farm have declined. A major challenge is to find ways to make small farms viable as the nature of agriculture changes to meet changing demands.

Sussex County Trends					
<i>Source: Census of Agriculture</i>					
	2007	1997	% Change to 2007	1987	% Change to 2007
Market Value of Products Sold (\$1,000)	\$21,242	\$19,187	11%	\$19,922	7%
Average/Farm	\$20,040	\$23,201	-14%	\$25,673	-22%
Production Expenses (\$1,000)	\$25,917	\$16,086	61%	\$17,028	52%
Average/Farm	\$24,450	\$19,451	26%	\$21,943	11%
Net Income (\$1,000)	\$1,342	\$2,646	-49%	\$2,098	-36%
Average/Farm	\$1,266	3199	-60%	\$2,704	-53%
Acres	65,242	73,001		78,641	-17%
Average Income/Acre	\$20.57	\$36.25	-43%	\$26.68	-23%
Number of Farms	1,060	827	28%	776	37%
Average Acres	62	83	-25%	101	-39%

2011 NJDA Economic Development Strategies

One of the major efforts undertaken by the NJDA is to identify products grown in New Jersey through branding, agri-tourism, farm direct sales programs, and farm markets. The NJDA *Economic Development Strategies* for 2011 support the promotion of Jersey products through a variety of markets and mechanisms. (*2011 Economic Development Strategies*) NJDA is committed to promoting local products and agri-tourism through the New Jersey Office of Travel and Tourism, the *Jersey Fresh* website, marketing to supermarkets and restaurants, media advertising, the distribution of printed materials, and other forms of promotion. Green Township farmers benefit from this state-wide effort.

The following is a brief discussion of each of the sectors of Green Township's agriculture industry as they relate to the 2011 "*Economics Development Strategies*" report and to the particular landscape of the Green Township agricultural community. For each of the sectors, the 2011 report indicates that farmers should continually seek new local, state, and interstate markets to strengthen market share.

Produce, which includes vegetables, such as pumpkins, tomatoes, sweet corn, and squash, and fruit, such as apples and peaches, covered 138 acres in Green Township in 2009, of which 43 acres were devoted to pumpkins and 64 acres devoted to sweet corn. (*Farmland Assessment*)⁴ Overall, the vegetable industry in Sussex County increased in market value from \$1.4 million in 2002 to \$1.9 million in 2007, and fruit and berries, a smaller but growing market sector, reached a high of \$1.1 million in 2007. In total, produce represented 25% the County's agricultural commodity value in 2007. (*2007 Census of Agriculture*)⁵ With Countywide trends to smaller farms, Township farmers may consider expanding the produce sector, with its more intensive land use, as opportunities arise. Some strategies Green Township and its farmers could follow are:

- Promote the *Jersey Fresh* brand, with signage on farm stands;
- Attend farmer and buyer meetings held by the NJDA;
- In concert with the Sussex County Agriculture Development Board (SCADB), promote farm markets, direct sales and pick-your-own operations through listings on the *Jersey Fresh* website, and the County's Four Seasons of Agriculture site; and,
- With the County, explore various additional products and markets for produce, including local restaurants, grocery markets, and institutions such as schools, hospitals and prisons. One example of a readymade market may be the facilities at the County's Homestead Complex that provide food service to residents.⁶

Ornamental horticulture (nursery, greenhouses, sod and floriculture), which includes trees and shrubs, Christmas trees, and bedding plants, covered 99 acres in Green in 2009. This was the number one crop category (44%) in Sussex County in 2007, with combined nursery and Christmas tree sales of \$5.2 million, almost double the 1987 figure of \$2.8 million. Green Township farms represented 6.61% of the Sussex County acreage for this category and acreage devoted to these products have been steadily increasing. Christmas trees alone generated \$400,000 in income County-wide. According to the 2011 Economic Development Strategies, ornamental horticulture is the leading agricultural sector in New Jersey, representing almost 41% of the state's agricultural production. One likely and major reason this sector of the crop industry has become important is due to the continued non-agriculture population growth in the County and region, providing a ready market for these products. Green Township can continue to strengthen and expand this sector of the agriculture economy as opportunities arise. Some strategies to follow are:

- Support efforts by NJDA to ensure plant health and disease-free material;
- Participate in the *Jersey Grown* program and increase local consumer awareness of the *Jersey Grown* brand through use of the *Jersey Grown* banner and other point of sale materials;

- Promote local nursery products through listings on the interactive *Jersey Grown* website as well as on local and regional and organizational websites; and
- Promote more “drive up” operations, such as the Township’s Christmas tree farms, where consumers can buy directly from the farm; and
- Consider the recent availability of *Jersey Grown* branding for local firewood.

Dairy had historically been one of the dominant agricultural sectors in Green Township but has dramatically decreased throughout Green since the 1980’s. As of 2009, Green had approximately 264 heads of dairy cattle, in comparison with approximately 1,252 heads in 1983. (*Farmland Assessment*) Currently there is only one dairy farm remaining in Green Township. This decrease in dairy production is more severe than in the County at large, which ranked third in the State for value of milk and other dairy products from cows and saw a rebound in sales from \$4.6 million in 2002 to \$6.4 million in 2007. (*Census of Agriculture*) Strategies to sustain and augment the County dairy industry, as a general way to support Green Township agriculture, might be:

- Promote *Jersey Fresh* dairy products locally and statewide;
- Explore various additional products and markets for dairy, including local restaurants and grocery markets;
- Work to ensure the health of the dairy industry, and the quality of raw and processed milk; and
- Market value-added dairy products, such as cheeses, which can be sold through local community farmers markets and specialty stores.

Field and Forage Crops contributed \$3.6 million, or 31%, of Sussex County’s 2007 market value, second to ornamental horticulture and ahead of produce. Green Township farms represented 6.63% of the County’s acreage devoted to such crops. Statewide the leading field crops are hay and corn. (*Census of Agriculture and Farmland Assessment*) These are also the top two crops in Green Township. Due to high land values, property taxes and labor rates, production costs in New Jersey are higher than in most other production areas, making it potentially less profitable to grow and market such products. (*Economic Development Strategies*) In addition, the trend to smaller farm sizes, indicates that such products are not marketed on a wholesale scale but rather serves the local market, either to feed the farmer’s own livestock (particularly true for corn for silage) or, often, to serve other local livestock or equine operations. Green Township can strengthen and expand this sector of the agriculture economy as opportunities arise. Some strategies to follow are:

- Monitor crop pricing and diversify crops to take advantage of market trends;
- Support State efforts to protect the health of field crops against the immediate threat of damaging plant pests and diseases;
- Educate farmers about any improved management practices and ways to improve yield per acre;
- Alert farmers to available workshops on pasture and cropland management;
- Encourage diversification to row crops that meet newly emerging markets or markets with increasing demand or lend themselves to value-added marketing opportunities;

- Support efforts by the County and State to produce renewable fuels, thus adding a ready market for corn;
- Support the livestock industry, which uses corn as feed.
- Explore various additional products and markets, and increased outlets for sales at community markets and special events;
- Inform producers about the role of crop insurance in mitigating marketing risk;
- Consider farm income diversification, the establishment of bio-fuels businesses and opportunities for agri-tourism (such as hay rides and corn mazes);
- Consider transitioning to organic corn, wheat and soybean crops to increase the value of such crops and opportunities for value-added secondary products such as food products made from organic ingredients, to take advantage of the growing demand for such products; and
- Support the green energy initiative to construct bio-fuel plants in New Jersey, which could create a major new local market with the potential to elevate prices paid for regionally produced grains.

Livestock and poultry operations include beef cattle, sheep, goats, hogs, and poultry. The statewide trend in this area is away from large commercial beef operations and toward “alternative livestock and production methods” with direct or value-added marketing becoming a driving factor. (*Economic Development Strategies*) Sussex County ranked number four in the state in sales of cattle and calves (\$6.4 million, up from \$4.6 million in 2002) and number three in inventory in 2007, (*Census of Agriculture*) Numbers of cattle are trending downward both in the County and Green Township, even though livestock prices were on an upswing. Green Township is losing cattle at a faster rate than Sussex (73% decline since 1983 versus 69%) and in 2009 accounted for 5% of the County’s beef cattle inventory and 6.5% of its dairy inventory. Inventories of sheep are declining in Green and County wide, but goats inventories are up, with Green Township’s 106 goats representing 7.38% of the County total. (*Farmland Assessment*)

Poultry, which includes egg production, turkeys and ducks, had a market value of \$567,000 in Sussex County in 2007, ranking it seventh in the State and representing a small percentage of overall State sales of \$33 million. (*Census of Agriculture*) Green Township’s highest inventory in this sector is ducks, which at 1,217 represent 15% of the county inventory in 2009. Laying chickens, at 1,039 represent 12% of the County, while meat chickens, at 660, only represent 2.84% of the County inventory. Duck and laying chicken stocks have risen in Green Township since 1983. Turkey inventory, while on the rise County wide, has declined in Green Township to 5, representing not even 1% of the County inventory. (*Farmland Assessment*)

To strengthen and expand its place in the county economy, livestock strategies Green Township could follow are:

- Explore alternative livestock;
- Adopt the NJDA encouraged practice of raising grass-fed and organic grass-fed livestock;

- Explore the benefits and possibilities of direct marketing of livestock, poultry and their value-added products, such as fresh meat, cheeses and milk from alternative livestock, particularly goats and goat products;
- Explore various products and markets, including local restaurants and grocery markets;
- Encourage 4-H members and agricultural education/FFA students to participate in the New Jersey Junior Breeders loan program, which helps to advance the breeding of purebred livestock and the production quality of grade livestock;
- Consider the NJDA's recommendations for farm management practices for goats to reduce costs associated with feeding and aid in maintaining open space benefits of rougher grassland;
- Support sales of livestock through additional local or regional annual markets; and
- Assist farmers with farming techniques, regulatory requirements and the latest research for livestock and poultry, including helping to ensure animal health and promote awareness of the numerous disease control programs administered by the NJDA, including programs for Cattle, Sheep and Goats.

Equine is a slowly growing agriculture sector in Sussex County (5% since 1983). It ranked eighth in the State in 2007 in terms of value of products sold (\$735,000). (*Census of Agriculture*) Green Township's 189 equine stock represent 6% of the County inventory in 2009, but is below the 206 reported in 2008. In Green Township, there were 19 acres devoted to equine operations in 2009. (*Farmland Assessment*) To continue and expand the Township's market share in the County and State equine industry, especially with its abundant supply of hay, Green Township and its farmers can:

- Work with State and County agencies to promote the expansion of equestrian trails, such as those in the Whittingham Wildlife Management Area and Allamuchy Mountain State Park, and develop trails along the old Lehigh Hudson Railway bed, which can attract more equine operations to the Township and give more opportunities to existing facilities that are open to the public for riding; boarding, etc.
- Promote the industry at shows and festivals, such as the March to November horse shows at the Sussex County Fairgrounds.
- Promote the agri-tourism aspect of the industry through petting zoos, horse and pony rides, and boarding and riding lessons;
- Explore the State's breeder programs for standardbreds and thoroughbreds;
- Support horse health through the State's disease control programs;
- Work with the County and State to promote opportunities for equine-related recreation, boarding and lessons in and around Green Township through State, regional and local websites;
- Support local 4-H club equine-related activities;
- Ensure Right to Farm Protection for Equine Operations per the Equine Agricultural Management Practices (AMP) adopted by the SADC in 2008.

Organic Farming, including crops and animals, is a potentially important market for Green Township and Sussex County. The Census of Agriculture reported a drop in the value of

organic commodities sold, from \$97,000 in 2002 to \$45,000 in 2007, but an increase in the number of farms reporting sales (from 10 to 17). Additionally, the total number of farms reporting acreage devoted to organic production was 21, including acreage devoted to organic crops and organic pastureland and acres being converted to organic production, for a total of 315 acres. (*Census of Agriculture*) With the increased consumer awareness in food production, organic products and the markets that support them should continue to gain a stronghold on the agricultural economy and become more “mainstream” as people demand high quality, readily accessible, and affordable, organic products. Many farms in Green Township claim to practice organic farming techniques, although not all are certified organic. Certification of organic farms is regulated by the U.S. Department of Agriculture via the Organic Food Production Act of 1990, and can be somewhat costly and time consuming as compared to non-organic farming. This may dissuade some farmers otherwise amenable to this type of farming. “Natural” farming is a type of farming that seeks to emulate organic farming, but is not overseen by laws or regulations, as is organic farming. Natural farming is somewhat less costly and time consuming than “organic,” and therefore may be a viable option for some farmers and their potential customers. Another alternative, for farmers transitioning to organic production, is the ability to market their products under the NJDA’s “Transitional Sustainable” label, eliminating the need to wait 36-months to profit from this niche market.⁷ With its strong support for agri-tourism, Sussex County is in an excellent position to facilitate the market growth of organic and natural agriculture products, particularly for small farmers who can market their products through on-farm stands or local farmers’ markets, minimizing the overhead of getting their product to market. Sussex County and Green Township can:

- Educate growers about organic and natural regulatory and certification requirements; and,
- Inform farmers about federal funds available to help offset organic grower certification (a reimbursement of up to 75% of certification costs, not to exceed \$500);
- Explore various additional markets, including local restaurants and grocery markets;
- Promote agri-tourism for organic and natural farms stands through municipal, County and State websites, brochures and other communications and at events;
- Work with NJDA to expand the *Jersey Organic* Brand as a way to promote and market organic products, including integration with *Jersey Fresh* campaigns; and
- Explore ways to support organic and natural, or biodynamic, food growing and processing.

Wine is a small piece of the Sussex County agricultural industry, with three wineries in operation as of December 2010, in the townships of Wantage, Montague, and Hamburg Borough; and two additional wineries in Hampton currently in the process of receiving their certifications (*Donna Traylor*).⁸ In 2009 five acres of land were dedicated to grapes in Green Township, accounting for 12% of the total 41 acres devoted to grapes in Sussex County. (*Farmland Assessment*) New Jersey ranks fifth in the nation in wine production but grape production is falling behind, causing wineries to look out of state for a portion of their grape supply (*Economic Development Strategies*). To encourage the growth of this potentially important market, Sussex County and Green Township can:

- Encourage increased grape production;
- Support licensing for distilled fruit-based spirits, which could expand the market for the Township's and County's fruit crops;
- Support the sale of wine at community farmers markets;
- Encourage county wine festivals and participation in New Jersey annual wine festivals and tours;
- Coordinate with wineries from other New Jersey counties, and New York and Pennsylvania, to grow a regional wine industry;
- Encourage additional cultural and agricultural events in association with wine festivals; and,
- Market wines to local restaurants and retail stores.

Agri-tourism is one potential link in the long term sustainability of the agriculture industry in Green Township and Sussex County. According to the 2011 *Economic Development Strategies*, "...agri-tourism offers an important opportunity to generate additional farm income and keep farms economically viable. Agri-tourism presents opportunities for New Jersey growers seeking to add value to their crops and/or capture more of the market price of their products by directly accessing consumers. Many residents consider agriculture a novelty and something to be explored and enjoyed. They desire to share the agricultural experience while increasing farm income at the same time." In Sussex County, sales attributed to this sector grew from \$2.3 million in 2002 to \$15.6 million in 2007, representing 6% of the State's income in this sector. (*Census of Agriculture*) Agri-tourism can draw people not only from throughout Sussex County and New Jersey but also from the neighboring states of New York and Pennsylvania.

Sussex County is "the state leader in developing agri-tourism." Recently, it has been aggressively pursuing enhanced utilization of the State Fairgrounds in Frankford, including the opening in 2009 of a permanent, three-season farmers market in the Barn building, backed by a \$300,000 Economic Development Grant from the federal government. The SCADB also has been the recipient of a \$50,000 grant from the New Jersey Highlands Council to further grow and develop agri-tourism initiatives. The Sussex County Farm and Horse Show/New Jersey State Fair is a 10-day event held yearly at the Sussex County Fairgrounds, and initiatives to schedule other events at the grounds are ongoing. The County promotes its agri-tourism opportunities through a brochure and website called "Enjoy Four Seasons of Agriculture in Sussex County" and "Enjoy Four Seasons of Agriculture in the New Jersey Skylands" The websites are <http://www.sussexfarmvisits.com> (the brochures are available by request from the website) and <http://www.njskylands.com/>. (2008 *Sussex County Comprehensive Farmland Preservation Plan Update*)

Agri-tourism opportunities in Green Township include at least one farm store, one year-round Community Supported Agriculture (CSA) and at least one farm offering hayrides. There is also a riding program for disabled children, a miniature horse rescue center, and an alpaca farm. (See *Green Township Farmers* list below.)

For a list of Green Township farmers participating in Direct Sales or Agri-Tourism see the end of *Chapter 2*

The Opportunity for Agri-tourism Development in New Jersey, a report prepared for the NJDA by two independent consultants and personnel from the Food Policy Institute at Rutgers, defines agri-tourism as “*the business of establishing farms as travel destinations for educational and recreational purposes.*” The report states that “*agri-tourism represents an opportunity [for the farmer] to generate supplemental income during periods when land and equipment may be underutilized or idle and afford the opportunity for feedback from consumers regarding preferences for various farm products and services.*” In addition it “*can create positive interactions between non-farmers and farmers,*” helping to “*reduce right to farm conflicts and garnering support for farm retention policies*”; it “*contributes to and enhances the quality of life in communities*” and provides consumers with “*direct access to fresh, locally-produced farm products.*” The New Jersey State Board of Agriculture formally recognized agri-tourism development as a strategy for “*bolstering the viability of New Jersey agriculture*” and in 2005, New Jersey’s Secretary of Agriculture, Charles Kuperus, convened the New Jersey Agri-tourism Industry Advisory Council.

Among the series of recommendations included in the Council’s report are:

- Marketing and Promotion – centralized promotion system, agri-tourism marketing website, better inclusion and integration of agri-tourism on the N.J. Division of Travel and Tourism marketing materials; stronger links between farmers and WIC, Senior and school lunch nutritional programs; and assisting counties with funding for agri-tourism promotion;
- Liability Protection and Insurance – develop a New Jersey Agri-tourism Limited Liability act modeled after laws in Virginia and North Carolina, and explore ways to reduce cost of liability insurance;
- Establish a state level Agri-tourism Industry Development program with a capacity to support regional agri-tourism initiatives and assist operators with marketing and promotion;
- Regulatory Guidance for Operators – include proactive communication about relevant regulations, and education about requirements and protections under the Right to Farm Act; address impediments to signage;
- Municipal Outreach – educate municipalities about building agricultural retention elements and regulations supportive of agri-tourism into their master plans and ordinances;
- Training and Information Workshops for Farmers – include hospitality training, marketing strategies and other, issue specific workshops such as liability, grant, traffic, signage; offer a forum for farmers getting into agri-tourism to interact with those who already are involved;
- Role of CADB – examine preservation policies to identify and address any restraints to agri-tourism development; provide outreach to operators and municipal officials; develop model long-term leases for farmers renting preserved farmland; host open houses and tours at agri-tourism operations such as those offered by the Somerset CADB and County Board of Agriculture;

- Resources – “how-to” website; innovation fund providing grants or low interest loans; technical assistance for farmers in identifying and obtaining grant funding; and
- School Tours – identify and compile farm-related curriculum for different grade levels (as an example of what can be done, see www.farminstitute.org. (The Farm Institute on Martha’s Vineyard’s website); provide opportunities for farmers to participate in school programs; and develop “fast facts” to educate farm visitors.

The study concludes that farmers have, over the years, adopted a range of agri-tourism activities; that agri-tourism is financially beneficial to both the farmer and the economy; and, farmers need specific assistance and resources in order to be successful at integrating agri-tourism activities into their operations.

Green Township and its farmers can:

- Work with the County and the State to expand participation in the Tourist Oriented Destination Signage (TODS) Program
- Encourage the State to produce and distribute an agri-tourism brochure, to promote the NJ State Fair and to expand the visitnjfarms.org website;
- Encourage development of an agri-tourism symposium and promote its availability to Green Township farmers;
- Track progress of the development and adoption of agri-tourism Agricultural Management Practices (AMPS) and encourage farmers to comply in order to gain grower protection under the Right to Farm Act;
- Implement a permanent signage program to alert and direct tourists and local residents to agri-tourism destinations may help increase business and income for those farming establishments; and
- Work with schools and farmers to develop and promote an expanded curriculum of opportunities for school tours to farms and for farmer visits to schools, maintaining a list of available farmers, and acting as a clearinghouse or coordinating link between schools and farmers.

General Economic Development Strategies

“Many different agencies, councils, and organizations, working through a variety of programs, have the common goal of assisting New Jersey’s agricultural community,” according to the 2011 Economic Development Strategies. “Strengthened communication and coordination between agencies and programs can result in multiple benefits for the agricultural community. In 2011 the Department will continue working on broad strategies and reaching out to better coordinate efforts with other agencies...to ensure the economic viability of the state’s agricultural industry.”

Ways to communicate to farmers include press releases to local papers and handouts developed for distribution at venues where farmers congregate, such as public meetings, farm organization meetings, fairs, workshops. Some of the general strategies that can be helpful to farmers include:

- Promote the availability of programs such as the Agricultural Leadership Development Program and the availability of training, agricultural and business development resources on the NJDA website;
- Promote the availability of programs that support worker training, health and safety and housing;
- Support the New Jersey Crop Insurance Education Initiative.
- Promote the availability of technical assistance regarding the New Jersey Construction Code as it relates to farm buildings;
- Encourage participation in New Jersey’s agricultural plastics recycling programs and expansion of these programs to include additional materials generated by farmers;
- Promote the availability of information available from the State requested motor vehicle laws and regulations as they apply to farmers and transportation of farm products; and
- Promote the availability of documents to help farmers understanding farmland assessment eligibility and filling out applications.

Agricultural Industry Retention, Expansion and Recruitment

By providing key strategies and techniques, the NJDA 2011 *Economic Development Strategies* endorses as critical the expansion and strengthening of all areas of the agricultural industry. (*2011 Economic Development Strategies*) There are many techniques to support the economic expansion, development, and solidification of Green Township’s agricultural industry. Certainly, diversity of agricultural commodities to broaden the agricultural base now dominated by hay and corn would help to ameliorate any economic downswing in either the general economy or a specific sector of the County’s agriculture industry. In general, the Agricultural Advisory Committee (AAC) and the Township stand behind the local agricultural industry. Some key items that the Green Township agriculture community can consider for economic development and sustainability are discussed below; however, with recent municipal funding issues, economic times and existing tax burdens, little if any financial support is expected. The AAC is supportive of agriculture initiatives, but the volunteer nature of the organization and the existing obligations hinder any increased efforts.

“Sell” agriculture as part of the Green Township “landscape.” The Green Township farmland preservation program has protected 1,280 acres since 1990 (see list of preserved farms in *Chapter 4*). However, this is not even one quarter (23%) of the Township’s 5,493 farmland assessed acres. (*New Jersey Farm Assessment Data*) Farming has had a long and deep tradition in Green Township and as more Township farmland becomes preserved, and support for agriculture is woven into various sectors of the Township’s economy, farming may be assured a long-term presence of life in Green Township, diminishing any perceived agriculture impermanence the general public may have. A coordinated effort to “sell” agriculture as a way of life that is enduring and significant to the Township and its economy will ensure area residents are aware of the many benefits of farmland, thus solidifying public economic support for agricultural industries. Signage on preserved

farms and other outreach mechanisms, such as adult and youth farmer education, the New Jersey State Fair/Sussex County Farm and Horse Show in Frankford, farm stands and pick-your-own operations for both produce and Christmas trees, as well as Community Supported Agriculture will work to enhance farming throughout the Township.

Supply products and services to support the emerging agricultural profile. As large-scale agriculture becomes a way of the past in Sussex County, so have the suppliers that serve that market. The agricultural infrastructure is in a transitional phase to accommodate the change to smaller farms and more intensive agricultural operations. The County agricultural community can pursue options, which may include tax incentives, to entice appropriate suppliers and services to build business or presence in the area. As agriculture in Green Township becomes more “permanent” through increased preservation efforts, suppliers may return if they sense that a profitable supply business can be operated in the area. The Township welcomes agriculture-related businesses within the confines of its existing zoning. See *Chapter 2* for a list of suppliers serving Green Township and the broader region.

Farmers need to be adaptable to farm for, and supply, emerging markets in and out of the Township. As the number of farms dedicated to livestock has declined in both Green Township and Sussex County over the past few decades, farmers have become increasingly adaptable, entering into new and niche markets to increase their profitability. As an example of adaptability, Ag Choice, a Green Township based company, collects and composites animal waste to reduce non-point source pollution⁹. Another farm sells alpaca fibers and alpacas for breeding, and another sells honey and beeswax products. Since agriculture is indeed a business, farmers must continue to be adaptable to change along with the needs and wants of its customer base. Support from the Sussex County Agriculture Development Board, Board of Agriculture, N.J. Farm Bureau, and other local and regional associations are vital to help the agriculture community be adaptable, and stay profitable.

Market Research – Green Township may want to consider coordinating with Sussex County to partner with Rutgers University’s Food Policy Institute, and the Rutgers Cooperative Extension of Sussex County to identify and integrate market research on agriculture and economic trends. The Food Policy Institute can be reached at (732) 932-1966.

Promote permanent markets – The agriculture community in Green Township can seek contracts with the area schools, such as the Green Hills School, Newton High School, and Andover Regional Schools to supply healthy, fresh farm products for use in their cafeterias. Area hospitals and other senior/nursing homes facilities in the area are also possible customers. Since all of these are permanent institutions, once established these markets can be considered as “permanent customers” and revenue sources for the Green Township agriculture community.

An example of this is the “Fresh Fruit and Vegetable Program,” sponsored by the U.S. Department of Agriculture. This is a program whereby participating school districts

purchase locally grown produce for use in the school. Other criteria are accessibility of the produce to all students, and nutrition education. In the 2011-2012 school year, no Sussex County school was enrolled in this program. (NJDA)¹⁰

Capitalize on Growing Population Centers – The nearness of large population centers in the area point to a need to expand food production and support the growing preferences for “eating locally” and organically. More Green Township farmers can consider taking advantage of these needs trends and adapt their farming as practicable for potential increased profitability and viability.

Flexible regulatory programs with various agencies – The 2006 Agricultural Smart Growth Plan for New Jersey, prepared by the NJDA, identified flexibility in government regulation as an important component relative to farm viability. (2006 Agricultural Smart Growth Plan) The Green Township agricultural community can work with the NJDA, and advocacy groups such as the New Jersey Farm Bureau and Sussex County Board of Agriculture, to ensure regulatory flexibility to the greatest extent possible. Examples where regulatory flexibility is important are the New Jersey Department of Environmental Protection’s Freshwater Wetlands Protection Act Rules” (N.J.A.C. 7:7A-et. seq.), which grant exemptions for agricultural activities, and also the Flood Hazard Area Control Act Rules (N.J.A.C. 7:13). The latter includes numerous agricultural permits-by rule and general permits, which allow the continuation of agriculture activities in otherwise regulated areas.

Green Township can continue to incorporate agriculture into its economic development plans, municipal master plans, and local zoning. Incorporating agriculture into local planning and zoning documents will help the Township protect its farmlands and rural character in the face of development pressure. As an example of its support of local agriculture, Green Township passed a Right to Farm ordinance in 2010 to ensure farmers have the ability to practice accepted agricultural operations. More than 90% of Green Township is zoned as Agricultural Residential (AR 5/2– single family residential with traditional five-acre minimum) and Agricultural Industrial (AI 10- ten- acre lot minimums zoned for agriculture or clean industrial uses). The AR 5/2 zone is largest in the town and where most of the Township’s farmland is located. However, many of preserved farmland properties are located within the AI 10 zone.¹¹ . Accessory farm buildings are permitted on any commercial farm within Green Township,¹² as an indicator of the Township’s zoning support of agriculture. The Township is willing to support economic development initiatives put forth by the County, but does not foresee financial resources available in the near term to develop such initiatives at the municipal level.

Minimum wage impact on farm businesses – The State minimum wage was raised to \$6.15 per hour in October 2005, followed by a second increase to \$7.15, effective October 2006, and a third increase to \$7.25 in July 2009. This minimum wage applies to farm workers and matches the federal minimum wage, as does neighboring New York State. Pennsylvania, however, still has an exception for labor on a farm, giving it a competitive advantage in operations that are hired-labor intensive.

Generally, due to smaller farm size or less labor intensive crops such as hay and corn, farm labor costs are not as large a problem for Green Township farmers as they are for farmers in parts of the County or State that have major produce agriculture industries. However, even while the current minimum wage puts a financial burden on farmers, it is equally hard to find laborers willing to work for such wages, particularly if these workers have to find housing for themselves, the cost of which is often out of balance with the wages they can earn.

The Rutgers Cooperative Extension (RCE) of Sussex County and the Rutgers University Agricultural Experiment Station are vital to the long-term economic sustainability of agriculture in Green Township, Sussex County, and the State of New Jersey. Farmer education programs keep the Sussex County agriculture industry apprised of the most recent farm research and techniques, which helps Sussex County farmers to remain competitive. The Future Farmers of America (FFA) organization trains young people in agriculture practices, preparing them to be future Sussex County farmers. Both the RCE and FFA are discussed in detail in *Chapter 8*.

Location and emerging opportunities – While Green Township does not have any major state or interstate highway systems passing through the town, it is located in close proximity to Interstate 80, U.S. 206, and N.J. 94, making it a bedroom community for many New York metropolitan area workers. County Route 517 and Route 519 are the main roads passing through the town.¹³ This easy access to major highway systems and the New York Metropolitan area opens up Green Township to a large consumer base. Green Township farmers can take advantage of their proximity to major transportation routes by marketing not only their products, but also agri-tourism events to the larger surrounding metropolitan area.

Sussex County has more cropland devoted to corn, switch grass and other farm products that could be used to produce ethanol. Green Township farmers can piggyback on County support for establishing the plant, if not in the County, then in the region (northern New Jersey or southern New York State).

Green Township supports the representation of agricultural interests on regional and local industry boards, business organizations, and economic development associations. Farmers are represented on both the Township Committee and the Agricultural Advisory Committee. The Township does not have the resources to initiate local programs and sees its greatest success in supporting and partnering with local and regional organizations (county, state, and national), and in encouraging farmers to enroll and actively participate in programs to stimulate and encourage agricultural economic development.

Economic Development Programs

Green Township benefits from the economic development program provided by Sussex County to help the county's agricultural community stay strong and profitable. The following is a listing and brief discussion:

Community Farmers Markets – In 2011, three community farmers’ markets were operating in Sussex County. The market at the Sussex County Fairgrounds has recently become a three-season market:

- *Sussex County Farmers Market at the Fairgrounds*, 37 Plains Rd., Barn Building, Augusta, April 3rd - October, 2010, Saturdays, 9am-2pm. Fresh vegetables, fruits, flowers, perennials, dried flower arrangements, heirloom vegetable plants, baked goods, cheese, honey, meats, eggs, alpaca fiber and products, and many value added products including jellies, pickles, and salsa. WIC and Senior Farmers Market Nutrition Program Coupons Accepted. Only Sussex County farmers participate, and all products are either Sussex County grown or *Jersey Fresh*.
- *Olde Lafayette Village Farmers’ Market*, Routes 15 & 94, Lafayette, June 27th - October 31st, 2010, Sundays, 10:30am - 3:00pm. Variety of fruits and vegetables, flowers, meats, perennials, baked goods, alpaca fiber products, eggs, jams & jellies, relish, pickles, fresh baked pies, Italian specialties, goats milk soap and cheese. WIC & Senior FMNP vouchers accepted by some farmers.
- *Sparta Farmers Market*, 65 Main St., Sparta Municipal Building parking lot, Sparta, May 14th- October 29th, Saturday 10:00 am - 2:00 pm. Variety of fruits and vegetables, all natural meats, cut flowers, bedding plants, eggs, baked goods, Jersey wines, milk, and cheeses. (New Jersey Department of Agriculture)¹⁴

Community Supported Agriculture – Economic support of the Green Township agricultural community also comes from local grass roots groups. This support is embodied in Community Supported Agriculture, which consists of:

- A community of individuals who pledge support to a farm operation so that the farmland becomes the community’s farm. In such an arrangement, the growers and consumers provide mutual support, and share the risks and benefits of agriculture.
- Members or “share-holders” of the farm pledge in advance to cover the anticipated costs of the farm operation and farmer’s salary.
- Members receive shares in the farm’s products throughout the growing season.
- Members also receive the satisfaction gained from reconnecting to the land and participating directly in food production.
- Members also share in the risks of farming, including poor harvests due to unfavorable weather or pests.
- Generally, growers receive better prices for their crops, gain some financial security, and are relieved of much of the burden of marketing.
(*National Agricultural Library*)¹⁵

Currently in Green Township Havenwood Farms offers a year round CSA and is looking to expand with additional pick-up sites.¹⁶

Other Sussex County Economic Development Programs

- “Commercial Kitchen” – a pilot program to use Sussex County’s Vocation & Technical School’s certified kitchen for production of value-added farm products

- Goat Project – The RCE, the NJDA and the SC Board of Agriculture received funds to study the feasibility of processing local milk products in the County; an interim report published in 2001 indicated that this would be feasible. A second study will explore the possibilities of milk producers owning and operating their own processing plant to create value-added dairy products.
(2008 Sussex County Comprehensive Farmland Preservation Plan Update)

Additional Resources

There are numerous other resources that can be used by the Green Township agriculture industry to assist it in expanding and solidifying its economic base in the county and region. Several are listed below.

The New Jersey Department of Agriculture (NJDA) lists various informational Agriculture Economic Development Services on its website. These include:

- Agriculture credit and finance;
- Business development for agriculture, food manufacturing and related industries;
- Farm building construction;
- Farmland assessment;
- Motor vehicle regulations for agriculture;
- Real property appraisal manual, farm building section;
- Recycling for agriculture;
- Risk management and crop insurance;
- Sales and use tax on farmer’s purchases; and
- Trespass, vandalism, and liability on farms.
(Agricultural Economic Development Services)¹⁷

To help solidify agri-tourism and the agriculture business in Sussex County, the NJDA lists on its website more than 30 Sussex County roadside markets and pick-your-own farms and provides links to a directory of Christmas tree farms and equine facilities. The County agri-tourism brochure also lists farms open to the public. Several Green Township operations are listed in these sources (see *Chapter 2*). The Green Township agricultural community can work with the County and the State to keep the lists updated and current.

Sustainable Agriculture Research and Education (SARE) is a United States Department of Agriculture “*competitive grants program with regional programs and regional leadership. SARE supports research and education that helps build the future economic viability of agriculture in the United States. SARE funding is authorized under Subtitle B of Title XVI of the Food, Agriculture, Conservation and Trade Act (FACTA) of 1990.*” (SARE)¹⁸ SARE funds are used for:

- *Farmer/Rancher Grants*: These grants help farmers who have an innovative idea they want to test that would prove beneficial to the wider farm community; they require partnership with a technical advisor such as an extension agent.
- *Partnership Grants*: These grants are for RCE and NRCS personnel, non-profits, and agricultural consultants who work directly with farmers. Grants are used for

on-farm research, demonstration and marketing projects that address sustainability and must be conducted with at least one farmer.

- *Sustainable Community Grants*: These grants make a direct connection between community revitalization and farming, addressing issues such as farm finance, marketing, land use, water use, and value-added product development and are awarded to municipalities, educational institutions, RCE or NRCS.
 - *Professional Development Grants*: These grants fund projects that help RCE educators and other agricultural professionals learn and transmit the knowledge needed to help farmers move toward greater sustainability.
 - *Research and Education*: This program funds projects that lead to farmers adopting sustainable practices. The emphasis is on improved farming practices and an enhanced quality of life for farmers and rural communities.
 - *Agroecosystems Research Grants*: This program funds long-term research that can lead to developing new models of farming that future farmers can adopt.
- (SARE)

As defined by Congress, sustainable agriculture is an integrated system of plant and animal production practices having a site-specific application that will, over the long term:

- Satisfy human food and fiber needs;
 - Enhance environmental quality and the natural resource base upon which the agricultural economy depends;
 - Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
 - Sustain the economic viability of farm operations; and,
 - Enhance the quality of life for farmers and society as a whole.
- (SARE)

The Agricultural Marketing Resource Center (AgMRC) is a “*national information resource for value-added agriculture.*” A project of Iowa State and Kansas State Universities, and formerly the University of California, funded in part by a USDA Rural Development grant. AgMRC provides information to help farmers “*assess value-added market opportunities, investigate processing options and understand business and production issues*” for agricultural commodities and products such as agri-tourism, renewable energy, livestock, specialty crops, and numerous others. In general, the goals of AgMRC are to:

- Provide value-added business and economic analysis tools, including information on business principles, legal, financial and logistical issues as an aid to business development.
 - Provide an electronic, Web-based library (www.agmrc.org) with powerful search capabilities to make such value-added information available to producers.
 - Conduct research and analysis on economic issues facing producers involved in value-added business ventures.
 - Conduct outreach activities such as workshops, seminars, newsletters and WebMail to disseminate this research and information to producers, businesses and others involved in value-added agriculture.
- (Agricultural Marketing Resource Center)¹⁹

The AgMRC website offers numerous business development information links, as well as links to other government and non-government sources for business development. This website can be used by the Green Township agricultural community as a resource as they consider the development and implementation of value-added products.

Future of Agriculture

The future of agriculture in Green Township is being shaped by market forces and social trends that are occurring throughout New Jersey. These trends have already begun to redefine the traditional agricultural industry in Green Township. Among the most substantial trends shaping local agriculture has been the extended decline in the dairy market. Dairy is the foundation of the region's agricultural industry, and its continued decline impacts dairy farmers and their support businesses as they transition towards other forms of agriculture. Consequently, grain and hay farms that support them may move toward different agricultural activities as well, as has been seen in Green Township with the decline in acres devoted to field crops, particularly corn and alfalfa hay.

Goats, egg chickens, swine, and ducks appear to be growing sectors in Green Township. Sweet corn, pumpkins and nursery trees and shrubs are doing well and should continue to do so, since they serve the active agri-tourism industry in Sussex County. These may be niches for Green Township farmers to continue to explore.

Another challenge facing the area's farmers is pressure on municipalities to raise property taxes to cover services, while a slowed economy creates an opposing pressure to conserve their resources and minimize services in order to hold the line on taxpayer costs. This trend indicates that farmers will show a greater preference for renting rather than owning land, that farm operations will take up less space and utilize more intensive practices on their land, and that more and more farmers no longer make farming their primary occupation. Increasing land prices also threaten to replace many of Green Township and Sussex County's farmlands and open space areas with residential and commercial developments that are less compatible with agricultural production, although development growth has been slow and relatively constant, numbering below 17 new single family permits annually in recent years (since 2008). However, this could have less to do with interests in preserving farmland and open space, but rather be an outcome of the economic downturn and recession since 2008. The Green Township Agricultural Advisory Committee can work with the Township Committee and the Planning Board to ensure that agricultural viability and sustainability is a continuing focus for the Township, as it plans its future.

The combination of traditional agricultural markets declining and land costs increasing will likely promote innovation in the ways farmers supplement their incomes. Farmers are currently trying to meet these challenges by producing goods with higher rates of return, such as nursery goods, farm stand merchandise, and equine services. Agri-tourism facilities, such as farm stands, pick-your-owns, and petting zoos, may become more numerous as the County's residential population grows, expanding the market for these

types of services. Many Green Township farmers are already ahead of the trends producing specialty crops for niche markets such as heirloom potatoes and tomatoes, as well as raising alpacas and natural and grass-fed beef.

Returns from “direct” sales of agricultural products to consumers have increased in recent years. This indicates that the anticipated trends towards more innovative farming practices have already begun to influence agriculture in Sussex County. Direct agricultural sales generated \$774,000 on 172 Sussex County farms in 1997 – a figure which grew to \$1,530,000 on 242 farms in 2007. Niche products such as packaged and organic goods that generate “value added” revenue streams are likely to increase as well. Between 2000 and 2007, the number of farms in Sussex County reporting organic production rose from 10 to 17, Unaccountability sales declined from \$97,000 to \$45,000, which is the reverse of a stunning statewide increase from \$222,000 to \$4,250,000. For the Green/Newton and Andover (partial) area, there were six operations reporting sales of organic products in 2007. (*Census of Agriculture*)

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- ² New Jersey Department of Agriculture, 2006 Agricultural Smart Growth Plan. <http://www.state.nj.us/agriculture/pdf/smartgrowthplan.pdf>. Accessed August 2009.
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- ⁵ United States Department of Agriculture, National Agricultural Statistics Service. www.agcensus.usda.gov. Accessed August 2009.
- ⁶ Blair Academy. “Sustainability at Blair.” http://www.blair.edu/About_Blair/ab_sustainability.shtm. Accessed October 26, 2010.
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- ⁹ Ag Choice LLC. <http://ag-choice.com/about.html>. Accessed October 2011.
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- ¹² Green Township. Ordinance 2010-09.
- ¹³ Green Township. Green Township Master Plan. May 2003.
- ¹⁴ New Jersey Department of Agriculture. Jersey Fresh. <http://www.state.nj.us/cgi-bin/agriculture/jerseyfresh/search.pl?type=urban&county1=sussex>. Accessed October 3, 2011.
- ¹⁵ United States Department of Agriculture, National Agricultural Library, Alternative Farming Systems Information Center, Community Supported Agriculture. <http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>. Accessed June 2007.
- ¹⁶ Local Harvest. www.localharvest.org. Accessed November 2011.
- ¹⁷ New Jersey Department of Agriculture, Agricultural Economic Development Services. <http://www.state.nj.us/agriculture/divisions/md/prog/agricultureeconomic.html#top>. Accessed December 2010.
- ¹⁸ New Jersey Department of Agriculture, Sustainable Agriculture Research and Education (SARE). <http://www.state.nj.us/agriculture/grants/sare.html>. Accessed December 2010.
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CHAPTER 7: NATURAL RESOURCE CONSERVATION



Preservation of farmland is the cornerstone of the New Jersey Department of Agriculture (NJDA)'s *Agricultural Smart Growth Plan* and the Farmland Preservation Program. However, there is more to farmland preservation than retirement of development rights or outright purchase of farms. A major contributor to a successful, long term farmland preservation program is the conservation of natural resources on farms, without which the long term sustainability and viability of New Jersey's preserved farmland would be in doubt.

Natural Resource Protection Agencies

There are numerous entities, both public and private, that administer, fund, and provide technical guidance for Green Township farmers relative to natural resource conservation. These entities are in place to assist farmers with natural resource conservation issues, and can be called upon by farmers for appropriate assistance.

Natural Resources Conservation Service

An important partner in support of natural resource conservation for the agricultural community is the United States Department of Agriculture (USDA)'s Natural Resources Conservation Service (NRCS). The NRCS provides technical assistance suited to natural resource issues, such as management of soil and water, which are specific to a farmer's needs, with ample opportunity for cost shares and financial incentives. (*Information for Farmers*)¹

The local NRCS office serving Green Township is located at Building 1, 101 Bilby Road, in Hackettstown Commerce Park.² Green Township farmers may utilize this local NRCS office for assistance. NRCS also will reach out directly to landowners if they know of a farmer who is in need of technical assistance, or could use the guidance of the NRCS staff.

The local NRCS office helps to prepare Conservation Plans for farmers. These Conservation Plans nearly always include strategies to conserve soil and water, but may also include conservation practices for flora, fauna and clean air. If all five elements are included, they are referred to as Resource Management Plans. Within one year of selling their development easement, owners of preserved farms are required to develop a Conservation Plan. These Plans are also recommended before applying for natural resource conservation programs such as the Wildlife Habitat Incentive Program (WHIP), the

Environmental Quality Incentive Program (EQIP) and the State Cost Share Program (Eight-Year Program). The local NRCS office administers these conservation program grants, which offer financial incentives to support conservation projects. For more information, contact the NRCS office at (908) 852-2576, extension 3, or visit the website at www.nj.nrcs.usda.gov.³ (Dan Mull and Maria Collazo, NRCS)

Discussions with the local NRCS office personnel indicate the following strategies would strengthen natural resource conservation efforts for farms in Sussex County and its municipalities, including Green Township:

- As previously stated, owners of preserved farms are required to develop a Conservation Plan within one year of selling their development easement.
- Owners of preserved farms have an obligation to conserve natural resources on their farms. Development of a Conservation Plan is a good first step towards fulfilling this obligation.

The District Conservationist is Dan Mull. He can be reached at (908) 852-2576, extension 114 or dan.mull@nj.usda.gov. Mr. Mull and his staff (listed below) can be contacted by Green farmers for assistance or for more information on the availability of NRCS programs in the Township.

		Ext.
District Conservationist	Dan Mull	114
Resource Conservationist	Jim Wick	116
Soil Conservationist	Bea Sabouathone	117
Soil Conservationist	David Schaaf	113
Ag. Resource Specialist (CAP)	Jillian Jaworski	115
Civil Engineering Technician	Jim Kleindienst	105
Engineering Technician	Adam Northrup	122
Program Assistant	Mim Dean	101

(NRCS Personnel Directory⁴)

An additional resource available from the NRCS is the “Field Office Technical Guide.”⁵ It contains information about the development and implementation of soil, water, air, flora, and fauna resource conservation practices, and is used to develop Conservation Plans. Conservation practices discussed in the Guide that are pertinent for Green Township include, but are not limited to:

- Riparian buffers, including necessary buffer widths and plant species;
- No till and minimum till practices;
- Prescribed grazing and pasture management;
- Nutrient management, including manure and fertilizers.

(Maria Collazo)

Sussex County Soil Conservation District

Another partner in the conservation of agricultural resources is the NJDA Division of Agricultural and Natural Resources. Among its responsibilities, the Division works through the State Soil Conservation Committee (SSCC) to administer "*policies and programs to conserve and develop the state's soil, water and related natural resources on agricultural and urban lands.*" (*Agricultural and Natural Resources*)⁶

The SSCC coordinates and supports the work of the state's 15 local soil conservation districts (SCDs), one of which is the Sussex County SCD. The Sussex County SCD is under the jurisdiction of a volunteer five-member Board of Supervisors currently chaired by Barbara Rosko and chosen to reflect the various geographical regions of the County and interest areas of the District. The Sussex County SCD is charged with reviewing and approving conservation plans, implementing agricultural conservation planning assistance, agricultural conservation state cost-sharing program grants, application of organic materials on agricultural land, agricultural water supply and management, soil erosion and sediment control, storm water discharge authorization, and soil survey information. (*Agricultural and Natural Resources*) Under a separate law, the District regulates soil erosion from construction sites. Soil disturbances, such as new farm buildings, roads, hoop houses, that are not tillage related and disturb more than 5,000 square feet need to obtain a soil erosion and sediment control certification from the District. (*Clifford Lundin, District Manager*)⁷

Green farmers may approach the local SCD office with a Conservation Agreement Request to apply for technical assistance and/or financial assistance with the NRCS. If approved, the Conservation Agreement Request is forwarded to the local NRCS office in Hackettstown for processing. The administration of the Request includes preparation of a Conservation Plan. The Sussex County SCD is involved in review of conservation plans and must give final approval. (*Maria Collazo*) These Conservation Agreements are prerequisites to qualify for NRCS assistance and qualify farm owners for consideration for assistance under a State Cost Share (8-Year) program. (*Clifford Lundin*)

The Sussex County SCD office is located at 186 Halsey Rd, Suite 2 in Newton. The phone number is 973-579-5074, and the District Manager is Clifford Lundin. He can also be reached at sussex@sussexscd.org. Mr. Lundin and his staff (listed below) can be contacted by Green Township farmers for assistance. (*Sussex County SCD*)⁸

- Clifford R. Lundin, District Manager
- Jeff Eckert, Erosion Control Inspector
- Joe Baysa, Erosion Control Inspector
- Cathy Williams, Administrative Assistant
- Peggy Zvalaren, District Clerk

Rutgers Cooperative Extension of Sussex County

The Rutgers Cooperative Extension (RCE) of Sussex County provides both field and technical research focused on best management practices for farmers to ensure the long

term viability of both the agricultural economy and the natural resources upon which it is based.

Relative to natural resource conservation, the RCE of Sussex County offers the Agriculture and Natural Resource Management program. This educational program serves farmers, turf, nursery and landscape professionals and home gardeners. Services offered by extension personnel include soil testing; plant, weed and insect identification; plant disease and insect diagnosis; pest management recommendations for agricultural operations; and educational publications covering a range of agricultural topics. The RCE helps clients “*acquire knowledge to make informed decisions.*” (RCE)⁹ An example of this service is helping to prepare animal waste management plans, so as to reduce impacts to watersheds from farm animal manure.

The RCE of Sussex County is located at 129 Morris Turnpike, Newton, NJ. Stephen Komar is the County Agricultural Agent, specializing in commercial plant and animal agriculture. (RCE) He may be contacted with any questions or for information on education programs or services. Mr. Komar can be contacted via e-mail at skomar@njaes.rutgers.edu and by phone at 973-948-3040.

The SSCC, NRCS, Sussex County SCD, and RCE of Sussex County, are part of the New Jersey Conservation Partnership. This partnership of agencies strives to further soil and natural resource conservation efforts. (*Agricultural and Natural Resources*)

New Jersey Department of Environmental Protection

The New Jersey Department of Environmental Protection (NJDEP)’s Division of Parks and Forestry oversees the ***Private Lands Management Program***. One aim of this program is to foster wise stewardship and management on 1.54 million acres of forest lands owned by 88,700 private landowners (*Division of Parks and Forestry*)¹⁰ This includes private woodlands under Farmland Assessment, which totaled 380,728 acres statewide in 2009. (*Farmland Assessment*)¹¹ Many properties in Green Township that are farmland assessed include extensive woodland tracts. Such tracts were added as “farm products” in the 1970’s. There are two classifications of woodlands under this program: appurtenant (or attached) woodlands and non-appurtenant (or unattached) woodlands. Overall, woodland acreage under farmland assessment increased 14% between 1990 and 2009, with appurtenant woodlands decreasing by 42% and non-appurtenant woodlands increasing by 139%.

Appurtenant woodlands are woodland acreage on a farm less than or equal to farmed acreage. So, if 125 acres of a farm are woodland and 50 acres are tilled or pastured, 50 of the 125 woodland acres would be appurtenant. Appurtenant woodland acres do not require a WMP to qualify for farmland assessment. (*Jim Barresi*) In Green Township, between 1990 and 2000, attached woodland acreage changed most dramatically over a 10 year period, with 1,475 appurtenant acres in farmland assessment in Green in 1990 and 990 acres in 2000. Between 2000 and 2009, there was a less significant drop to 849 acres. (*Farmland Assessment*)

Non-appurtenant woodlands are woodland acreage on a farm over and above total farmed acreage (tilled and pasture). So, in the previous example, 75 of the 125 acres of woodlands would be non-appurtenant (125 woodland acres minus 50 farmed acres). In Green Township for 2009, there were 1,598 acres of non-appurtenant (or unattached) woodland in farmland assessment, up slightly from 1,562 acres in 2000, but a dramatic increase from 669 acres in 1990. (*New Jersey Farmland Assessment*)¹²

Requirements for non-appurtenant woodland tracts are listed in N.J.A.C. 18:15-2.7. These tracts must be utilized by the farmer as a sustainable “product” and require Woodland Management Plans (WMPs) in order to receive reduced local property taxes accorded properties in the farmland tax assessment program. (*Jim Barresi*)¹³ The NJDEP’s Division of Parks and Forestry, Bureau of Forest Management (BFM), reviews farmland assessment applications that include WMPs. These WMPs are prepared for farmers by private consultants. The BFM maintains a list of foresters for this purpose. Once a WMP is in place, a “Woodland Data Form” must be submitted with the farmland assessment application yearly to certify compliance with the WMP. However, the NJDEP, BFM, also inspects each site once every three years to verify compliance. (*Jim Barresi*) Since reduced local property taxes are often critical in keeping active agricultural lands economically viable, the NJDEP is an important partner for Green Township’s farmland preservation efforts.

The NJDEP’s Nongame and Endangered Species Program also administers the ***Landowner Incentive Program*** (LIP). LIP works to improve habitat, habitat management, and habitat protection for threatened and endangered species on private lands, some of which are agricultural lands. Project durations must be for a minimum of five years, and the property owner contributes a minimum 25% cost share. Some grain farmers have expressed concern over the use of LIP. This is because it provides habitat not only for threatened and endangered species but also for nuisance wildlife such as deer and turkey, which are known to cause severe loss to corn and other farm products.

In 2005, Frelinghuysen and Green Township were awarded a joint LIP¹⁴ for the area known as the Johnsonburg Swamp Preserve¹⁵. From 2007 to 2010, the LIP program was not funded in New Jersey, although the program continued for those contracts already in place. In 2011, three were three new LIP projects awarded throughout the state, however none of these were in Green Township. (*Kim Korth*)¹⁶

USDA, Forest Service’s Forest Stewardship Program

The United States Forest Service sponsors the Forest Stewardship Program. This program supports landowners whose property has a WMP that recognizes and manages the wetlands, wildlife, aesthetics, soil, and water in addition to the commercial woodlands on the property. This program, when fully funded, offers landowners cost-share initiatives to allow the landowners to fully follow the guidelines in their WMP. In New Jersey, the state farmland tax program and the U.S. Forest Service program have merged to allow one planning document for the landowner where the stewardship plan meets the state tax code

and eliminates conflicts between the two. Increasing enrollment of landowners in this merged state-federal program will ensure increased protection of the natural resources for an extended period. The minimum is a ten-year management plan. This does not ensure preservation of the land in perpetuity, but it does allow recognition of the importance of the land value and stewardship of the property for a longer period of time. (*Forest Stewardship Program*)¹⁷

In Green Township, there are 54 acres of farmland on 2 different properties enrolled in the Forest Stewardship Program. (*Mike Hart*)¹⁸

North Jersey Resource Conservation and Development Council

The North Jersey Resource Conservation and Development (RC&D) Council's main mission is to "*facilitate the transition to sustainable use and protection of the region's human and natural resources,*" including agricultural management for water quality and agricultural sustainability. The RC&D accomplishes this by working with communities and regional partnerships to deliver coordinated resource conservation and rural development assistance. Among other programs, the North Jersey RC&D offers a River-Friendly Farm Certification Program (currently limited to farms in the Raritan River Basin), which is a voluntary certification program designed to provide technical assistance and recognize farms that protect our shared natural resources through responsible management.

With support from the USDA, NRCS, each RC&D area usually consists of several counties, and has a council composed of local citizens and government representatives who serve on a voluntary basis. The North Jersey RC&D Council includes the counties of Hunterdon, Morris, Somerset, Sussex, Union and Warren. The office is located at 54 Old Highway 22, Suite 201, in Clinton, Hunterdon County, and the phone number is 908-735-0733. Sussex County government representatives include Chair Barbara Rosko (Sussex County Soil Conservation District) and Secretary Eric Snyder (Sussex County Planning Department). Green Township farmers can contact the North Jersey RC&D Council for assistance with issues related to natural resource conservation and sustainable farming. (*North Jersey RC&D Council website*)¹⁹

Private nonprofit groups and private citizens

The preservation of agriculture and agricultural resources needs not only the broad support of state, county, and local governments but also the help of private nonprofit groups and citizens. Without this help, government programs and support for agriculture would fall short of what is needed to protect the natural resource base of the agricultural landscape. Nonprofit groups and individual citizens spend countless hours providing and sharing their expertise, as well as raising and contributing money. They are invaluable in assisting with all phases of farmland preservation for Green Township, including natural resource conservation and stewardship.

The Green Township agriculture community has the support of a variety of committees and organizations, including the newly formed Green Township Agricultural Advisory

Committee (AAC), Green Township Environmental Commission (which makes recommendations on the environmental impacts of land use), Green Township Open Space Committee, Sussex County Board of Agriculture, Sussex County Agriculture Development Board (CADB), New Jersey Farm Bureau, 4-H, Future Farmers of America, and the New Jersey State Fair-Sussex County Farm and Horse Show held in nearby Frankford.

Local and regional nonprofit organizations also contribute to the permanent protection of farmland. These groups include the Ridge and Valley Conservancy, The Land Conservancy of New Jersey, The Nature Conservancy, New Jersey Conservation Foundation and New Jersey Audubon Society.

The Green Township agricultural community, via the Green Township AAC and Sussex CADB, can work with nonprofit organizations and private citizens in a coordinated fashion to further the farmland preservation program in the Township.

Resource Protection Programs and Funding

2002 and 2008 Farm Bills

The Farm Security and Rural Investment Act of 2002 (2002 Farm Bill) was landmark legislation, with much of its focus on conservation funding and environmental issues. Conservation provisions were designed to assist farmers in being good stewards of the land through grants and technical assistance. Voluntary programs relevant to New Jersey, and Sussex County, included the Conservation Reserve Enhancement Program (CREP), Conservation Innovation Grant Program (CIG), Environmental Quality Incentives Program (EQIP), Farm and Ranch Land Protection Program (FRPP), Grassland Reserve Program (GRP), Wetlands Reserve Program (WRP), and Wildlife Habitat Incentives Program (WHIP). (*Conservation Programs*)²⁰ These programs are continued under the Food, Conservation and Energy Act of 2008 (2008 Farm Bill), which provides for “*the continuation of agricultural and other programs of the Department of Agriculture through fiscal year 2012.*”²¹ As in the past, the programs are administered by the local NRCS office in Hackettstown, and the Sussex County SCD, as discussed in this section.

The Mid-Atlantic region, of which New Jersey is part, is generally underserved by federal farm programs. The Northeast/Mid-Atlantic region receives on average less than two cents in commodity payments for every dollar in farm sales, in stark contrast to over fifteen cents in some Midwest and Western states. With smaller than average farms, lower profit margins, varied crops, and development pressure, New Jersey has unique farm and food policy needs, which do not match other, larger agricultural states who receive the bulk of commodity payments. (*American Farmland Trust*)²² The 2008 Farm Bill created the new Average Crop Revenue Election (ACRE) program. This is a revenue guarantee program based on “*five-year state average yield and the two-year national average price.*” The program is voluntary, but participants would receive payments when their revenue falls below established levels. (*Farm Bureau Update newsletter*)²³ Such a revenue support system may well have a positive effect for Sussex County farmers, since it would help specialty crops and niche markets receive their fair share of payment support.

Some of the most significant gains in the 2008 Farm Bill were made in the area of conservation practices. Authorized funding increased by over \$4 billion, which should translate into increased stewardship practices, and a healthier environment via cleaner water, reduced erosion and enhanced wildlife habitat. However, many of the programs require annual appropriations from Congress, which often can mean a shortfall in full implementation of these critical conservation programs. Some highlights of the 2008 Farm Bill include:

- Improvement of the Farm and Ranch Lands Protection Program (FRPP) to allow for greater flexibility at the local level. Nationally, authorized funding rises from \$97 million to \$200 million a year by 2012.
- Expansion of the Environmental Quality Incentives Program (EQIP) to allow for innovative approaches that generate public benefits such as water and soil quality improvements, renewable energy production, and wildlife and open space protection. Nationally, authorized funding rises from \$1.2 billion to \$1.75 billion in 2012.
- Establishment of a conservation loan guarantee program to help producers secure low interest loans in order to implement often-costly conservation and environmental practices.
- Creation of a cooperative conservation initiative as a way for producers and community groups to work together on common natural resource concerns.
- Greater flexibility with third party technical assistance providers to identify and implement the most effective conservation practices appropriate for the land.
- Continuation of the Wetlands Reserve Program (WRP) and the Grassland Reserve Program (GRP) to protect water resources and expand wildlife habitat.

(American Farmland Trust website)²⁴

The following is a synopsis of the natural resource conservation programs funded by the 2008 Farm Bill. They will be implemented by NRCS and the Sussex County SCD, and to a minor degree the Farm Service Agency, which is also part of USDA. These programs are the backbone of natural resource conservation efforts in Sussex County and its municipalities, including Green Township.

Agricultural Management Assistance (AMA)

AMA is a voluntary program in which farmers receive financial and technical assistance to incorporate conservation techniques into their practices to address issues of water management, water quality, and erosion control. Funds are awarded for up to 75 percent of project costs and higher cost shares are offered for historically underserved farmers with a cap of \$50,000 per farmer per year. AMA is available in sixteen states where Federal Crop Insurance Program participation is generally low.*(NRCS Conservation Programs)²⁵* In Sussex County, there are currently eight active AMA contracts; one of which is in Green Township *(Dan Mull)*.

Conservation Reserve Enhancement Program (CREP) and Conservation Reserve Program (CRP)

Through CREP and CRP, agricultural producers voluntarily retire land to protect environmentally sensitive areas, decrease soil erosion, provide and restore wildlife habitat, and protect ground and surface water. *(NRCS Conservation Programs)*²⁶ CRP focuses on planting resource-conserving covers. CREP is used mostly along streams and rivers, to protect water resources. Examples of conservation practices include riparian buffers and filter strips for water quality, and contour buffer strips to reduce soil erosion. With incentive payments for farmers to fully implement a CREP contract, payment for this program may be fully funded by NRCS and NJDA. Both programs offer annual rental payments and cost-share assistance and require a 10 to 15-year contract. *(Maria Collazo)* Currently, there are six active CRP contracts in Sussex County totaling 16.1 acres.²⁷

Conservation Innovation Grants (CIG)

The aim of the CIG program is to stimulate the development and adoption of conservation approaches and technologies that are innovative, in conjunction with agricultural production. Funds are awarded as competitive 50-50 match grants to non-governmental organizations, tribes, or individuals. CIG is authorized under and funded through EQIP (see below), and administered by the NRCS. The CIG program offers both national and state components. At the state level, four CIGs were chosen for 2009, providing about \$200,000 in funding for innovative projects. The 2010 application deadline was in June and one project focusing on native plant seed products was chosen, receiving \$75,000 in funding. In 2006 Ag Choice, LLC, located in Green Township, received a CIG grant to study the “economic feasibility and environmental benefits of a regional composting facility for agricultural waste.”*(NRCS Conservation Programs)*²⁸

Environmental Quality Incentive Program (EQIP)

EQIP is a conservation program in which farmers receive financial and technical assistance with structural and management conservation practices that address soil, water, and grazing land concerns. *(NRCS Conservation Programs)* New Jersey funding for 2010 focused on Livestock; Irrigated Cropland; Dry Cropland; Woodlands; and Organic Operations, with contract offers that include practices to address soil quality, soil erosion, water quality, reduced animal waste production and reduced energy consumption receiving high priority²⁹ EQIP is the most well funded of all the programs, receiving approximately \$4 million statewide on an annual basis. In Sussex County, there are 36 active EQIP contracts, one of which is located in Green Township. *(Dan Mull)*³⁰

Farm and Ranch Land Protection Program (FRPP)

FRPP provides up to 50% matching funds to purchase development rights and conservation easements to keep farm and rangeland in agricultural use. The USDA partners with state, tribal, or local governments, and non-governmental organizations. (*NRCS Conservation Programs*) Farmers accepting funds through this program must adhere to strict impervious surface limitations. In New Jersey, this program receives approximately \$500,000 to \$1 million annually, most of which goes to the State Agriculture Development Committee or private conservation groups. (*Maria Collazo*) The FRPP is earmarked to provide \$250,650 towards preservation of the Pittinger farm in Green Township.³¹

Wetlands Reserve Program (WRP)

WRP offers farmers payments for restoring and protecting wetlands on their property that had been previously drained for agricultural use. Wetlands help reduce flooding, filter pollutants from water, provide critical wildlife habitat, and protect open space. (*NRCS Conservation Programs*) Payment by NRCS is based upon appraised agricultural land value. With appraised values from \$100 to \$2,000 per acre, many farmers are not willing to create wetlands on otherwise productive agricultural lands. As a result, the WRP is not widely used in Sussex County. (*Tim Dunne*) Currently, there are no active WRP contracts within the County (*Dan Mull*).

Wildlife Habitat Incentives Program (WHIP)

The Wildlife Habitat Incentives Program (WHIP) is a voluntary USDA program for improving or developing fish and wildlife habitat on private lands. The program provides both technical and financial assistance to establish and enhance habitat for priority species and habitat types.

NRCS and their wildlife partners in the state developed a state plan to direct WHIP financial and technical assistance in several areas. Applications are accepted year-round for individual projects that meet one of these objectives: Pollinator Habitat, Grasslands Habitat, Disturbance-dependent Habitat, Bog Turtle Priority Species, Wetland Habitat and Delaware Bay Priority Area. For more information visit the NRCS website at <http://www.nj.nrcs.usda.gov/programs/whip> or contact the Hackettstown Service Center at: (908) 852-2576, extension 3.

Since its inception in 1998, WHIP has been a popular program for non-federal landowners interested in wildlife habitat management in New Jersey. There are nine active contracts in Sussex County, one of which is located within Green Township. (*Dan Mull*)

Funding for WHIP through 2012 is authorized at \$85 million per fiscal year. (http://www.nrcs.usda.gov/programs/farmland/2008/pdfs/whip_factsheet.pdf)

SADC Soil and Water Conservation Grants

The New Jersey Department of Agriculture, State Agriculture Development Committee (SADC) has in the past provided grants to farms that are permanently preserved, or are enrolled in the Eight Year Program, with permanently preserved farms given priority for funding. The purpose of the grants and program is to provide funding for soil and water conservation practices.

The types of soil and water conservation projects funded by SADC include soil erosion and sediment control systems (terrace systems), control of farmland pollution (stream protection; sediment retention, erosion or water control systems; animal waste control facilities; and agri-chemical handling facilities), the impoundment, storage and management of water for agricultural purposes (diversions; water impoundment reservoirs; irrigation systems; and drainage systems), and management of land to achieve maximum agricultural productivity (land shaping or grading) while conserving natural resources. (*Soil and Water Conservation Grants*)³²

These grants fund soil and water conservation projects approved by the Sussex County Soil Conservation District (District), with the program administered by both the District and the local NRCS office in Hackettstown. Both the District and the local NRCS office also provide technical assistance for Eight Year Program projects. Once the District deems the conservation project necessary and feasible, applications are forwarded to the New Jersey State Soil Conservation Committee (SCC), which recommends projects to the SADC for funding approvals. (*Soil and Water Conservation Grants*) Traditionally, 50% of the costs of approved soil and water conservation projects are paid with grant funds, but up to 75% has also been approved in the past. As of November 2011, all funds for the year have been exhausted. However, when funds do become available applications will be funded in the order submitted and approved with highest priority going to properties permanently preserved. (*Clifford Lundin*)³³

Water Resources

The Importance of the Water Resource

The protection of the water resource as it relates to agriculture and farmland preservation in Green cannot be overstated. Without a consistent, plentiful, adequate and clean water source, agriculture cannot exist. In addition, farms are critical as open space areas to provide aquifer water recharge. In Green Township, many farm-assessed properties occupy some of the higher-ranking aquifer recharge areas including a large portion of land in the Pequest River corridor. In addition, farm- assessed properties are located in close proximity to the Pequest River, Bear Brook, and Trout Brook, all three of which are able to support trout (See *Farmland Map* in the Maps section). To a certain extent, some aspects of ensuring clean and plentiful water can be controlled at the individual farm level. These include:

- Minimizing the use of synthetic chemicals such as fertilizers, herbicides, pesticides, and fungicides so as to lessen impacts to groundwater;
- Providing riparian buffers along watercourses, so as to protect streams from the aforementioned synthetic chemicals;
- When possible, practicing organic farming methods;
- Practicing appropriate timing of chemical application, so as to minimize its use; and
- Practicing water conservation techniques, such as drip irrigation and water reuse for certain types of farming where feasible, such as smaller scale vegetable and fruit operations.

The necessity of clean and plentiful water, and its precariousness, is clearly stated in the *Sussex County Strategic Growth Plan*. The Plan indicates that clean water is “*part of the Sussex County character.... Particular focus should be on water quality, recharge, overall watershed management, soil erosion, protection of natural resources, threatened and endangered species and other indicator species habitat....A degradation of water quality exerts a negative impact on quality of life and property values.*” (2007 *Sussex County Strategic Growth Plan*)³⁴ Some potential contamination sources are pesticides, which are used in agriculture and at private residences, and underground storage tanks for various substances such as gasoline and diesel fuel. Underground storage tanks are sometimes used on farms as fuel sources for equipment.

In addition, the 2003 *Sussex County Open Space and Recreation Plan* indicates the importance of agriculture to the water resource by stating, “*Agricultural land provides significant benefits associated with water. The fields and woodlands slow the force of storm water and allow more of it to filter into the ground. Conversion of this land to other uses having impervious surfaces would severely limit this function. These open fields also create the vistas and are the focal point of views from Sussex County’s higher elevations.*” The Plan states that “*Approximately 95% of Sussex County residents rely on groundwater for consumption. However, the Highlands-Appalachian province that Sussex County exists in has the least favorable conditions of any in the State for reliable groundwater supplies. The water resources are considered acceptable only as “potable supplies for small municipalities and farms.*” (2003 *Sussex County Open Space Plan*)³⁵

The *State Development and Redevelopment Plan* also discusses the importance of the water resource. The State Plan Policy Map from June 2010 (see *Chapter 3*) indicates that Green’s farmland is found predominantly in areas mapped as Rural/ Environmentally Sensitive Planning. In this area, the Plan’s intent is to be supportive of agriculture and other related economic development opportunities than ensure diversity within New Jersey, ensuring that all development or redevelopment in this area is respectful of natural resources and the environmentally sensitive features of the area. (*SDRP, page 214*)

Finally, emphasis is also given to the importance of the water resource via the New Jersey Department of Agriculture which “*...is working with Rutgers Cooperative Extension, the Natural Resources Conservation Service, the United States Geological Survey, the New Jersey Department of Environmental Protection and the farm community to assess the water needs of agriculture and to assist in the development of essential rules, policies and*

guidelines to ensure an adequate water supply to meet the current and future needs of the agricultural industry.” (2006 Agricultural Smart Growth Plan)³⁶

Physical Features and Water Aquifer Supply Characteristics

The physiographic and geologic layout of Green Township dictates water supply, availability and recharge, as well as location of agriculture.

Green Township is a rural municipality and despite its large amount of agricultural lands faces high pressure for suburban development. The majority of the Township falls within the Ridge and Valley Physiographic Province, excluding Allamuchy Mountain in the southeastern portion of the town and is located in the Highlands Province. The Ridge and Valley Province contains a series of northeast-to-southwest running sandstone ridgelines with limestone valleys in-between. The majority of Green Township lies within the valley portions of the Ridge and Valley Province and the town contains many areas comprised of limestone forests and fens and is home to six Natural Heritage Priority Sites. In Green Township, the area between the Pequest River and Trout Brook and Decker Pond Road is known as the Pequest River Hidden Corridor and has the greatest potential for aquifer recharge. This area is home to some of the best agricultural soils in the township and is currently home to a number of unpreserved farms, making it susceptible to pollution from pesticides, fertilizers, and runoff. The roads running through this area make movement easy and have increased development pressure in this area.³⁷

While the Township predominantly relies on individual wells and septic, there is one water supply company in town; The Tranquility Springs Water Company, which services the Forest Knolls community as well as a few surrounding homes. As noted in the 2007 *Sussex County Wastewater Management Plan Update*, the aquifer from which all wells in the town draw is a highly productive but highly vulnerable aquifer. Composed of sand and gravels, it exhibits “*what is known as primary porosity*” and is “*highly susceptible to drought events and the introduction of pollutants,*” including the pesticides and animal waste often association with farming. (*Sussex County WMP*)³⁸

Water Conservation Strategies

An adequate water supply is important to successful agriculture operations. Droughts in recent years have highlighted the precarious nature of the agriculture (and general) water supply, and the need for water conservation systems and regimens.

The SADC, through its *Agricultural Smart Growth Plan*, encourages farmers to:

“ ...work to accelerate the use of efficient water conservation technologies, such as drip irrigation [and] identify and promote new and efficient methods to conduct water distribution on farms, utilizing farm ponds and water reuse options.” (2006 Agricultural Smart Growth Plan)

The dominant field crop in Green Township is hay, followed by corn. These crops rely on rain and some groundwater for water needs, making water conservation strategies difficult

to implement. For the more water intensive nursery, greenhouse and produce farming, it is possible to implement conservation strategies such as drip irrigation, water reuse, or watering crops in the cooler parts of the day. However, since vegetable, fruit, and nursery agriculture are minor to hay and corn, the positive effects of water conservation efforts for the Township are minimal. The year of greatest irrigation use was 1990, with 78 acres of field crops receiving irrigation. In 2009, irrigation was used only for ornamentals (2 acres). Uses in other years have been extremely low. (*Farmland Assessment*) Acres devoted to active agriculture are trending slightly downward across the board in Green Township; unless this reverses, there is little reason to anticipate higher demand for water use by Green Township farmers. However, while acreage of ornamental crops does not represent a large portion of Green Township's active farmland, acreage devoted to ornamentals has been increasing and has the potential to impact water demands in the future.

Waste Management and Recycling

Management of livestock waste has important implications for the quality of ground and surface waters. Unchecked, or poorly managed, these wastes can cause serious water quality problems by the introduction of unwanted microorganisms into natural systems. Poor management of animal waste can also cause disease among farm animals. Proper animal waste management not only is required but is environmentally responsible, as is recycling of farm by-products whenever feasible.

Waste Management in Green Township

Discussions with the local NRCS office in Hackettstown and the Sussex County Land Preservation Department indicate the following regarding animal and crop waste management in Sussex County and its municipalities, including Green Township:

- Many farmers have Comprehensive Nutrient Management Plans (CNMP) to manage the manure generated on their farms. (*Maria Collazo/Dan Mull*)
- Relative to disease, cattle manure is not as serious a problem as horse manure. This is due in part to the relatively large land area of dairy farms, making it easier to safely and effectively distribute the manure on fields. This helps to control the spread of disease. (*Maria Collazo*)
- Ag Choice LLC in Green Township, Sussex County, is operated by Jay and Jill Fisher. Ag Choice picks up or accepts and then composts horse waste. They also accept other animal waste, such as goat, ostrich, and sheep.³⁹ The composted waste is available as bulk pickup, is sold to landscapers and garden centers, or is bagged and sold at retail outlets. This type of operation not only helps control the problem of horse and other waste on farms, but also is a good revenue source for the Fishers. Green Township farmers can review the Ag Choice operation to ascertain if such operations might be beneficial to them. The Ag Choice website is <http://www.ag-choice.com/>.

Animal Waste

Animal feeding operations have the potential to cause water pollution since mismanagement of the animal waste has the potential to cause soil and groundwater contamination via introduction of organic matter, nitrogen, phosphorus, and bacterial pathogens into nearby surface waters. Proper management is essential. The NJDEP has outlined a statewide strategy to manage and regulate these operations. The strategy calls for NJDEP to administer permits for the few, large Concentrated Animal Feeding Operations (CAFOs) in the state, and the NJDA to administer appropriate measures for other farms with animals, using the Criteria and Standards for Animal Waste Management, adopted March 16, 2009. This strategy emphasizes the use of cost-effective voluntary measures, limiting the need for permits. (*Michael Westendorf*)⁴⁰

The Criteria and Standards for Animal Waste Management (N.J.A.C. 2:91), which went into effect on March 16, 2009, set forth requirements for the development and implementation of self-certified Animal Waste Management Plans (AWMPs), high-density AWMPs and Comprehensive Nutrient Management Plans (CNMPs) for farms that generate, handle or receive animal waste. All existing farms were given 12 months from the effective date to comply with the General Requirements of the rule, and new farms must comply within 12 months of meeting the 1 to 7 Animal Unit (AU) Threshold. All producers, regardless of size, must meet the general requirements, which are:

- 1) *“Agricultural animal operations shall not allow animals in confined areas to have uncontrolled access to the water of the state;*
- 2) *Manure storage areas shall be located at least 100 linear feet from surface waters of the state.*
- 3) *The land application of animal waste shall be performed in accordance with the principles of the NJDA Best Management Practices Manual.*
- 4) *Dead animals and related animal waste resulting from a reportable contagious disease or an act of bio-terrorism shall not be disposed of without first contacting the State Veterinarian.*
- 5) *Any person entering a farm to conduct official business related to these rules shall follow bio-security protocol.” (Criteria and Standards for Animal Waste Management)*⁴¹

Additional requirements are either voluntary or mandatory, depending on the number and density of animals. Generally:

- Operations with 7 or fewer animal units (AU=1,000 pounds) or receiving or applying less than 142 tons of animal waste per year are encouraged, but not required, to develop a self-certified AWMP
- Operations with 8 to 299 AUs with densities of less than 1 AU per acre are required to complete a self-certified AWMP;
- Operations with 8 to 299 AUs at densities greater than 1 AU per acre are required to complete an AWMP, which must be reviewed by a conservation professional;
- Operations receiving or applying 142 or more tons of animal waste per year are required to develop a self-certified AWMP; and

- Operations with 300 or more AUs are required to have a CNMP developed, which must be certified by the NJDA. (*Criteria and Standards*)

In, general self-certified waste management plans will be coordinated through the RCE, which held training sessions on the new rules throughout 2009 to help farmers learn how to write and file AWMP plans. Farmers can apply for funding through EQIP to obtain a CNMP for their operation. Any livestock operation receiving EQIP funds for waste management practices such as a heavy use area protection (HUAP) or waste storage facility must have a Comprehensive Nutrient Management Plan (CNMP). (*Michael Westendorf and Maria Collazo*)

Recycling

Recycling should be an important part of natural resource conservation for the agriculture industry. Recycling saves natural resources, and can save farmers money through creative reuse, such as using leaves and grass clippings to mulch and fertilize farm fields, and saving on solid waste disposal costs. Recycling reduces the amount of refuse finding its way to limited landfill space. Hay, by far the dominant farm product by acreage in Green Township, uses limited products that can be recycled, and as such limits recycling opportunities. Although nursery and produce make up a small part of Green's agricultural operations, there still is a need to provide outlets for recyclable waste from these operations.

The Township's recycling ordinance (#2009-13)⁴² addresses aluminum and steel cans, glass containers #1 and #2 plastics, corrugated paper, computer, white ledger, and office paper, newspapers and magazines, leaves and brush, tree parts, textiles, tires, and used motor oil for residential waste generators. For commercial and institutional waste generators, the ordinance addresses all of the previous items; as well as concrete and asphalt, batteries, heavy iron, devices containing mercury, plastics #3, #4, #5, #6 and #7, scrap autos, used electronics, white goods and light iron, wood scraps, and non ferrous and aluminum scrap metal. Food service establishments are also responsible to recycle grease and cooking oil. A recycling calendar is distributed to all taxpayers with dates and specifics for the following year each December. Commercial generators are responsible for the proper disposal of recyclable materials, unless the Green Township provides for their collection.

The NJDA website lists resources for agricultural recycling, including the Lyons Veterans Medical Center in Somerset County, which will pick up horticultural pots at no cost to the farmer, and Universal Commodity Services in Brooklyn, which accepts pots and plug trays and nursery/greenhouse film. There are also agricultural plastics collection sites in southern New Jersey that accept mulch film and drip irrigation tape along with other agricultural plastics and which will truck the recyclables for a fee. Three New Jersey counties (Atlantic, Cumberland and Salem) also have seasonal pesticide container collection sites that are open to anyone with an NJDEP pesticide license. (*NJDA*)⁴³

Energy Conservation

Energy conservation makes economic sense for Green Township's agriculture businesses. The less energy a farmer uses, the less money spent on energy, and the more money that can be invested elsewhere, or realized as profit. Energy conservation and the use of alternate technologies also make environmental sense. They help keep the air, water and soil clean, and minimize or eliminate further pollution to these critical agricultural resources.

In its 2006 *Agricultural Smart Growth Plan*, the NJDA emphasizes the importance of energy conservation and alternative energy use. The Plan indicates that it is important to:

“Promote the use of innovative technologies, recycling, energy conservation and renewable energy systems on New Jersey’s farms” and to “Promote, provide technical assistance for and inform the agricultural community about new and existing energy conservation and renewable energy programs by promoting the financial and environmental benefits of implementing these programs.” Also, the NJDA indicates that *“Through (these) numerous efforts coordinated between the state and federal levels, New Jersey’s agricultural community is proving itself to be an important player in protecting our state’s natural resources. Clearly, there is more work to be done, and the agricultural community has shown initiative in pursuing alternative energy sources, such as solar, wind and bio-gas in running farm operations, and by being a leader in the pursuit of ethanol and bio-diesel fuel markets.”* (2006 *Agricultural Smart Growth Plan*)

Additionally, a law was enacted in January 2010 (P.L. 2009, c.213) that allows for the construction, installation, and operation of biomass, solar, or wind energy generation facilities, structures, and equipment on commercial farms, including preserved farms, with certain caveats regarding interference with agricultural productivity, valuation for farmland assessment, amount of farm acreage that can be devoted to such facilities, local and State approvals, etc. (P.L. 2009, c. 213)⁴⁴ In the first half of 2011, Green Township passed ordinances 2011- 3 and 2011- 7 as amendments to Chapter XXX- Land Use Regulations in the general ordinances of the town, allowing for and regulating alternative forms of energy such as wind and solar for small scale (ordinance 2011-3)⁴⁵ and large commercial uses (ordinance 2011-7).⁴⁶

The EQIP natural resource conservation program pays for some energy production programs, such as replacement of older, dirty polluting working diesel engines, with newer, more efficient, cleaner burning diesel engines that will meet EPA Tier requirements for the program year. Farmers should check the NRCS website regarding this program since requirements may change from year to year. (*Maria Collazo*)

The New Jersey Board of Public Utilities offers rebates for solar electric, wind and sustainable biomass systems as long as funding is available.

Greenhouse Gases

With the increasing release of excessive carbon dioxide emissions into the atmosphere, energy conservation and the use of alternate energy sources can help to slow the warming trend caused by such emissions.

This goal of reducing greenhouse gases is indicated in the Regional Greenhouse Gas Initiative (RGGI), a compact signed by the Governors of ten states, including New Jersey. As part of RGGI, the potential trading of carbon credits between energy companies and farmers can offer financial incentives for farmers to utilize processes that minimize carbon dioxide production. (RGGI)⁴⁷

Solar Energy

At least two Sussex County municipalities, Sparta and Hardyston, have contracted to install solar power systems.⁴⁸ Green Township's alternative energy ordinance allows for solar arrays in all zoning districts. Currently there are no ground solar installations in Green Township, although one farm has received final approval for such an installation and is in the process of submitting final revised site plans.⁴⁹

Restrictions are placed on the maximum height of solar arrays and the energy production of ground mounted solar arrays. Rooftop solar arrays are not to be more than twelve inches higher than the roof surface of a peaked roof or four feet from a flat roof. The energy production of ground mounted solar arrays is not to exceed 110% of the energy needs of the principle structure located on the same lot. Ground mounted solar arrays are to be no taller than eight feet in height, located in side or rear yard areas, meet accessory structure setbacks and maximum area limitations, and buffered from the view of adjoining properties and roadways by fencing or plantings. (*Ordinance 2011-3*)

The large-scale commercial production of solar energy through ground mounted solar arrays is allowed only in the AR- 5/2 and AI-10 zoning districts. Energy generation is limited to 10 MW, with the minimum lot size must equal at least six acres for every MW of electricity produced, and no more than 80% of the site devoted to ground mounted production.

Solar energy can be harnessed via the installation of solar panels. This harnessed or stored energy can then be used to create electricity and provide heat. If excess electricity is generated, it can be sold back to the electric grid for a profit. The overall use of solar panels has greatly increased in New Jersey over the last decade. (*Agriculture and Green Energy*)⁵⁰ The increase in use is due in large part to a federal investment tax credit, which has been extended through 2016, and a rebate program sponsored by the New Jersey Board of Public Utilities (BPU),⁵¹ Recently, the BPU has altered its rebate program to support fewer solar power rebates, converting the program, in part, to "solar renewable energy certificates" (SRECs) earned by the electricity a system generates and sold or traded to the public utilities under a long term contract. The market value of these certificates is not

determined. This uncertainty has caused a slowdown in the interest of farmers to pursue solar energy on their farms. (*New Jersey's Clean Energy Program*)

EQIP provides some funding for solar livestock watering facility as part of a grazing system, and Green Township farmers interested in using this alternate energy source can contact the local NRCS office in Hackettstown for more information.

Other programs available to help agricultural producers take advantage of this technology include U.S. Department of Energy, "Solar Energy Technology Program," <http://www1.eere.energy.gov/solar/> and the "Solar Energy for New Jersey Agriculture" work and information sheet at <http://www.state.nj.us/agriculture/pdf/solarenergyguide.pdf>. Solar energy is one of the fastest growing sectors in the alternative energy market, and Green Township farmers can take advantage of this money and energy saving technology.

Wind Energy

The power of a strong wind can be captured by turbines or windmills, turning such power into electricity. Expanding and evolving technology is making this option more attractive to farmers as a way to cut energy costs. According to the NJDA, the northwest part of New Jersey, which includes Sussex County, has ample and consistent enough wind power to make turbine energy feasible. (*2006 Agricultural Smart Growth Plan*) The New Jersey State Based-Anemometer Loan Program is funded by the United States Department of Energy Wind Powering America Program and the NJ Board of Public Utilities Office of Clean Energy Program and allows potential installers to gather data to determine the economic feasibility of a wind turbine installation location.⁵² The target market includes municipalities, farms, residential and small commercial customers. Currently, anemometers are installed on farms as close to Green Township as Hackettstown and Long Valley. However, a map published on the Rowan University Clean Energy website shows that Green Township does not have adequate wind speed (greater than 5.5 miles per hour) to be eligible for this program.

New Jersey's Clean Energy Program (NJCEP) provides a model ordinance that municipalities can adopt to create a friendly environment for wind installations. As of March 2009, the NJCEP Small Wind Model Ordinance has been adopted in Hillsborough Township (Somerset County's leading municipality in terms of agricultural land) and in eight other municipalities statewide.⁵³ Green Township's alternative energy ordinances permit and regulate the use of Wind Energy Systems.

Ordinance 2011-03, permits and regulates Small Wind Energy Systems in all zoning districts and Ordinance 2011-07 permits and regulates wind production systems for large scale commercial use. Small Wind Energy Systems are not permitted to be mounted on a roof, nor is more than one wind turbine permitted on an individual lot. Wind turbines can only be located in the rear of the lot, with a maximum height of 100 feet; and the total energy output of a wind turbine must not exceed 110% of the energy needs of the principal structure. Wind turbines for large scale commercial use are permitted as conditional uses in the AR- 5/2 and AI-10 zoning districts. The minimum lot size on which a turbine can be

located is 1- acres and the maximum density of turbines cannot exceed one turbine per ten acres. Wind turbines cannot exceed 198 feet and all moving parts must be at least thirty feet above the ground, with a minimum setback from property lines of 1.5 times the height of the structure. (*Ordinance 2011-03 and Ordinance 2011-07*)

In addition to the Anemometer Loan Program, Incentives and Assistance for Terrestrial and Small Wind Systems include the Renewal Energy Incentive Program (REIP) which offers rebates to reduce the upfront cost of installing wind energy. These were set for the September 1, 2010 funding cycle at \$3.20/kWh for production levels up to 16,000 kWh and \$0.50/kWh above that.⁵⁴

Biopower

According to NJCEP, biopower “uses a renewable supply of organic material, such as wood, agricultural waste and/or methane gases from landfills, to spin a turbine that produces electricity.” This organic material, known as biomass, reduces our dependence on fossil fuels while promoting local businesses and farming. Biomass also can be used to produce transportation fuels, or chemicals. Using biomass helps reduce the amount of materials going into landfills and reduces methane, a greenhouse gas.⁵⁵ (*NJCEP*)

Sustainable biomass facilities incorporating the following methods of electricity generation, and complying with all NJDEP air pollution control regulations, are eligible for an incentive from REIP:

- Biogas, including captured methane from animal waste or sewage treatment
- Digestion of sewage sludge
- Combustion, as long as all matter used directly as biomass fuel was cultivated and harvested in a sustainable manner in accordance with the state environmental or agriculture agency in the state in which the plant was grown
- Landfill gas facilities (*NJCEP*)

REIP rebates for biomass facilities in 2010 range from \$4 per watt for facilities producing up to 10,000 watts to \$.15 per watt for facilities producing greater than 500,000 watts. There is also a Combined Heat and Power (CHP) initiative that offers a rebate schedule for biopower/CHP systems. (*NJCEP*)

Ethanol and Pelletized Switchgrass

Ethanol is a renewable fuel “made by distilling the starch and sugar in a variety of plants.” (*Agriculture and Green Energy*) It can then be blended into gasoline as an “oxygenate,” reducing air pollution. Its use also reduces dependence on foreign oil, and the harmful environmental effects of oil drilling. Also, unlike the gasoline additive MTBE, ethanol will not contaminate groundwater. (*Agriculture and Green Energy*) Corn, the second most dominant field crop in Green Township, could position the Township’s farmers to financially capitalize on the spreading movement towards ethanol-blended fuels. More study would need to be done on whether this would be profitable for farmers, and how it would affect other local agriculture industries. In addition, interest has been shown in

utilizing switchgrass to make energy producing pellets. This could add another market for Green farmers, and another source of clean energy.

Renewable Energy Grant Programs

The NJDA provides the following information on renewable energy grant programs, which can help encourage the use of these energy sources:

New Jersey's Clean Energy Program: Administered by the New Jersey Board of Public Utilities, this program provides financial incentives to install clean energy systems, including fuel cells, solar energy, small wind and biomass equipment. Financial incentives are in the form of rebates, grants, energy certificates and loans. Additional information is at www.njcep.com/. A funding level for all renewable energy projects has been established at \$53.25 million for rebates for the period of 2009–2012. Funding cycles have been implemented to ensure that financing is available through 2012. (NJCEP)

As mentioned above, funding for solar electric, wind and sustainable biomass installations is available for 2010 through the *Renewable Energy Incentive Program (REIP)*, which provides incentives to residential and business customers to help reduce the initial cost of installing a renewable generation system. These incentives – which defray the costs of installation, equipment, and interconnection – are paid incrementally based on the size of the system. In addition the *Anemometer Loan Program*, administered by five New Jersey universities, provides a way for prospective locations to test the potential for wind power production and assess its economic feasibility. (NJCEP)

Renewable Energy Systems and Energy Efficiency Improvements Program: As part of the 2008 Farm Bill, this program “funds grants and loan guarantees to agricultural producers for assistance with purchasing renewable energy systems and making energy efficiency improvements.” Final rules for loans and grants were adopted by the U.S. Department of Agriculture in July 2005. www.rurdev.usda.gov/rbs/farmbill/index.html.

Biomass Research and Development Initiative Grants: The United States Departments of Agriculture and Energy support development of biomass energy. Grants are available for research, development and demonstrations on bio-based products, bio-energy, bio-fuels, bio-power and additional related processes. In the recent past, grants have focused on development and demonstration projects that lead to greater commercialization. <http://www.brdisolutions.com/default.aspx>. (Agriculture and Green Energy)

Outreach and Incentives

The Township's Agricultural Advisory Committee (AAC) values the opportunity to partner with the Sussex CADB and regional agencies to reach out to farmers and landowners and educate them regarding natural resource conservation and agricultural productivity. The Green Township AAC supports and encourages the implementation of programs to aid in natural resource conservation on farms in the Township.

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CHAPTER 8: AGRICULTURAL INDUSTRY SUSTAINABILITY, RETENTION AND PROMOTION



Existing Agricultural Industry Support

Right to Farm

To ensure farmers have the ability to practice accepted agricultural operations, the Right to Farm Act (RFA) was enacted by the State Legislature in 1983 and amended in 1998. The Act provides “*protection of commercial farm operations from nuisance action, where recognized methods and techniques of agricultural production are applied, while, at the same time, acknowledging the need to provide a proper balance among the varied and conflicting interests of all lawful activities in New Jersey.*” (SADC Right to Farm Program)¹ The Act also created the State Agriculture Development Committee (SADC) and eighteen County Agriculture Development Boards (CADB’s), which among other duties, implement the RFA on the State and local levels.

The SADC works to maximize protection for commercial farmers under the RFA by developing Agricultural Management Practices, tracking right to farm cases, offering a conflict resolution process, and reviewing rules proposed by other state agencies for the impact they may have on agriculture. In order to qualify for right to farm protection a farm must meet the definition of a “commercial farm” in the RFA; be operated in conformance with federal and state law; comply with agricultural management practices recommended by the SADC, or site specific agricultural management practices; must not be a direct threat to public health and safety; and be located in an area where agriculture is a permitted use under the municipal zoning ordinance, or be consistent with the municipal master plan as of December 31, 1997. (If the commercial farm was in operation on the effective date of the amendments to the Right to Farm Act (July 2, 1998), the zoning ordinance/master plan requirement does not need to be met.) (*Eligibility Criteria for RTF Act Protection*)²

All right to farm complaints or issues that are brought before the Sussex CADB are first handled with fact finding and efforts to resolve differences between the parties. The mediation can be informal or, if the parties agree, the SADC will provide mediation or conflict resolution at no cost to the participants through its Agricultural Mediation Program. If a formal complaint is filed with the Sussex CADB, it is sent to the SADC for a determination as to whether the farm falls within the parameters established by the RFA for right to farm protection. Once the complaint is returned to the Sussex CADB from the

SADC, additional fact finding and technical review occurs and the issue is given a public, quasi-judicial hearing at the county level. After all information has been considered, the Sussex CADB will make a determination as to whether the agricultural activity is protected by the RFA or whether changes to the operation will be required. If the issue is not resolved by the Sussex CADB determination, either party in the dispute may take the matter for a subsequent appeal and determination to the New Jersey Superior Court, Appellate Division. (*Conflict Resolution*)³

Right to Farm Ordinances are necessary if a municipality, or property owner, wishes to enter into the farmland preservation program. Green Township's Right to Farm Ordinance (Ord. No. 2010-15) was adopted in 2010. A copy can be found in the *Appendix*. The Ordinance states that its intent is to "*preclude farming and agricultural operations, when conducted in accordance with accepted agricultural management and farming practices, from constituting or being found to constitute a public or private nuisance.*"

To protect its farmers the Green Township Right to Farm Ordinance outlines the following fourteen permissible acts on a commercial farm that meets the eligibility criteria under the Farmland Assessment Act or a home-based agricultural pursuit:

- The storage, processing and sale of farm products subject, however, to all other conditions and limitations applicable thereto as set forth in the Zoning Ordinance.
- The use of irrigation pumps and equipment.
- The application of chemical fertilizers, insecticides, herbicides, pesticides and liquid/liquefied manure and/or fertilizer. Liquid/liquefied manure and/or fertilizer shall only be applied to ground which is not frozen and shall be tilled into the soil within 24 hours after its application.
- On-site distribution of organic agricultural wastes.
- Use of the land for the grazing of animals, subject to all applicable restrictions for intensive fowl or livestock farms.
- The use of farm laborers employed by the farm owner and/or operator.
- The use of public roadways for the transportation of tractors and other large slow-moving vehicles and equipment.
- The construction of fences for retention of animals and livestock.
- The use of customary farm machinery and equipment.
- The creation of noise, dust, odors and fumes conventionally associated with such agricultural activities.
- The engaging in farm practices at any and all times deemed reasonably necessary, including, but not limited to, Sundays, holidays and in the evenings.
- The raising and keeping of farm animals, including, but not limited to: dairy cattle, beef cattle, sheep, goats, swine, fowl, horses, ponies and mules provided, however, that proper sanitation measures, minimum recommended acreage limitations and appropriate setbacks between fencing and enclosures for such farm animals and adjoining properties are established and maintained.
- Installation of physical facilities for soil and water conservation and the harvesting of timber.

- Provisions for the wholesale and retail marketing of the agricultural output of the farm, which include the building of temporary and permanent structures and parking areas for said purpose, providing same conform to all applicable provisions of the Green Township Zoning Ordinance and the Green Township Site Plan Review Ordinance.

The SADC Model Right to Farm Ordinance is included in the *Appendix*. The Township is currently working with the staff at the SADC to ensure its municipal Right to Farm Ordinance is consistent with the SADC model ordinance.

Farmland Assessment

The Farmland Assessment program is a tax incentive that reduces property taxes on active commercial farmed land, thereby assisting farmers with a critical financial aspect in helping to keep land in farms. This tax incentive is made possible by the Farmland Assessment Act of 1964, N.J.S.A. 54:4-23.1 et seq.

Basic eligibility requirements include:

- The applicant must own the land;
- The property owner must apply annually for Farmland Assessment on Form FA-1 with the municipal tax assessor on or before August 1 of the year immediately preceding the tax year;
- Land must be devoted to agricultural and/or horticultural uses for at least two years prior to the tax year;
- Land must consist of at least five contiguous farmed and/or woodland management plan acres. Land under or adjoining a farmhouse is not counted towards the minimum five acres;
- Gross sales of products from the land must average at least \$500 per year for the first five acres, plus an average of \$5.00 per acre for each acre over five. In the case of woodland or wetland, the income requirement is \$.50 per acre for any acreage over five. Dependent on the agricultural or horticultural products being produced, the farmer can also offer clear evidence of anticipated yearly gross sales, payments, or fees within a reasonable period of time; and,
- The property owner must represent that the land will continue in agricultural or horticultural use to the end of the tax year.
(*New Jersey's Farmland Assessment Act*)⁴

The Farmland Assessment program does not, however, apply to farm structures, such as barns and storage facilities. It has been proposed that additional tax incentives which encourage farmers to maintain their buildings in good working order as part of active farm operations, and which do not financially penalize them for renovating or replacing old or unsafe structures, are necessary. Maintained buildings not only are critical to the farmer but also add to farm “aesthetics” for the larger community, helping to support agri-tourism, an element that could help agricultural sustainability in Green Township.

Green Township is 16.31 square miles, with about 0.8% being water. There are 10,560 acres in the municipality and 5,493 acres (or approximately 52% percent of the Township) are farmland assessed. (*NJ Farmland Assessment*)⁵ According to the New Jersey Farmland Assessment data from 1983 to 2009, general trends indicate:

- Total farmland assessed acreage decreased 24% from 1983 to 2009.
 - Harvested cropland declined slightly from 1983 (2,437 acres) to 2004 (2,032 acres). Since 2005, acres of cropland have fluctuated from 2,103 acres in 2005, down to 1,835 in 2007 and back up to 2,032 in 2009 for an overall net decrease of 16%.
 - Pastured cropland decreased from 435.8 acres in 1983 to 99 acres in 2005, but increased again in 2009 to 162 acres (a net decrease of 62%);
 - Permanent pasture declined steadily, from 1,234.8 acres in 1983 to 639 in 2009 (a net decrease of 48%);
 - Total acreage in active agricultural use (cropland harvested, cropland pastured and permanent pasture) decreased 31%, from 4,107.6 acres in 1983 to 2,833 acres in 2009.
 - Woodland acreage has generally been on the decline since 1983, dropping by 15%, from 2,879.2 acres in 1983 to 2,447 acres in 2009.
 - Equine acreage has been on the increase, rising from 3 in 1983 to 19 acres in 2009 (a net increase of 533%).
- (*NJDA Farmland Assessment*)⁶

It is important to sustain and expand tax incentives such as Farmland Assessment to keep land in farms, and to encourage the development or extension of other tax incentives for the agricultural industry. By making agriculture more profitable and viable, tax incentives will help to ensure a steady, permanent source of agricultural lands for the Township's farmland preservation efforts. The Township considers the assessment procedure as essential to continued agricultural success, and supports the law in its current form.

Additional Strategies to Sustain, Retain, and Promote Agriculture in Green

Regulatory Flexibility

Municipalities play a key role in the preservation of farming as an industry. In municipalities with a sizable acreage of assessed farmland, zoning powers can be utilized to require buffers between agriculture and other uses to minimize conflict. The Right to Farm Ordinances are an active example of municipalities' support for agriculture. Such actions create an atmosphere favorable to agriculture, its economics and profitability.

The viability of farming in New Jersey is impacted by many issues, including government regulation, development pressures, and the economics of the marketplace. While land preservation is vital for maintaining a sufficient land base suitable for farming, sustaining Green's strong agricultural base requires support on many fronts, one of which is flexibility in government regulation. (*2006 Agricultural Smart Growth Plan*)⁷ It is essential that the

Green Township Agricultural Advisory Committee; Sussex CADB, Planning Division, Board of Agriculture, and County Freeholders; Sussex Soil Conservation District; Natural Resources Conservation Service; Rutgers Cooperative Extension of Sussex County; private farm preservation groups; and other interested entities and individuals work together to present a united front in issues regarding government regulation and permits as they relate to agriculture. Some specific areas relative to regulatory flexibility and priority, which can help support continued agricultural viability in Green Township, are identified in the 2006 *Agricultural Smart Growth Plan* for New Jersey identified, as follows:

- *Positive and supportive public policy*: This includes legal protection (right to farm), priority in decisions on taxation (farmland assessment), regulation exemptions, and financial incentives (planning incentive grants). These need to be strengthened and modified if, and when, necessary;
- *Exemptions*: State, county, and municipal regulations must be responsive to the needs of farmers. Minor changes to, or exemptions from, certain local and state regulations, rules and ordinances help to buffer agricultural operations from burdensome costs, creating a farmer-friendly environment. Green Township's Right to Farm Ordinance stands as one example of such regulations. At a state level, the Department of Environmental Protection's "Freshwater Wetlands Protection Act Rules" (N.J.A.C. 7:7A-et. seq.) and the "Flood Hazard Area Control Act Rules" (N.J.A.C. 7:13) grant exemptions, permits by rule, or general permits for agricultural activities. The Green Township agriculture community must work to ensure that exemptions are adequate and reasonable;
- *Flexibility*: State agencies such as the Department of Environmental Protection, Department of Transportation, Department of Community Affairs, Department of Labor, and New Jersey Commerce Commission, should consider the NJDA Agricultural Smart Growth Plan when making important decisions regarding existing and proposed infrastructure, developing and amending regulations and programs, and protecting environmental and historical resources. These agencies should coordinate with NJDA to ensure that regulations and programs are attuned to the needs of Sussex County and Green Township farmers;
- *Agriculture-Friendly Zoning*: This refers to a comprehensive land use practice that coordinates zoning and land use policy in a proactive way. The desired result is that it encourages agribusiness, while at the same time reducing the incidence of farmer-homeowner nuisance issues. In other words, it seeks to harmonize potentially conflicting land use policies. This strategy would be done mostly at the local and county levels.

(2006 Agricultural Smart Growth Plan)

Farm Labor

An adequate labor supply is integral to harvesting vegetables, fruits, and berries. Measured in farmed acreage, Green has a relatively small industry for these products compared with field crops such as hay. Harvesting of the latter farm products is more mechanized, and/or not as labor intensive as produce, with most work being done by farm family members. *(Kent Hardmeyer)*⁸ As of 2009, 138 acres were devoted to fruits, berries, and vegetables,

while 1,834 acres were devoted to field crops and nursery products. (*NJDA Farmland Assessment*) Since the overall acreage devoted to labor intensive farming is small in Green, seasonal farm labor housing, a large issue in towns and counties with high farm labor populations is, for the most part, not of high concern in the Township.

Rising farm labor costs are not currently impacting the agriculture sustainability of the majority of farmers in Sussex County or Green Township, which is due at least in part to the continued strong trend of mechanized, non-labor intensive crop farming in the county. In addition, in Green Township, the major issues with farm laborers are the need to provide year-round on-farm housing to offset the low wages and make it viable for laborers to work on farms. These trends may change over time, warranting a brief discussion of the topic.

The New Jersey Department of Labor recommends the following to address farm labor issues at the state and local levels:

- Work with the U.S. Department of Agriculture's Rural Development program to reexamine program criteria to enable New Jersey's rural communities to qualify for more programs related to farm labor. While some areas of New Jersey are not eligible, Sussex County is eligible for most Rural Development programs.
- Link neighborhood revitalization efforts with housing opportunities for farm workers and, where appropriate, establish on-site housing, to ensure a safe and stable workforce.
- Develop and promote comprehensive and ongoing training opportunities for farm workers.
- Work with the New Jersey Department of Labor, Rutgers Cooperative Extension and others to provide farm safety training.
- Join other agricultural stakeholders in supporting ongoing efforts at the federal level to streamline and modernize the immigration process.
(*2006 Agricultural Smart Growth Plan*)

In January 2006, the Agriculture Transition Policy Group (Group), composed of government and agriculture industry representatives, submitted a report to then Governor-elect Jon Corzine, with recommendations to keep agriculture strong and viable in the Garden State. The Group reported many serious problems facing New Jersey farm employers. Two of these are the impacts of the rise in the state minimum wage (which rose again to \$7.25 per hour, effective July 24, 2009) and the ongoing issue before the U.S. Congress regarding immigration and undocumented workers. (*Agriculture Transition Policy Group, Final Report*)⁹ The State Department of Agriculture passed resolutions in 2007 and 2008, urging that the New Jersey Department of Agriculture, New Jersey Farm Bureau and New Jersey Agricultural Experiment Station “*work cooperatively with the Governor and the Legislature to develop an agricultural assistance program*” that would “*offset the economic impact of increases in farm labor costs.*”¹⁰

The cost of labor in New Jersey is a critical issue for some farming sectors such as produce, and one that needs further consideration for its effect on agriculture in Sussex County and New Jersey. This is because as labor costs increase, so does the cost to farmers producing

commodities. Though a farmer may wish to raise his/her prices to cover increased production costs, this is many times not feasible due to competition from neighboring states with lower production (i.e. labor) costs. The result is lower profits for Sussex County and Green Township farmers, making the business of farming less profitable, and therefore more difficult.

Agriculture Education and Training

To sustain a modern, diverse and stable food and agricultural industry, education and progressive ongoing training for farmers will promote a more efficient and productive business environment. This includes programs covering “*farmer risk management education, agricultural leadership training, secondary school and college agricultural education.*” (2006 Agricultural Smart Growth Plan)

One educational link for Green Township agricultural land owners and operators is to collaborate with the Rutgers New Jersey Agricultural Experiment Station (NJAES) Cooperative Extension (RCE) of Sussex County (associated with the School of Environmental and Biological Sciences [formerly Cook College], Rutgers University). During the growing season, RCE of Sussex County provides one-on-one, on-site consultations with farmers to assist with control of insect identification, plant disease diagnoses and pest management recommendations for agricultural operations. In addition, its online resources and on-site programs through the state, the NJAES, in combination with extension services at universities nationwide, increasingly offers its educational and training opportunities via Webinars, Webcasts and online tutorials.

RCE of Sussex County also provides practical assistance to farmers. Examples are assistance in obtaining pesticide application licenses (necessary to buy and apply pesticides), and also to obtain water certification and registration permits from the New Jersey Department of Environmental Protection, for groundwater and/or surface water allocations. Finally, the RCE of Sussex County performs applied research on area farms to further knowledge on a wide range of issues pertaining to agricultural plants and animals. Results of any research are used to advise local farmers on an as needed basis. All of the aforementioned available programs and assistance offer an individual farm operator the opportunity to gain the latest information on numerous and pertinent agriculture topics, which are important to agricultural sustainability. Green farmers may take advantage of these resources on an ongoing, and as needed basis.

Through its Division of Agriculture and Natural Resources, Natural Resources Conservation Program, the New Jersey Department of Agriculture offers technical, financial, and regulatory assistance, and provides educational outreach to landowners throughout the state. The Department also offers, in conjunction with the U.S. Department of Agriculture, farm risk management and crop insurance education programs to assist farmers in understanding what assistance is available to reduce agricultural risks. (2006 Agricultural Smart Growth Plan)

Hired farm workers continue to be one of the most economically disadvantaged groups in the United States due to low wages, usually seasonal employment and limited participation in the non-farm labor market. Therefore, as an important statewide resource to the agricultural industry, the New Jersey Department of Labor recommends that more must be done to ensure a well-trained, educated farm labor workforce, that has adequate living and working conditions, and is trained in worker safety. (*2006 Agricultural Smart Growth Plan*)

Agriculture labor education and training funding may be available through the New Jersey Department of Labor and Workforce Development programs. These programs can help to assist in upgrading the skills and productivity of the agricultural workforce. (*NJDA, Training*)¹¹ Some of the programs which may be applicable include Customized Training Initiative, Basic Skills Program, and Occupational Safety and Health Training Program.

Finally, as a form of “education,” government agencies at the state and county level can provide continuous outreach information to farmers, to ensure they take full advantage of all federal and state loan, grant, education, and technical assistance programs. This is especially important since these programs are meant to aid the farming business to thrive and survive. Due to the complexity and vast array of the programs, they may be unknown to many farmers.

Youth Farmer Education Programs

According to the Census of Agriculture, the farmer population in Sussex County is getting older, with an average age of 57.3 in 2007 versus 55.3 in 2002 and 53 in 1992. This tracks with the figures nationwide, where the average age of U.S. farm operators increased from 55.3 in 2002 to 57.1 in 2007. Nationally, the number of operators 75 years and older grew by 20 percent from 2002, while the number of operators under 25 years of age decreased 30 percent. (*Census of Agriculture*)¹² Due to the aging farmer population, the next generation of the county’s farmers needs to become interested in and exposed to the business of agriculture, and be prepared to enter the industry. Educational programs in agriculture offered as an optional and viable opportunity for the youth of Green Township will assist those who are interested in pursuing such careers. Creating new opportunities via secondary and post secondary education programs in Agriculture, Food and Natural Resources will reassure students that opportunities exist for them in Green Township and wider Sussex County. (*2006 Agricultural Smart Growth Plan*)

The New Jersey Department of Agriculture offers an “Agricultural Education” program. This is “a systematic program of instruction available to students desiring to learn about the science, business, and technology of plant and animal production and/or about the environmental and natural resources systems. A complete Agricultural Education program is composed of three components: class/lab instruction, experiential learning, i.e., supervised agricultural experience (SAE), and leadership development through membership in Future Farmers of America (FFA) and/or the National Postsecondary Agricultural Student Organization (PAS), which provide a well-rounded and practical approach to student learning.” (*NJDA, Agricultural Education*)¹³

In 2008, there were 37 FFA chapters in New Jersey with more than 1,950 members.¹⁴ Through the local FFA and New Jersey Department of Agriculture's Office of Agriculture, Food and Natural Resource Education, Sussex County offers youth agriculture education at Newton High School (ornamental horticulture and conservation & natural resources) and Sussex County Vocational Technical School in Sparta (Ag Business Management), which hosts the Sussex County FFA chapter. (*Office of Agriculture*)¹⁵ Students in Green Township attend Newton High School through the Tri-District Consortium¹⁶ and have the ability to go to Sussex County Vocational Technical School as county residents.¹⁷ Dave Pede, Mike Ridge, and Worth Christian are the FFA advisors at Newton High School. They can be contacted at: dpede@newtonnj.org, mridge@newtonnj.org, and wchristian@newtonnj.org; respectively for further information. Daniel Delcher is the local FFA representative for Sussex County Vocational School and can be contacted at ddelcher@sussex.tec.nj.us. The Green Township Agricultural Advisory Committee supports the continuation, and expansion, of these courses.

Youth agriculture education classes or programs are not offered at any elementary schools within the County, but are an opportunity to cultivate young people's interest in the field of agriculture.

The national Agriculture in the Classroom program helps K-12 students become aware of the importance of agriculture. 4-H is an informal, practical educational program for youth, which assists young people interested in farm animals through livestock projects; the Sussex County chapter is overseen by Dave Foord, assisted by Michelle Teitsma¹⁸, and is located at the RCE facility in Newton. Programs include traditional 4-H project clubs, school enrichment activities, special interest projects, and 4-H camping programs. The New Jersey Agricultural Society's Agriculture Leadership Program provides young professionals in agriculture with leadership development skills and opportunities. (*2006 Agricultural Smart Growth Plan*)

Public outreach

Over the last 50 years, New Jersey has transformed away from a largely rural and agricultural landscape, to a more urban and suburban landscape. However, farming remains strong and viable in many portions of the state, including Sussex County and Green Township. If the Township's many remaining agricultural acres are to survive and prosper, the non-farming public needs to be aware of the continuing financial, cultural, scenic and agricultural contributions made by Green Township agriculture. The Township recognizes the importance of agriculture and the agricultural character of the landscape in many of its planning documents, but it is also important to create visual public awareness of opportunities for the public to interact with farmers and know how and where to access their products. Farmstands are advertised throughout the town with local signage, however the Township website could also be a vehicle for publicizing local roadside stands; nursery and other pick-your-own operations; riding stables, corn mazes, and other agri-tourism activities and events.

Management of nuisance and crop damaging wildlife

Management of nuisance and crop damaging wildlife is critical to the short and long term sustainability of Green's agriculture industry. Wildlife management control is the single greatest issue facing Green Township farmers. Crop damage from wildlife leads to economic loss for the farmer and/or land owner, and is an extremely serious problem throughout Sussex County, causing up to 90% damage in some instances. Most damage is caused by a multitude of insects, as well as deer, bear, turkeys, geese and other wildlife. This has been ascertained by aerial wildlife studies and bear damage surveys conducted through the Sussex County Board of Agriculture and RCE. (*Donna Traylor, Coordinator, Sussex CADB*) It is imperative to not only control and manage damage to crops but also to do it in a manner that causes the least amount of collateral natural resource damage (e.g., limit pesticide use to the greatest extent possible, using natural pest control. State, County and local government units need to be sensitive to the negative economic impacts caused by crop damage, and support efforts to control it through education, technical and financial assistance, and regulatory flexibility.

One key way for Green Township farmers to control damage from deer, bear and turkey is through the harvesting of crop damaging animals. This is allowed through depredation permits, issued by the New Jersey Department of Environmental Protection's (NJDEP) Fish and Wildlife Program. (*Donna Traylor*). In many instances, this is the only short term solution to control crop damage. Farmers in Sussex County continue to work with the NJDEP and NJDA, as well as other counties and municipalities, to implement wildlife control strategies on privately and publicly owned land. (*Agricultural Smart Growth Plan 2006*).

The New Jersey Department of Agriculture's Division of Plant Industry works to safeguard New Jersey's plant resources from injurious insect and disease pests. The Division implements several programs for detection, inspection, eradication and control of insect pests, which helps to ensure that the public can enjoy high quality, pest-free agricultural products. (*Division of Plant Industry*)¹⁹ In addition, "*the Division oversees programs that certify plant stock for interstate and international shipments, protects forested communities from tree loss caused by the gypsy moth and Asian longhorned beetle, inspects honeybees for harmful bee diseases and pests, regulates the quality of plant seeds, and produces and releases beneficial insects to reduce crop and environmental damage, and decrease dependence on chemical pesticides.*" (*Division of Plant Industry*)

Protection of forest resources is important to Green Township farmers who harvest wood as part of Woodland Management Plans on their farmland assessed properties. One example of the Division of Plant Industry's work is in control of the gypsy moth, which is considered the most destructive defoliation forest insect pest in New Jersey. The Division promotes an integrated pest management approach, which "*encourages natural controls to reduce gypsy moth feeding and subsequent tree loss.*" However, aerial spray treatments of *Bacillus thuringiensis* are utilized when gypsy moth cycles are at peak and natural controls are not sufficient to control defoliation. The gypsy moth problem in Sussex County was heavy enough in several recent years to require aerial spray treatments in some areas.

However, in both 2010 and 2011, gypsy moth defoliation was minimal to nonexistent in Green Township. (*Gypsy Moth Suppression*)²⁰

Agriculture vehicle movement

In recent years, as many portions of the rural landscape have become developed with residential subdivisions and malls, the sometimes conflicting lifestyles of farmers and residents clash. Green farmers need to move heavy, slow moving agricultural equipment over local, county and sometimes state roads to access unconnected fields and barns. Local residents also need to commute to workplaces, or drive to area destinations for shopping, town sports and social activities, at a pace much faster than the slow moving agricultural equipment. These different paces can cause conflict between Green Township's farmers and other residents, while creating unsafe road conditions as residents and farmers "compete" for road space. The public needs to be educated that agriculture vehicle movement is part of the agricultural environment.

Since many farm vehicles travel over local municipal roads, Green should continue to support local agricultural business' right to do so. The current Right to Farm Ordinance in Green specifically protects the right to transport tractors and other large, slow moving farm equipment over public roads within the Township as a recognized right. Signage alerting fast moving cars as to the possible movement and road crossing of slow moving farm vehicles is an additional effective tool to protect farmer (and automobile passenger) safety. Signage also informs the public at large that agriculture is an important, equal and permanent fixture of life in Green Township. The Township may want to consider the posting of such signage, where appropriate.

If local non-agriculture residents are to enjoy the scenic vistas, fresh produce, clean air and limited traffic congestion that Sussex County's agriculture provides, they must be more tolerant of the farming community. Local, county and state government can advertise the contributions of the farming community via public outreach at local schools and various community activities. The annual New Jersey State Fair/Sussex County Farm and Horse Show is a prime example of advertising the importance and permanence of agriculture in Sussex County. Educational programs and the promotion of organic farming can also help to increase tolerance of the farming community.

Federal Programs

The federal government is an important partner in supporting Sussex County and Green Township agriculture. There are several federal programs that support, or could support, the agricultural industry in the Township.

USDA Rural Development

The United States Department of Agriculture (USDA), through its Rural Development programs, has an extensive array of loans and grants to assist residents in rural areas of the country to support essential public facilities and services such as water and sewer systems,

housing, health clinics, emergency service facilities, and electric and telephone service. USDA Rural Development offers technical assistance and information to agricultural producers and cooperatives to get started or improve their effectiveness, as well as to communities for empowerment programs. With a multi-billion dollar portfolio of loans, loan guarantees, and grants, the USDA can be an effective partner to assist with agriculture sustainability. (*Rural Development*)²¹

Grants and loans are available in the following sectors: Business and Cooperative (including economic development, biomass R&D, value added producer and small minority producer grants), Housing and Community Facilities (including farm labor housing, seasonal or year round direct loans and grants), and Utilities (including water and waste disposal and solid waste loans, grants or guarantees). Sussex County, and Green Township are eligible for most Rural Development programs, although qualifying population limits vary from program to program.

Income Averaging for Farmers

The U.S. Taxpayer Relief Act of 1997, administered by the U.S. Department of Treasury's Internal Revenue Service, is meant to smooth out economic disparities that farmers experience from year to year due to the cyclical nature of agriculture. Known as Farm Income Averaging, qualified farmers can average all or part of their current year farm income over the previous three years. Substantial tax dollars can be saved by income averaging. (*United States Department of the Treasury*)²²

In the New Jersey Legislature in the 2008-2009 sessions, New Jersey Senate Bill 1409 was introduced in March 2008 and referred to the Senate Economic Growth Committee, while Assembly Bill 1406 was introduced in January 2008 and referred to the Assembly's Agriculture and Natural Resources, and Appropriations Committees. (*New Jersey State Legislature*)²³ These bills would have provided income averaging similar to the federal program described above. However, no similar bills appear to be before the Legislature for 2011-2012. The New Jersey Department of Agriculture, State Agriculture Development Committee, Sussex County Freeholders, and Sussex County Agriculture Development Board can work with, and encourage, the New Jersey Legislature to reintroduce and adopt income averaging legislation. This would greatly assist Sussex County farmers, and farmers statewide, to remain economically viable.

USDA Farm Service Agriculture Program

Farming is a business that can be extremely cyclical and unpredictable, with factors, such as weather and market conditions, out of the farmer's control. As such, farmers often need assistance to make ends meet, to stay profitable, and to stay in business. Many times federal government programs are available. Green Township farmers can take advantage of these loans as a tool in running their farm businesses.

The United States Department of Agriculture (USDA), Farm Service Agency (FSA) makes "...guaranteed farm ownership and operating loans to (beginning farmers), family-size

farmers and ranchers who cannot obtain commercial credit from a bank, Farm Credit System institution, or other lender”, often due to financial setbacks from natural disasters, or whose resources are too limited to maintain profitable farming operations. FSA loans can be used for most agriculture necessities such as purchasing land, livestock, equipment, feed, seed, supplies, and also for construction of buildings, or to make farm improvements. (*Farm Service Agency*)²⁴ Requests for guaranteed loans were up in 2009 and 2010, reaching levels not seen since the mid-1980s. (*Virginia Brophy*)²⁵

The FSA also makes “Direct” farm loans. These loans include supervision and credit counseling for farmers so they have a better chance for success. Under this program, farm ownership, operating, emergency and youth loans are the main types of loans available, but there are also minority applicant and beginning farmer loans. (*Farm Service Agency*) In Sussex County farm loans have been as follows:

- Fiscal year 2011 had eleven loans totaling upwards of \$560,000.²⁶
 - Fiscal year 2010 had four loans with an average loan amount of \$86,750. There were used for operating expenses and to refinance payables.
 - Fiscal year 2009 had three loans, with an average loan amount of \$80,000. They were used predominantly for operating expenses and equipment.
 - Fiscal year 2008 had three loans, with an average loan amount of \$20,000. They were used for operating expenses and building improvements.
 - Fiscal year 2007 had three loans, with an average loan of \$61,000. They were used to buy dairy cows and refinance debt.
 - Fiscal year 2006 had five loans, with an average loan of \$234,000. They were used to buy farms and cows, and to refinance operating and real estate debt.
 - Fiscal year 2005 had two loans, with an average loan of \$42,500. They were used to buy equipment, and for operating expenses.
- (*Virginia Brophy*)²⁷

The FSA office for Sussex County is located at 101 Bilby Road, Suite 1H in Hackettstown, Warren County, at the same location as the NRCS office discussed in *Chapter 7*. The County Executive Director is Lindsay Caragher, and she may be reached at (908) 852-2576, extension 109, or at Lindsay.Caragher@nj.usda.gov. Virginia Brophy is the Farm Loan Manager and should be contacted by Green Township farmers for assistance in determining whether they qualify for these loans, and assistance in applying. She may be reached at (908) 852-2576, extension 110 or virginia.brophy@nj.usda.gov. This FSA office also administers the financial aspect of the CREP program, which was discussed in *Chapter 7*.

Township of Green: Vision for Farmland Preservation

Mission Statement of the Green Township Agricultural Advisory Committee:

The mission of the farmland preservation program in Green Township is to preserve the agricultural economy, environment and landscape, and ensure the agricultural lifestyle that characterizes the Township. The AAC supports innovative approaches to maintaining the

sustainability and economic integrity of the farming community as well as the availability of fresh, locally grown farm products.

The Township has produced this *Comprehensive Farmland Preservation Plan* and enrolled in the municipal farmland Planning Incentive Grant program to maximize local, county and state funding sources to preserve farmland in the Township.

Goals of the Green Township Agricultural Advisory Committee:

Green Township will preserve existing farmland by encouraging private landowners to work with the Sussex County Agriculture Development Board (CADB) and the Township AAC to preserve their farms. The AAC will communicate with the local farmland owners to provide information on preservation programs and opportunities and with regional nonprofit organizations, including the Foodshed Alliance, New Jersey Agricultural Society, and Northeast Organic Farming Association of New Jersey, to increase agri-tourism opportunities in Green Township. As part of Green Township Day, the AAC will add programming to celebrate the agrarian traditions of the community and promote local farms and local farm products.

To date, there are 1,300 acres of permanently preserved farmland in Green Township. The goal of the Farmland Preservation Committee is to preserve an additional 700 acres for a total of 2,000 acres of preserved, productive farmland in the municipality.

-
- ¹ New Jersey Department of Agriculture. New Jersey State Agriculture Development Committee (SADC). Right to Farm Program. <http://www.state.nj.us/agriculture/sadc/rtfprogram.htm>. Accessed March 11, 2007.
- ² New Jersey Department of Agriculture, State Agriculture Development Committee, Right to Farm (RTF) Program: Eligibility Criteria for RTF Act Protection. <http://www.nj.gov/agriculture/sadc/rtfprogram/eligibility/>. Accessed December 2010.
- ³ New Jersey Department of Agriculture, State Agriculture Development Committee, Right to Farm Program: Resolving Agricultural-Related Conflicts <http://www.nj.gov/agriculture/sadc/rtfprogram/conflictres/>. Accessed December 2010.
- ⁴ New Jersey Department of Agriculture, New Jersey's Farmland Assessment Act, An Informational Guide on Basic Requirements. July 2006.
- ⁵ New Jersey Department of Agriculture, State Agricultural Development Committee,, New Jersey Farmland Assessment. Tax Year 2010.
- ⁶ New Jersey Department of Agriculture, State Agricultural Development Committee. Farmland Assessment. Tax Years 1984, 1991, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010.
- ⁷ New Jersey Department of Agriculture, Agricultural Smart Growth Plan 2006. <http://www.state.nj.us/agriculture/pdf/smartgrowthplan.pdf> Accessed March 27, 2007.
- ⁸ Personal communication with Kent Hardmeyer, United States Department of Agriculture, Natural Resources Conservation Service. May 15, 2007 and August 2008.
- ⁹ Agriculture Transition Policy Group, Final Report. January 10, 2006. <http://www.state.nj.us/governor/home/pdf/agriculture.pdf>. Accessed March 11, 2007.
- ¹⁰ New Jersey Department of Agriculture. <http://www.nj.gov/agriculture/conventions/2008/farmlabor.html>. Accessed August 15, 2009.
- ¹¹ New Jersey Department of Agriculture, Training. <http://www.state.nj.us/agriculture/grants/training.html>. Accessed August 15, 2009.
- ¹² USDA Census of Agriculture. http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Fact_Sheets/demographics.pdf. Accessed December 2010.
- ¹³ New Jersey Department of Agriculture, Agricultural Education. <http://www.jerseyageducation.nj.gov/>. Accessed August 18, 2009.
- ¹⁴ State of New Jersey Department of Agriculture. Agricultural Education. FFA Convention. http://www.nj.gov/agriculture/ag_ed/ffa/convention/ Accessed December 2010.
- ¹⁵ New Jersey Department of Agriculture, Agricultural Education. Food and Natural Resources Education Programs and Related Organizations. Secondary Agricultural Education Programs by School. http://www.jerseyageducation.nj.gov/agriculture/ag_ed/bulletin/ageddirectory.html#4 Accessed December 2010.
- ¹⁶ Tri- District Consortium: Andover Regional, Green Township and Newton Public Schools. <http://www.newtonnj.org/education/dept/dept.php?sectionid=489>. Accessed September 30, 2011.
- ¹⁷ Sussex County Technical School. <http://www.sussex.tec.nj.us/prospective-students/admissions.html>. Accessed October 7, 2011.
- ¹⁸ Sussex County 4-H. Sussex County 4-H Staff. http://sussex4h.org/About/sc4h_staff.html. Accessed October 27, 2011.
- ¹⁹ New Jersey Department of Agriculture, Division of Plant Industry, Programs. <http://www.state.nj.us/agriculture/divisions/pi/prog/>. Accessed April 1, 2007.

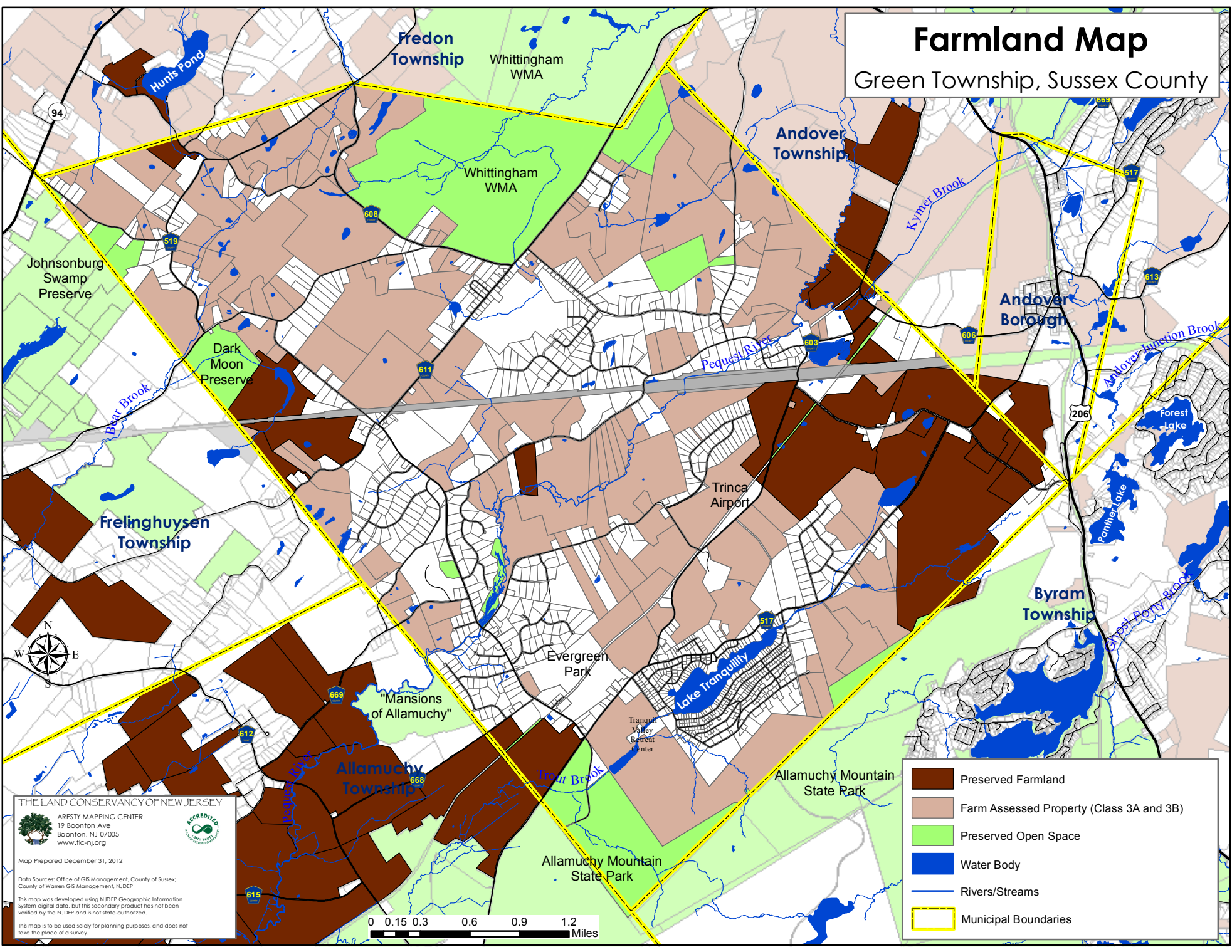
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- ²⁰ N.J. Department of Agriculture, Division of Plant Industry. Gypsy Moth Suppression. <http://www.nj.gov/agriculture/divisions/pi/prog/gypsymoth.html#1> Accessed September 30, 2011.
- ²¹ United States Department of Agriculture, Rural Development, <http://www.rurdev.usda.gov>. Accessed December 2010.
- ²² United States Department of the Treasury, Internal Revenue Service, Farm Income Averaging. Agriculture Tax Tips. <http://www.irs.gov/businesses/small/industries/article/0,,id=99020,00.html>. Accessed December 2010.
- ²³ New Jersey State Legislature. <http://www.njleg.state.nj.us/bills/BillView.asp>. Accessed December 2010.
- ²⁴ United States Department of Agriculture, Farm Service Agency, Farm Loan Programs, Background. <http://www.fsa.usda.gov/FSA/webapp?area=home&subject=fmlp&topic=landing>. Accessed December 2010.
- ²⁵ Personal Communication with Virginia Brophy, United States Department of Agriculture, Farm Service Agency. December 2010.
- ²⁶ Personal communication with Lindsay Caragher, Farm Service Agency. November 2011.
- ²⁷ Personal Communication with Virginia Brophy, United States Department of Agriculture, Farm Service Agency. December 2010.

MAPS

1. Farmland
2. Sussex County Agricultural Development Areas
3. Sussex County Project Areas
4. Agricultural Soils Categories
5. Project Area
6. Farm Parcels that meet SADC Criteria for Agricultural Soils
7. Farm Parcels that meet SADC Criteria for Tillable Land
8. Farm Parcels that meet SADC Criteria for both Agricultural Soils and Tillable Land

Farmland Map

Green Township, Sussex County



- Preserved Farmland
- Farm Assessed Property (Class 3A and 3B)
- Preserved Open Space
- Water Body
- Rivers/Streams
- Municipal Boundaries

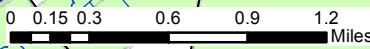
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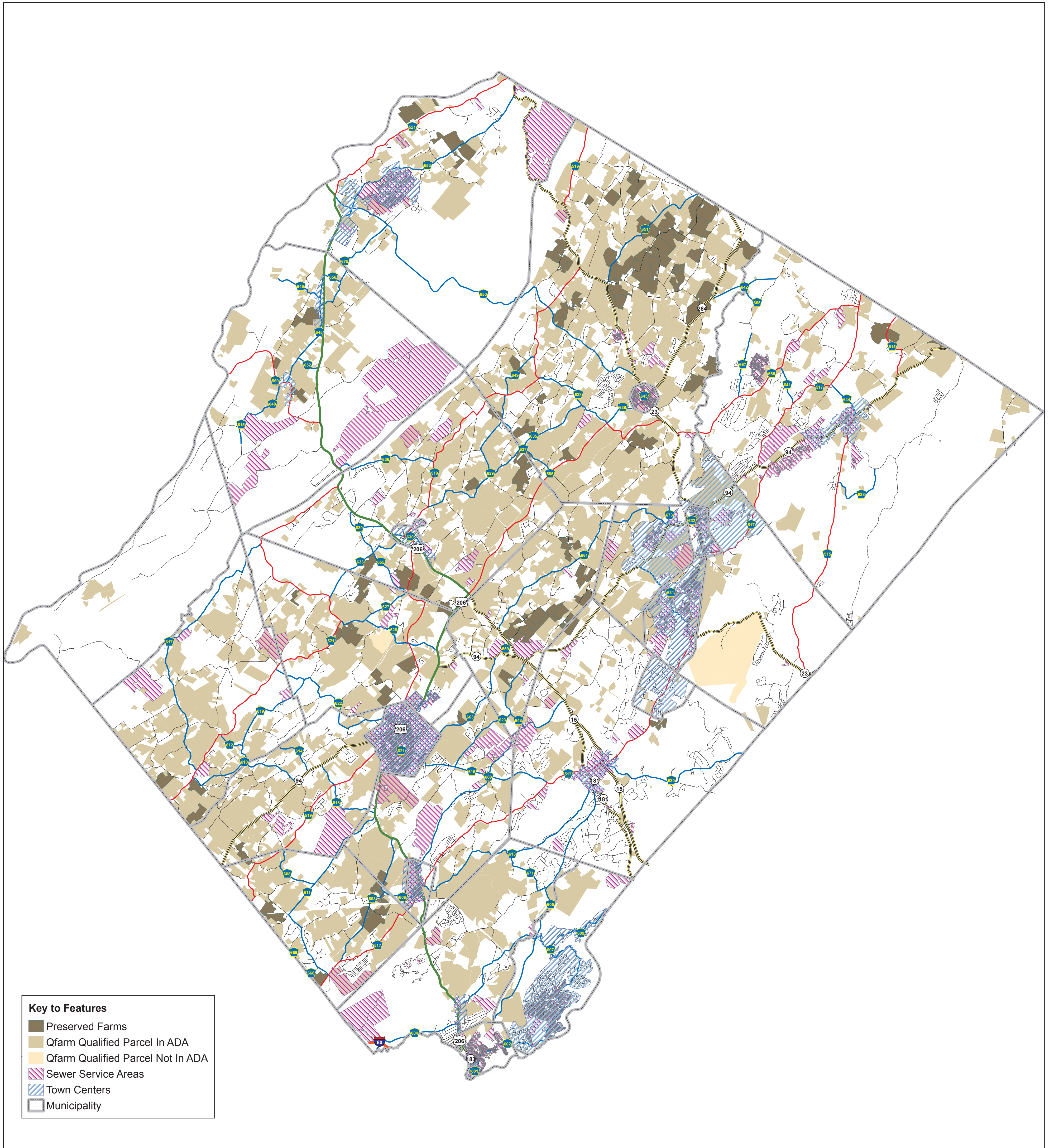
Map Prepared December 31, 2012

Data Sources: Office of GIS Management, County of Sussex; County of Warren GIS Management, NJDEP

This map was developed using NJDEP Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.

This map is to be used solely for planning purposes, and does not take the place of a survey.






Key to Features

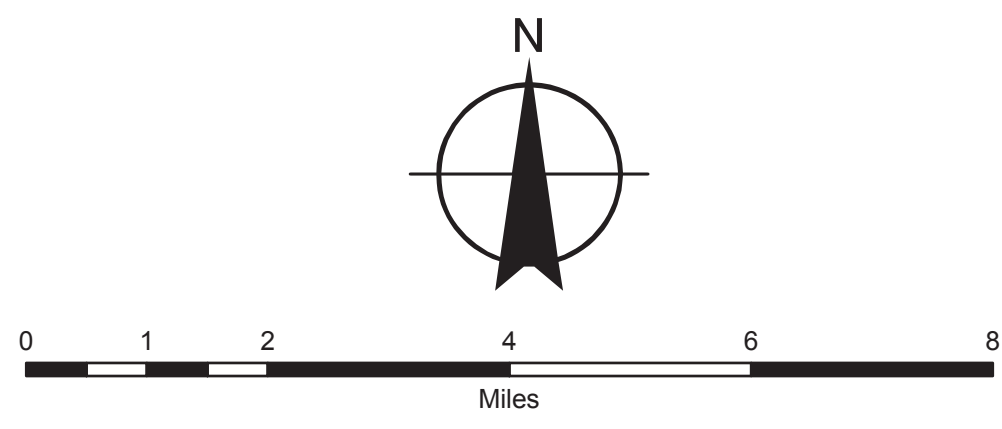
- Preserved Farms
- Qfarm Qualified Parcel In ADA
- Qfarm Qualified Parcel Not In ADA
- Sewer Service Areas
- Town Centers
- Municipality

This map was created using data developed by Sussex County, NJDCA, and NJDOT. 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.



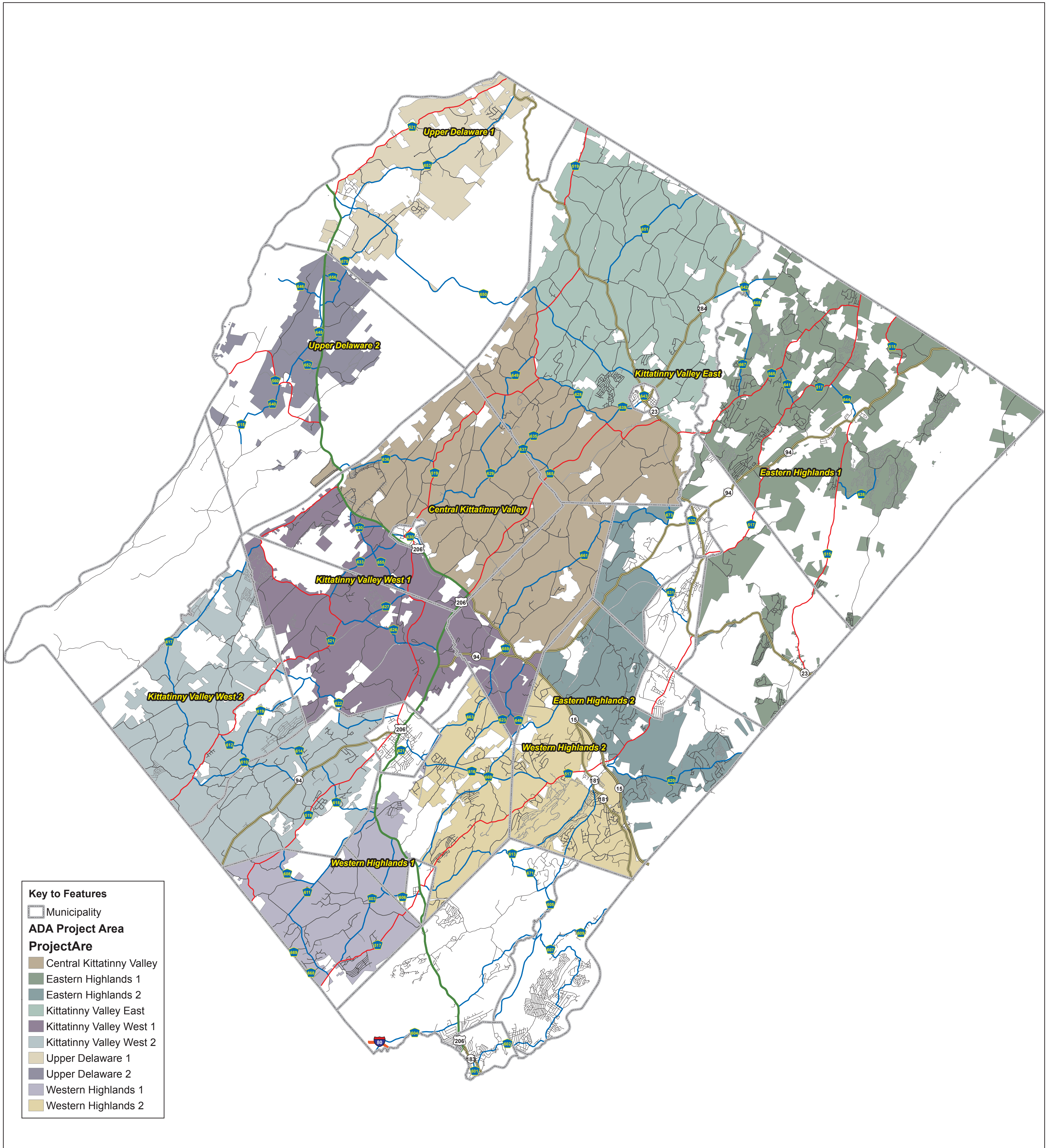
Office of GIS Management
Division of Engineering
Department of Engineering and Planning




Sussex County -- People & Nature Together

**Comprehensive Farmland
Preservation Plan**

Agriculture Development Areas

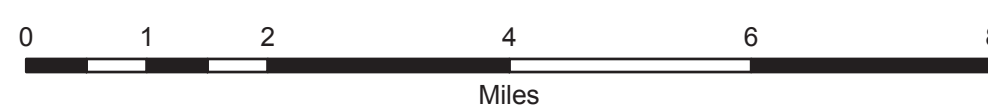


Key to Features

- Municipality
- ADA Project Area**
- Project Area**
- Central Kittatinny Valley
- Eastern Highlands 1
- Eastern Highlands 2
- Kittatinny Valley East
- Kittatinny Valley West 1
- Kittatinny Valley West 2
- Upper Delaware 1
- Upper Delaware 2
- Western Highlands 1
- Western Highlands 2

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

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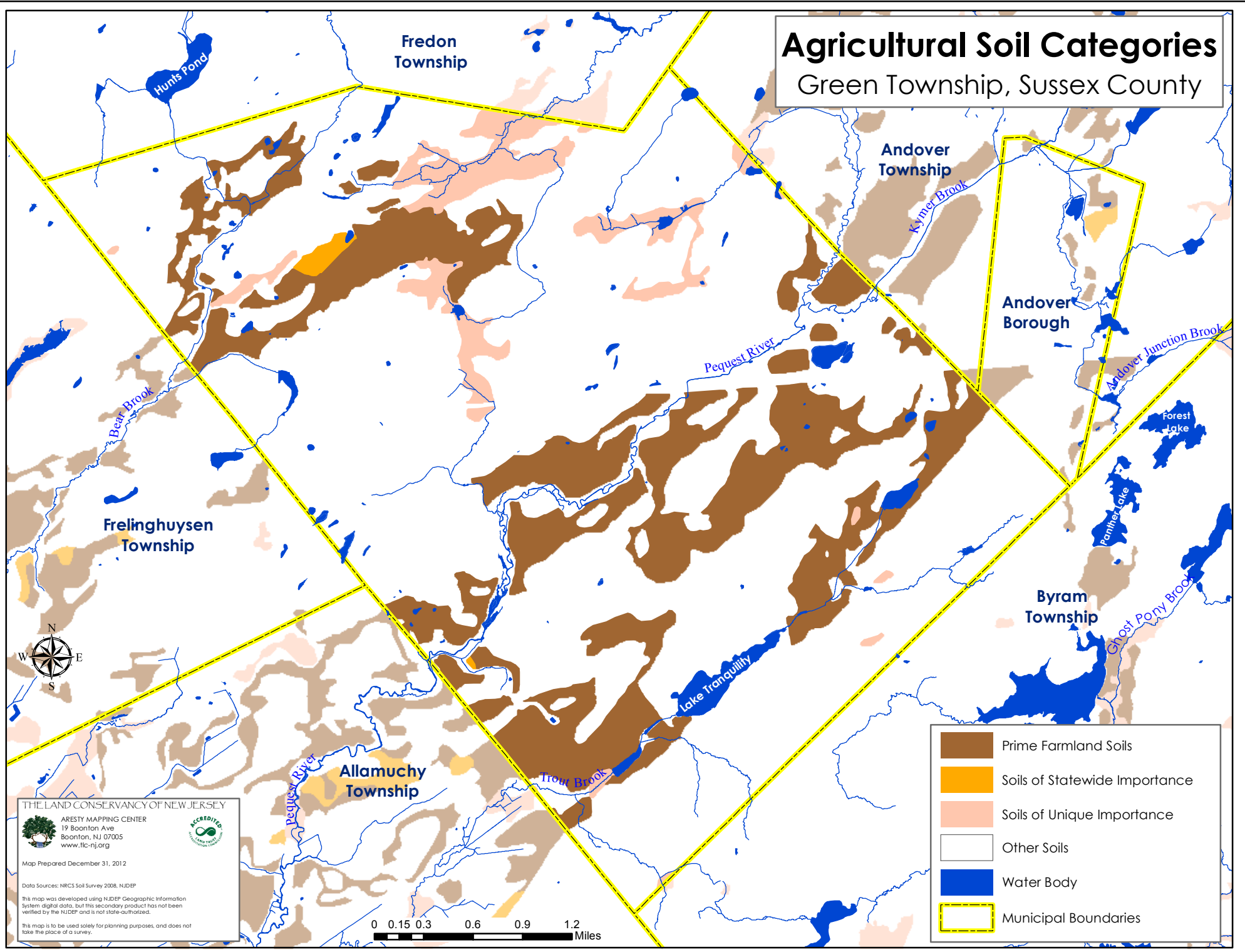








Comprehensive Farmland Preservation Plan

Proposed Project Areas

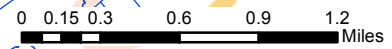
Agricultural Soil Categories

Green Township, Sussex County



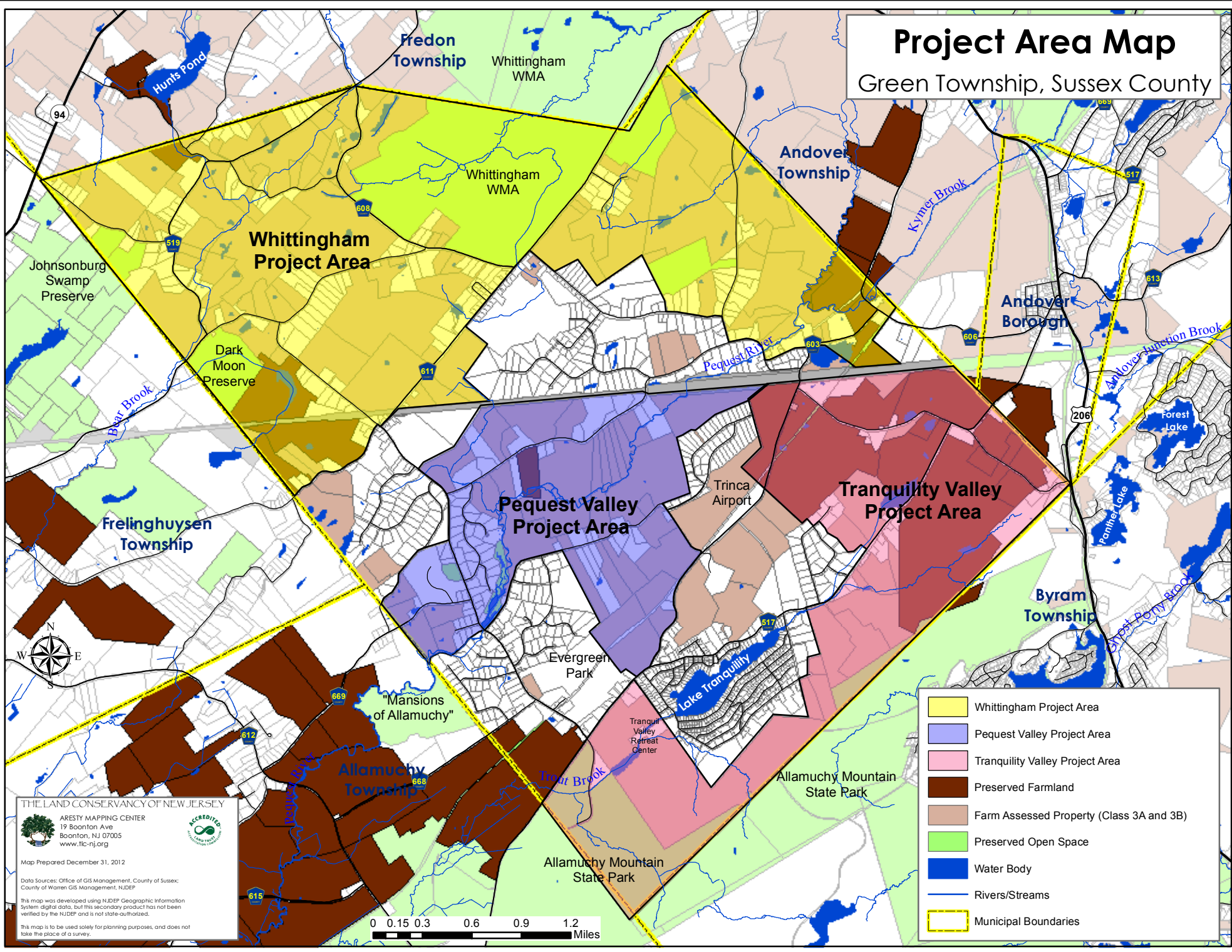
	Prime Farmland Soils
	Soils of Statewide Importance
	Soils of Unique Importance
	Other Soils
	Water Body
	Municipal Boundaries

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 Map Prepared December 31, 2012
 Data Sources: NRCS Soil Survey 2008, NJDEP
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 This map is to be used solely for planning purposes, and does not take the place of a survey.



Project Area Map

Green Township, Sussex County



- Whittingham Project Area
- Pequest Valley Project Area
- Tranquility Valley Project Area
- Preserved Farmland
- Farm Assessed Property (Class 3A and 3B)
- Preserved Open Space
- Water Body
- Rivers/Streams
- Municipal Boundaries

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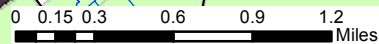


Map Prepared December 31, 2012

Data Sources: Office of GIS Management, County of Sussex;
County of Warren GIS Management, NJDEP

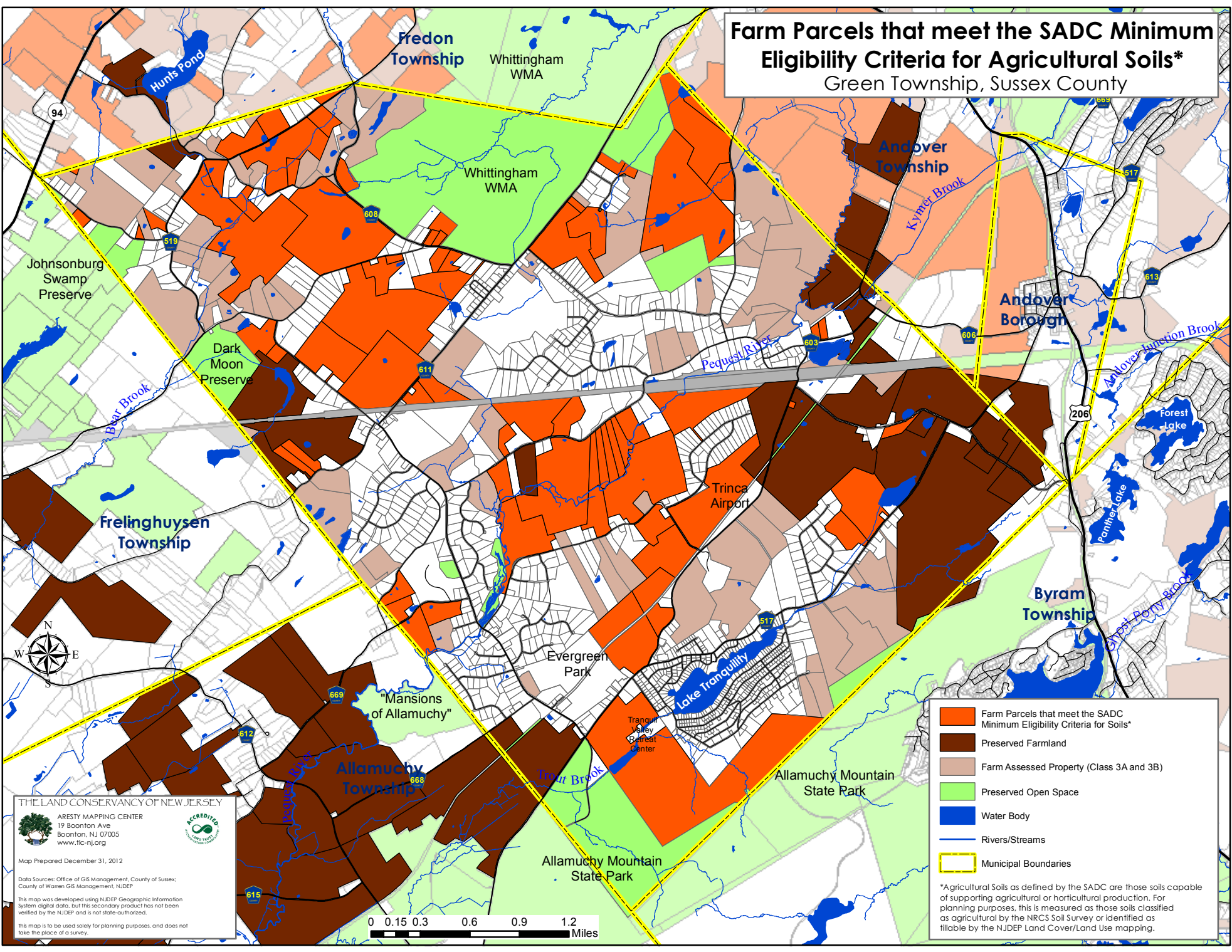
This map was developed using NJDEP Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.

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Farm Parcels that meet the SADC Minimum Eligibility Criteria for Agricultural Soils*

Green Township, Sussex County



	Farm Parcels that meet the SADC Minimum Eligibility Criteria for Soils*
	Preserved Farmland
	Farm Assessed Property (Class 3A and 3B)
	Preserved Open Space
	Water Body
	Rivers/Streams
	Municipal Boundaries

*Agricultural Soils as defined by the SADC are those soils capable of supporting agricultural or horticultural production. For planning purposes, this is measured as those soils classified as agricultural by the NRCS Soil Survey or identified as tillable by the NJDEP Land Cover/Land Use mapping.

THE LAND CONSERVANCY OF NEW JERSEY

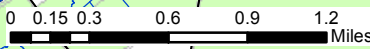
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Map Prepared December 31, 2012

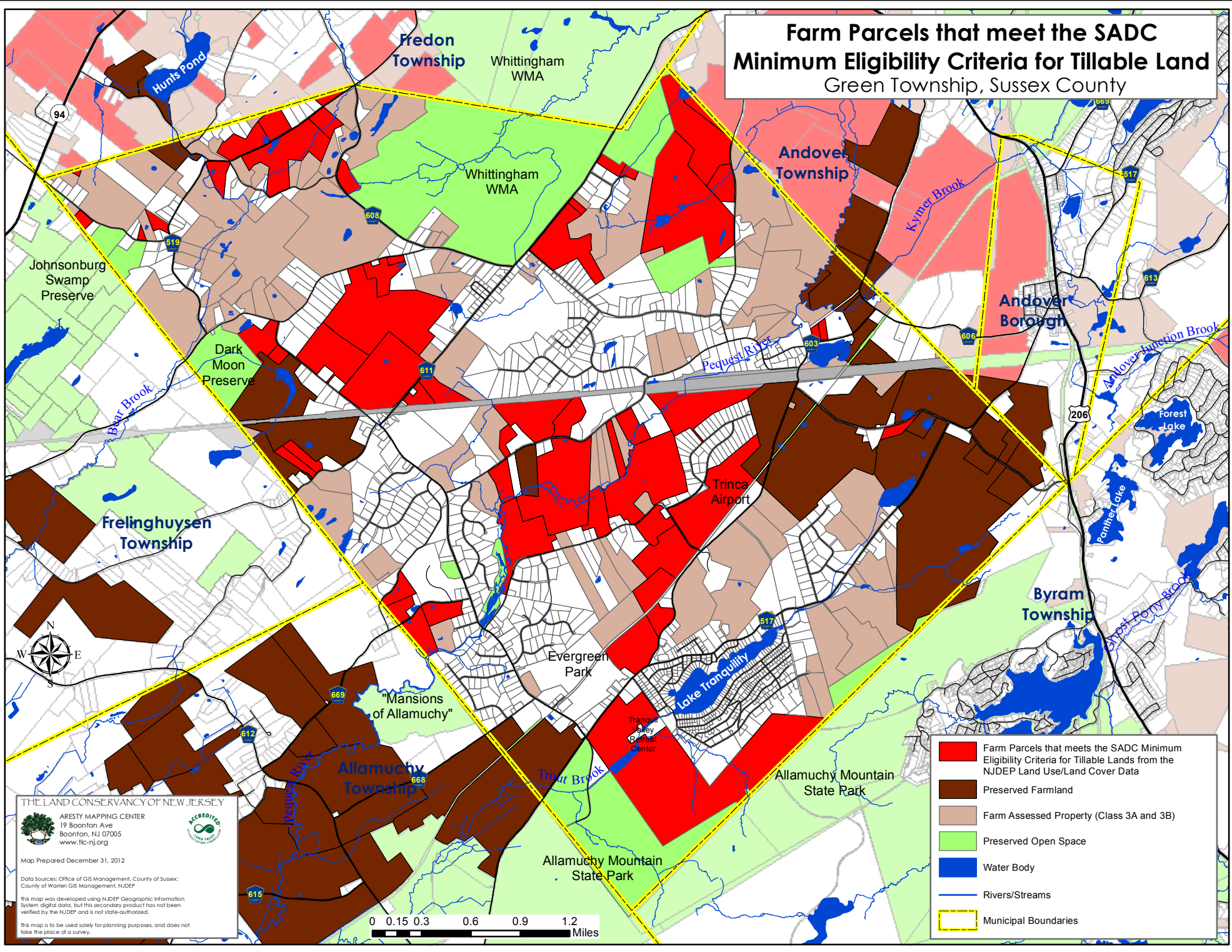
Data Sources: Office of GIS Management, County of Sussex; County of Warren GIS Management, NJDEP

This map was developed using NJDEP Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.

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Farm Parcels that meet the SADC Minimum Eligibility Criteria for Tillable Land Green Township, Sussex County



	Farm Parcels that meets the SADC Minimum Eligibility Criteria for Tillable Lands from the NJDEP Land Use/Land Cover Data
	Preserved Farmland
	Farm Assessed Property (Class 3A and 3B)
	Preserved Open Space
	Water Body
	Rivers/Streams
	Municipal Boundaries

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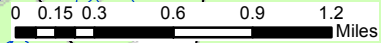


Map Prepared December 31, 2012

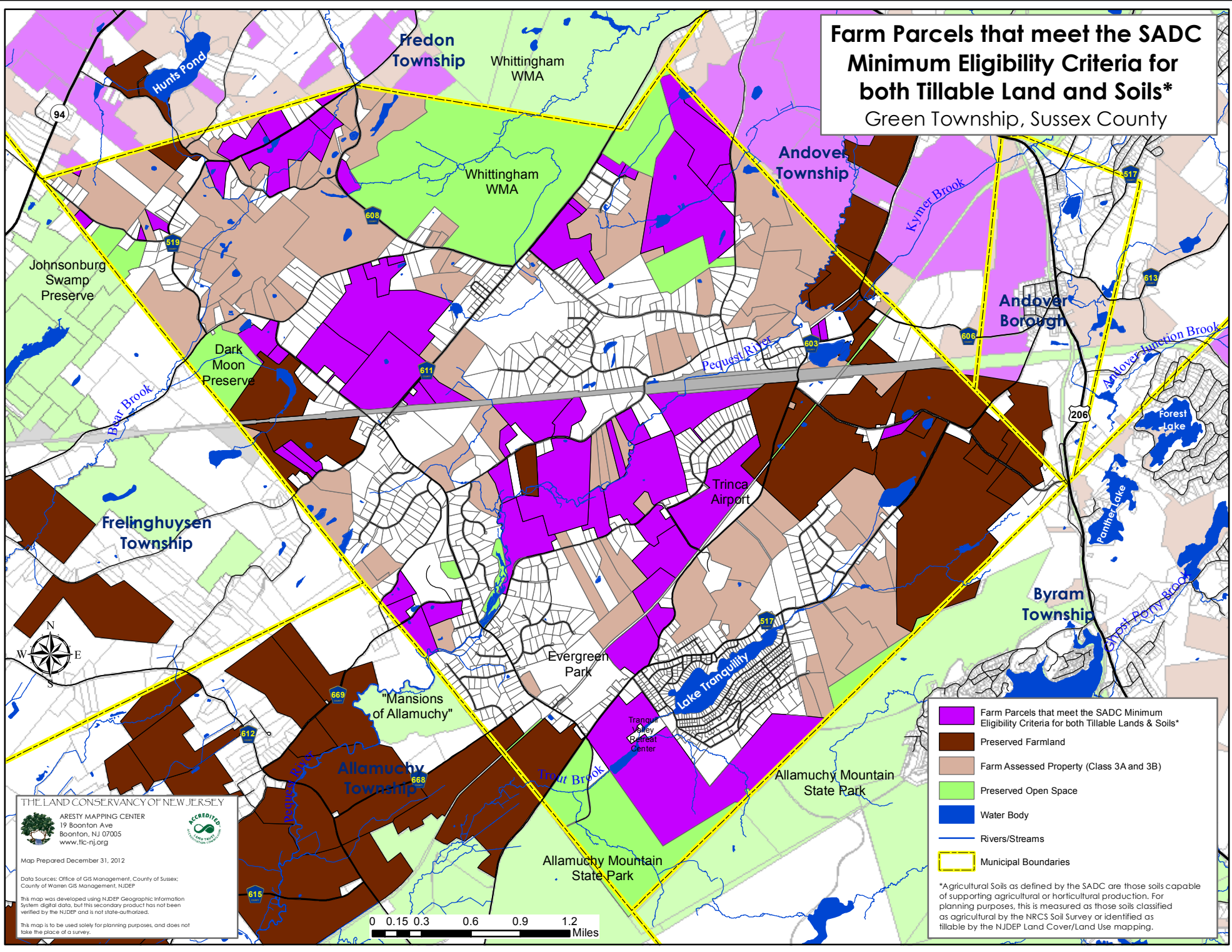
Data Sources: Office of GIS Management, County of Sussex; County of Warren GIS Management, NJDEP

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Farm Parcels that meet the SADC Minimum Eligibility Criteria for both Tillable Land and Soils* Green Township, Sussex County



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Map Prepared December 31, 2012

Data Sources: Office of GIS Management, County of Sussex;
County of Warren GIS Management, NJDEP

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0 0.15 0.3 0.6 0.9 1.2 Miles

*Agricultural Soils as defined by the SADC are those soils capable of supporting agricultural or horticultural production. For planning purposes, this is measured as those soils classified as agricultural by the NRCS Soil Survey or identified as tillable by the NJDEP Land Cover/Land Use mapping.

APPENDICES

- A. Notice of Submittal: Green Township to Sussex County – September 14, 2011
- B. Public Hearing November 10, 2011– Notice and Agenda
- C. Sussex County FY2012 Minimum Score Report
- D. SADC Deed of Easement
- E. State Ranking Criteria
- F. Green Township: Agricultural Advisory Committee Ordinance
- G. Green Township: Right to Farm Ordinance
- H. Parcel Data Tables:
 - 1. Farm Parcels Meeting the SADC Minimum Eligibility Criteria for Agricultural Soils and Tillable Land
 - 2. Farm Assessed Property



Township of Green

P.O. BOX 65, 150 KENNEDY RD.
TRANQUILITY, N.J. 07879
TELEPHONE: (908) 852-9333
FAX: (908) 852-1972

September 14, 2011

Ms. Donna Traylor
Sussex County Agriculture Development Board
Sussex County Administrative Center
One Spring Street
Newton, NJ 07860

RE: Green Township, Sussex County
Intention of Submitting Draft Comprehensive Farmland Preservation Plan
Intention of Submitting Planning Incentive Grant Application

FAX: (973) 579-0513

Dear Donna,

The Township of Green is submitting this letter to you and the members of the Sussex County Agriculture Development to inform you of our intention to submit a draft Comprehensive Farmland Preservation Plan Update and Planning Incentive Grant application by the December 15th SADC deadline.

This notification to the CADB is being done as required by the SADC, 90 days in advance of the SADC December 15th deadline. If you have any questions about our application or Comprehensive Plan, please call me or contact Barbara Heskins Davis at The Land Conservancy of New Jersey at (973) 541-1010, extension 33.

Thank you.

Sincerely,

Linda Peralta
Township Administrator

cc James Chirip, Mayor
Lou Caruso, Chair, Green Township Open Space Committee
Barbara Heskins Davis, The Land Conservancy of New Jersey

Tim Brill, State Agriculture Development Committee: FAX: (609) 633-2004

Attn: Donna Hendricks

Dear Donna,

Please publish the following legal notice and kindly send an affidavit of publication:

BEGIN

GREEN TOWNSHIP
PLANNING BOARD

Please take notice that the Green Township Planning Board, on November 10, 2011, at 7:30 PM, or thereafter, will convene a public meeting in the Township Municipal Building to include a presentation of the Draft Comprehensive Farmland Preservation Plan.

Desiree L. Dunn
Planning Board Secretary

END

COMPREHENSIVE FARMLAND PRESERVATION PLAN—2011

for

Township of Green

Public Hearing #1

Green Township Municipal Building
150 Kennedy Road

November 10, 2011 - 7:30 pm

Hosted by

Green Township Planning Board and Green Township Agricultural Advisory Committee

AGENDA

Welcome – Scott Holzhauer, *Chair, Planning Board*

Introductions – James Chirip, *Mayor, Member of the Agricultural Advisory Committee*

Draft Comprehensive Farmland Preservation Plan and Maps

Facilitated by The Land Conservancy of New Jersey

Linda Glosinski, Land Preservation Specialist

Kathleen Caccavale, Project Consultant

* * * * *

Overview – Comprehensive Farmland Preservation Plan

Farmland Mapping

Identification of Project Areas and Preservation Goals

* * * * *

Public Comment & Participation

For further information please contact:



The Land Conservancy of New Jersey
19 Boonton Avenue
Boonton, NJ 07005
(973) 541-1010
Fax: (973) 541-1131
www.tlc-nj.org



Township of Green
Agricultural Advisory Committee
150 Kennedy Road
Andover, NJ 07821
(908) 852-9333
www.greentwp.com

Why draft a Comprehensive Farmland Preservation Plan?

The primary purpose of completing the Farmland Preservation Plan is for the Township to conform to the updated State Agriculture Development Committee (SADC) guidelines so it can apply for funding through the municipal Planning Incentive Grant (PIG) program from the SADC.

Completing the Farmland Preservation Plan is a requirement for eligibility into this Program.

The Comprehensive Farmland Preservation Plan will provide a vision and strategy for the preservation of agricultural resources and will prioritize farmland for preservation based upon input local farmland owners, residents, municipal officials, county board and committees.

Preserved Land in Green Township

The Township of Green encompasses a total of 10,432 acres. Of these, 2,541 acres, or 24%, are permanently preserved.

Preserved Farmland	1,300 acres
NJDEP Land	1,088 acres
The Land Conservancy of New Jersey	19 acres
The Nature Conservancy	44 acres
Ridge and Valley Conservancy	84 acres
Preserved Municipal Land	6 acres
<i>Total Preserved Lands</i>	<i>2,541 acres</i>

Proposed Project Areas for Farmland Preservation:

The Comprehensive Farmland Preservation Plan identifies three Project Areas. These include:

- * Whittingham Project Area
- * Pequest Valley Project Area
- * Tranquility Valley Project Area

SADC Minimum Standards for "Eligible" Farm									
	<u>*2012 Average Quality Score</u>	<u>70% of Average Quality Score</u>							
Atlantic									
Bergen									
Burlington	64.91	45							
Camden									
Cape May	45.77	32							
Cumberland	59.53	41							
Gloucester	62.14	43							
Hunterdon	65.52	45							
Mercer	72.42	50							
Middlesex	63.03	44							
Monmouth	68.95	48							
Morris	60.42	42							
Ocean	61.39	42							
Passaic									
Salem	69.77	48							
Somerset	67.09	46							
Sussex	57.02	39							
Warren	61.57	43							
* Based on preliminary or Green Light quality scores for County '09, '10, and '11 Rounds - Fiscal Years N.J.A.C. 2:76-17.9 (a) and 17.2 (County Planning Incentive Grant Program) Effective January 1, 2012 through December 31, 2012									
** all numbers are rounded down to the nearest whole number									

E3-E

DEED OF EASEMENT

STATE OF NEW JERSEY AGRICULTURE RETENTION AND DEVELOPMENT PROGRAM

This Deed is made _____, 20 _____.

BETWEEN _____, whose address is _____ and is referred to as the Grantor;

AND _____, whose address is _____ and is referred to as the Grantee and/or Board.

The Grantor, Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns grants and conveys to the Grantee a development easement and all of the nonagricultural development rights and credits on the Premises, located in the Township of _____, County of _____, described in the attached Schedule A, and, for the limited purpose of the restrictions contained in Paragraph 13(b), the tract of land described in the attached Schedule C, which schedules are incorporated by reference in this Deed of Easement, for and in consideration of the sum of _____ Dollars.

Any reference in this Deed of Easement to "Premises" refers to the property described in Schedule A, and, for the limited purpose of the restrictions contained in Paragraph 13(b), to the tract of land described in Schedule C.

The tax map reference for the Premises is:

Township of _____
Block _____, Lot _____

WHEREAS, the legislature of the State of New Jersey has declared that the development of agriculture and the retention of farmlands are important to the present and future economy of the State and the welfare of the citizens of the State; and

WHEREAS, the Grantor is the sole and exclusive owner of the Premises; and

WHEREAS, the Grantee believes that the retention and preservation of agricultural lands is beneficial to the public health, safety and welfare of the citizens of _____ County;

NOW THEREFORE, THE GRANTOR, GRANTOR'S HEIRS, EXECUTORS, ADMINISTRATORS, PERSONAL OR LEGAL REPRESENTATIVES, SUCCESSORS AND ASSIGNS PROMISES that the Premises will be owned, used and conveyed subject to, and not in violation of the following restrictions:

1. Any development of the Premises for nonagricultural purposes is expressly prohibited.
2. The Premises shall be retained for agricultural use and production in compliance with N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32, and all other rules promulgated by the State Agriculture Development Committee, (hereinafter Committee). Agricultural use shall mean the use of the Premises for common farmsite activities including, but not limited to: production, harvesting, storage, grading, packaging, processing and the wholesale and retail marketing of crops, plants, animals and other related commodities and the use and application of techniques and methods of soil preparation and management, fertilization, weed, disease and pest control, disposal of farm waste, irrigation, drainage and water management and grazing.
3. Grantor certifies that at the time of the application to sell the development easement to the Grantee and at the time of the execution of this Deed of Easement the nonagricultural uses indicated on attached Schedule (B) existed on the Premises. All other nonagricultural uses are prohibited except as expressly provided in this Deed of Easement.

Prepared by: _____

4. All nonagricultural uses, if any, existing on the Premises at the time of the landowner's application to the Grantee as set forth in Section 3 above may be continued and any structure may be restored or repaired in the event of partial destruction thereof, subject to the following:

- i. No new structures or the expansion of pre-existing structures for nonagricultural use are permitted;
- ii. No change in the pre-existing nonagricultural use is permitted;
- iii. No expansion of the pre-existing nonagricultural use is permitted; and
- iv. In the event that the Grantor abandons the pre-existing nonagricultural use, the right of the Grantor to continue the use is extinguished.

5. No sand, gravel, loam, rock, or other minerals shall be deposited on or removed from the Premises excepting only those materials required for the agricultural purpose for which the land is being used.

6. No dumping or placing of trash or waste material shall be permitted on the Premises unless expressly recommended by the Committee as an agricultural management practice.

7. No activity shall be permitted on the Premises which would be detrimental to drainage, flood control, water conservation, erosion control, or soil conservation, nor shall any other activity be permitted which would be detrimental to the continued agricultural use of the Premises.

- i. Grantor shall obtain within one year of the date of this Deed of Easement, a farm conservation plan approved by the local soil conservation district.
- ii. Grantor's long term objectives shall conform with the provisions of the farm conservation plan.

8. Grantee and Committee and their agents shall be permitted access to, and to enter upon, the Premises at all reasonable times, but solely for the purpose of inspection in order to enforce and assure compliance with the terms and conditions of this Deed of Easement. Grantee agrees to give Grantor, at least 24 hours advance notice of its intention to enter the Premises, and further, to limit such times of entry to the daylight hours on regular business days of the week.

9. Grantor may use the Premises to derive income from certain recreational activities such as hunting, fishing, cross country skiing and ecological tours, only if such activities do not interfere with the actual use of the land for agricultural production and that the activities only utilize the Premises in its existing condition. Other recreational activities from which income is derived and which alter the Premises, such as golf courses and athletic fields, are prohibited.

10. Nothing shall be construed to convey a right to the public of access to or use of the Premises except as stated in this Deed of Easement or as otherwise provided by law.

11. Nothing shall impose upon the Grantor any duty to maintain the Premises in any particular state, or condition, except as provided for in this Deed of Easement.

12. Nothing in this Deed of Easement shall be deemed to restrict the right of Grantor, to maintain all roads and trails existing upon the Premises as of the date of this Deed of Easement. Grantor shall be permitted to construct, improve or reconstruct any roadway necessary to service crops, bogs, agricultural buildings, or reservoirs as may be necessary.

13(a). At the time of this conveyance, Grantor has existing single family residential buildings on the Premises and residential buildings used for agricultural labor purposes. Grantor may use, maintain, and improve existing buildings on the Premises subject to the following conditions:

- i. Improvements to agricultural buildings shall be consistent with agricultural uses;
- ii. Improvements to residential buildings shall be consistent with agricultural or single and extended family residential uses. Improvements to residential buildings for the purpose of housing agricultural labor are permitted only if the housed agricultural labor is employed on the Premises; and
- iii. Improvements to recreational buildings shall be consistent with agricultural or recreational uses.

13(b). Grantor, their heirs, executors, administrators, personal or legal representatives, successors and assigns may use and maintain the Exception Area, as described in the attached Schedule C, conditions:

sample conditions:

- a. the Exception Area shall not be severed or subdivided from the Premises
- b. the Exception area may be severed and subdivided from the Premises
- c. the Exception Area shall be limited to one residential unit
- d. (Right to Farm Language if Exception is Non-Severable)

Grantors, grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns or any person who is occupying or residing on the Exception Area as well as the heirs, executors, administrators, personal or legal representatives, successors and assigns of all such persons are hereby notified and made aware that the Exception Area is adjacent to a parcel ("Premises") permanently deed restricted under the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq. Such persons occupying or residing on the Exception Area are notified and made aware that agriculture is the accepted and preferred use of the adjacent Premises and that the adjacent Premises shall continue in agricultural use as defined in Section 2 of the Deed of Easement.

- e. (Right to Farm Language if Exception is Severable)

Grantors, grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns or any person to whom title to the Exception Area is transferred as well as the heirs, executors, administrators, personal or legal representatives, successors and assigns of all such persons are hereby notified and made aware that the Exception Area is adjacent to a parcel ("Premises") permanently deed restricted under the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq. Such persons taking title to the Exception Area are notified and made aware that agriculture is the accepted and preferred use of the adjacent Premises and that the adjacent Premises shall continue in agricultural use as defined in Section 2 of the Deed of Easement.

14. Grantor may construct any new buildings for agricultural purposes. The construction of any new buildings for residential use, regardless of its purpose, shall be prohibited except as follows:

- i. To provide structures for housing of agricultural labor employed on the Premises but only with the approval of the Grantee and the Committee. If Grantee and the Committee grant approval for the construction of agricultural labor housing, such housing shall not be used as a residence for Grantor, Grantor's spouse, Grantor's parents, Grantor's lineal descendants, adopted or natural, Grantor's spouse's parents, Grantor's spouse's lineal descendants, adopted or natural; and
- ii. To construct a single family residential building anywhere on the Premises in order to replace any single family residential building in existence at the time of conveyance of this Deed of Easement but only with the approval of the Grantee and Committee.
- iii. _____ residual dwelling site opportunity(ies) have been allocated to the Premises pursuant to the provisions of N.J.A.C. 2:76-6.17, "Residual Dwelling Site Opportunity". The Grantor's request to exercise a residual dwelling site opportunity shall comply with the rules promulgated by the Committee in effect at the time the request is initiated.

In the event a division of the Premises occurs in compliance with deed restriction No. 15 below, the Grantor shall prepare or cause to be prepared a Corrective Deed of Easement reflecting the reallocation of the residual dwelling site opportunities to the respective divided lots. The Corrective Deed shall be recorded with the County Clerk. A copy of the recorded Corrective Deed shall be provided to the Grantee and Committee.

In the event a residual dwelling site opportunity has been approved by the Grantee, the Grantor shall prepare or cause to be prepared a Corrective Deed of Easement at the time of Grantee's approval. The Corrective Deed of Easement shall reflect the reduction of residual dwelling site opportunities allocated to the Premises. The Corrective Deed shall be recorded with the

County Clerk. A copy of the recorded Corrective Deed shall be provided to the Grantee and Committee.

(OR)

- iii. No residual dwelling site opportunities have been allocated pursuant to the provisions of N.J.A.C. 2:76-6.17. No residential buildings are permitted on the Premises except as provided in this Deed of Easement.

For the purpose of this Deed of Easement:

"Residual dwelling site opportunity" means the potential to construct a residential unit and other appurtenant structures on the Premises in accordance with N.J.A.C. 2:76-6.17.

"Residual dwelling site" means the location of the residential unit and other appurtenant structures.

"Residential unit" means the residential building to be used for single family residential housing and its appurtenant uses. The construction and use of the residential unit shall be for agricultural purposes.

"Use for agricultural purposes" as related to the exercise of a residual dwelling site opportunity and the continued use of the residential unit constructed thereto, means at least one person residing in the residential unit shall be regularly engaged in common farmsite activities on the Premises including, but not limited to: production, harvesting, storage, grading, packaging, processing and the wholesale and retail marketing of crops, plants, animals and other related commodities and the use and application of techniques and methods of soil preparation and management, fertilization, weed, disease and pest control, disposal of farm waste, irrigation, drainage, water management and grazing.

15. The land and its buildings which are affected may be sold collectively or individually for continued agricultural use as defined in Section 2 of this Deed of Easement. However, no division of the land shall be permitted without the joint approval in writing of the Grantee and the Committee. In order for the Grantor to receive approval, the Grantee and Committee must find that the division shall be for an agricultural purpose and result in agriculturally viable parcels. Division means any division of the Premises, for any purpose, subsequent to the effective date of this Deed of Easement.

- i. For purposes of this Deed of Easement, "Agriculturally viable parcel" means that each parcel is capable of sustaining a variety of agricultural operations that yield a reasonable economic return under normal conditions, solely from each parcel's agricultural output.

16. In the event of any violation of the terms and conditions of this Deed of Easement, Grantee or the Committee may institute, in the name of the State of New Jersey, any proceedings to enforce these terms and conditions including the institution of suit to enjoin such violations and to require restoration of the Premises to its prior condition. Grantee or the Committee do not waive or forfeit the right to take any other legal action necessary to insure compliance with the terms, conditions, and purpose of this Deed of Easement by a prior failure to act.

17. This Deed of Easement imposes no obligation or restriction on the Grantor's use of the Premises except as specifically set forth in this Deed of Easement.

18. This Deed of Easement is binding upon the Grantor, the Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns and the Grantee; it shall be construed as a restriction running with the land and shall be binding upon any person to whom title to the Premises is transferred as well as upon the heirs, executors, administrators, personal or legal representatives, successors, and assigns of all such persons.

19. Throughout this Deed of Easement, the singular shall include the plural, and the masculine shall include the feminine, unless the text indicates otherwise.

20. The word 'Grantor' shall mean any and all persons who lawfully succeed to the rights and responsibilities of the Grantor, including but not limited to the Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns.

21. Wherever in this Deed of Easement any party shall be designated or referred to by name or general reference, such designation shall have the same effect as if the words, 'heirs, executors, administrators, personal or legal representatives, successors and assigns' have been inserted after each and every designation.

22. Grantor, Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns further transfers and conveys to Grantee all of the nonagricultural development rights and development credits appurtenant to the lands and Premises described herein. Nothing contained herein shall preclude the conveyance or retention of said rights by the Grantee as may be permitted by the laws of the State of New Jersey in the future. In the event that the law permits the conveyance of said development rights, Grantee agrees to reimburse the Committee () percent of the value of the development rights as determined at the time of the subsequent conveyance.

23. That portion of the net proceeds, representing the value of the land only (and not the value of the improvements), of a condemnation award or other disposition of the Premises following termination of this Deed of Easement, as permitted pursuant to N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32, shall be distributed among the Grantor and the Grantee in shares in proportion to the fair market value of their interests in the Premises on the date of execution of this Deed of Easement. For this purpose, the Grantee's allocable share of the proceeds shall be the net proceeds multiplied by a fraction, the numerator of which is the fair market value of the development easement as certified by the Committee at the time of the initial acquisition and the denominator of which is the full fair market value of the unrestricted Premises as certified by the Committee at the time of the initial acquisition, which is identified as (/).

Furthermore, the Grantee's proceeds shall be distributed among the Grantee and the Committee in shares in proportion to their respective cost share grants on the date of execution of this Deed of Easement. The Grantee shall use its share of the proceeds in a manner consistent with the provisions of N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32.

24. No historic building or structure located on the Premises may be demolished by the grantor or any other person without the prior approval of the State Agriculture Development Committee. Historic building or structure is a building or structure that, as of the date of this Deed of Easement, has been included in the New Jersey Register of Historic Places established pursuant to N.J.S.A. 13:1B-15.128 et seq.

The Grantor signs this Deed of Easement as of the date of the top of the first page. If the Grantor is a corporation, this Deed of Easement is signed and attested to by its proper corporate officers, and its corporate seal, if any, is affixed.

_____(L.S.)

_____(L.S.)

_____(Corporate Seal)

Secretary
(For use by corporations only)

(INDIVIDUAL ACKNOWLEDGMENT)

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____, 20 _____,

_____ personally came before me and acknowledged under oath, to my satisfaction, this that person (or if more than one, each person):

- (a) is named in and personally signed this DEED OF EASEMENT;
- (b) signed, sealed and delivered this DEED OF EASEMENT as his or her act and deed;
- (c) made this DEED OF EASEMENT for and in consideration of mutual obligations and benefits to each party; and
- (d) the actual and true consideration paid for this instrument is \$_____.

Print name and title below signature

(CORPORATE ACKNOWLEDGMENT)

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____ 20 _____, the subscriber

_____, personally appeared before me, who, being by me duly sworn on his or her oath, deposes and makes proof to my satisfaction, that he or she is the Secretary of

_____, the Corporation named in the within Instrument; that _____ is the President of said Corporation; that the execution, as well as the making of this Instrument, has been duly authorized by a proper resolution of the Board of Directors of the said Corporation, that deponent well knows the corporate seal of said Corporation; and that the seal affixed to said Instrument is the proper corporate seal and was thereto affixed and said Instrument signed and delivered by said President as and for the voluntary act and deed of said Corporation, in presence of deponent, who thereupon subscribed his or her name thereto as attesting witness; and that the full and actual consideration paid to purchase a development easement as evidenced by the DEED OF EASEMENT is \$ _____ and the mutual obligations and benefits contained herein.

Sworn to and subscribed before me, the date aforesaid

Print name and title below signature

(COUNTY AGRICULTURE DEVELOPMENT BOARD)

THE UNDERSIGNED, being Chairperson of the _____ County Agriculture Development Board, hereby accepts and approves the foregoing restrictions, benefits and covenants.

ACCEPTED AND APPROVED this _____ day of _____, 20 ____.

Chairperson
_____ County Agriculture Development Board

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____, 20 _____,

_____ personally came before me and acknowledged under oath, to my satisfaction that this person: (a) is named in and personally signed this DEED OF EASEMENT, (b) signed, sealed and delivered this DEED OF EASEMENT as the Board's act and deed; and (c) is the Chairperson of the _____ County Agriculture Development Board.

Print name and title below signature

(STATE AGRICULTURE DEVELOPMENT COMMITTEE)

The State Agriculture Development Committee has approved the purchase of the development easement on the Premises pursuant to the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32, and has authorized a grant of _____% of the purchase price of the development easement to _____ County in the amount of \$ _____.

Gregory Romano, Executive Director
State Agriculture Development Committee

Date

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____, 20 _____,

_____ personally came before me and acknowledged under oath, to my satisfaction, that this person:

- (a) is named in and personally signed this DEED OF EASEMENT,
- (b) signed, sealed and delivered this DEED OF EASEMENT as the Committee's act and deed, and
- (c) is the Executive Director of the State Agriculture Development Committee.

Print name and title below signature

FARMLAND PRESERVATION PROGRAM

RANKING CRITERIA

Applicant: _____
Block(s)/ Lot(s): _____
Municipality: _____

Density or Contiguous Properties (maximum of 10 points)

Add 2 points for the subject farm: _____
 Add 2 points for each permanently farm indicated: _____
 Add 1 point for each 8-Year farm indicated: _____
Sub Total for this Category: _____

Boundaries and Buffers (multiply percentage as indicated)

Deed Restricted Farmland (permanent) x .20: _____
 Deed Restricted Wildlife Areas x .18: _____
 Streams (perennial) and Wetlands x .18: _____
 Cemeteries x .16: _____
 Parks (limited public access) x .14: _____
 Military Installations x .14: _____
 Golf Course (public) x .14: _____
 8 year programs/EP Applications x .13: _____
 Highway (limited access) or Railroads x .10: _____
 Farmland (unrestricted) x .06: _____
 Woodlands x .06: _____
 Parks (high use) x .05: _____
 Residential Development x .00: N/A
 Residential (< 5 acres w/o infrastructure) x .00: N/A
 Commercial x .00: N/A
 Industrial x .00: N/A
 Schools x .00: N/A
Sub Total for this Category: _____

Tillable Acres (multiply percentage as indicated)

Cropland Harvested x .15: _____
 Cropland Pastured x .15: _____
 Permanent Pasture x .02: _____
 Woodlands x .00: N/A
 Wetlands x .00: N/A
 Other x .00: N/A
Sub Total for this Category: _____

Soils (multiply percentage as indicated)

Prime x .15: _____
 Statewide x .10: _____
 Unique x .125: _____
 Locals x .05: _____
 Other x .00: N/A
Sub Total for this Category: _____

Imminence of Change or Conversion

If the premises is in an estate situation add 3 points: _____
 If the owner has filed for bankruptcy add 4 points: _____
 If subdivision approval has been granted add 2 points: _____
Sub Total for this Category: _____

Local Commitment (maximum of 20 points)

If any question 2a through 2e is "yes" add 5 points: _____

If there is **no** sewer/water indicated add 3 points: _____

If preservation is supported by State/local plans add 2 points: _____

If there is an active CADB liaison add 1 point: _____

If planning board actions support preservation add 1 point: _____

If municipal actions support preservation add 1 point: _____

If any 8-Year municipal programs exist add 1 point: _____

If any easements have been purchased in the town add 1 point: _____

If the town has a Right-to-Farm ordinance add 4 points: _____

If the RTF ordinance requires builder notification add 1 point: _____

Sub Total for this Category: _____

County Ranking

If the property is the County's top ranked farm add 10 points: _____

Sub Total for this Category: _____

General Applicant Information

Up to 10 points can be added to the ranking score depending on the net acres to be preserved in comparison to the average size of a farm in the county. The formula for determining point value for the Size Criterion is:

10 x net acres to be preserved

2 x average farm size in county

(73 acres - from the 2002 U.S. Census of Agriculture)

Points based on above formula: _____

Sub Total for this Category: _____

Exceptions

If exception sum is more than 10% of farm subtract 1 point: _____

If the exception is severable subtract 2 points: _____

If the landowner does not agree to restrict the exception to one house, subtract the number of units in excess of the local zoning requirements: _____

Sub Total for this Category: _____

Amount of all Sub Totals: _____

Final Ranking

Amount of farms submitted in round: _____

Ranking of property based on farms submitted in round: _____

**RESOLUTION 2011-137
TOWNSHIP COMMITTEE - TOWNSHIP OF GREEN
SUSSEX COUNTY, NEW JERSEY**

AGRICULTURAL ADVISORY COMMITTEE APPOINTMENTS

BE IT RESOLVED by the Township Committee of the Township of Green in the County of Sussex and State of New Jersey that the following appointments as members of the Green Township Agricultural Advisory Committee:

Dick Guidi
Rich Vohden
James Chirip
David Phillips
Roger Michaud

DATED: October 24, 2011

I, Linda Peralta, Township Clerk of the Township of Green, County of Sussex, State of New Jersey, do hereby certify the foregoing resolution to be a true and correct copy of a resolution adopted by the Township Committee at the reorganization meeting held on October 24, 2011.

Linda Peralta, Township Clerk

Vote on Resolution:

	FOR APPROVAL	AGAINST APPROVAL	ABSTAIN	ABSENT
Mr. Bilik				
Mr. Conkling				
Mrs. Esenlohr				
Mr. Michaud				
Mr. Chirip				

ORDINANCE NO. 2010-15

TOWNSHIP OF GREEN, COUNTY OF SUSSEX, STATE OF NJ

**AN ORDINANCE TO AMEND CHAPTER XXX-LAND USE REGULATIONS
OF THE TOWNSHIP OF GREEN, PARTICULARLY ARTICLE XVII-
GENERAL PROVISIONS – BY ADDING THE FOLLOWING
NEW SECTION THERETO, TO BE DESIGNATED AS
SECTION 30-76 AND BEING ENTITLED AND READING
AS SET FORTH HEREIN BELOW**

BE IT ORDAINED, by the Township Committee of the Township of Green that, that Article XVII – General Provisions of Chapter XXX - Land Use Regulations of the Township of Green, be amended to the end that the following new provision shall be added thereto, to be designated as Section 30-76 and reading particularly as follows:

Right to Farm.

The Township Committee of the Township of Green finds that farming has existed and been carried on in the Township of Green for hundreds of years last past and long prior to the residential development that has since become prevalent within the Township. As a result of residential construction which has occurred in close proximity to existing working farms which engage in conventional agricultural practices such as spraying, the spreading of animal waste, fertilization and irrigation as well as other activities which are normally associated with active agricultural operations, those residences have been or may be subjected to the effects or impacts, which some residents may deem to be nuisances, from such agricultural activities. It has been further determined that the farmer must be secure in the ability to continue operation of the farm, earn a livelihood therefrom and engage in customary agricultural practices and techniques, free from the threat of nuisance complaints or litigation resulting from such impacts to other residents. The Township Committee has determined that whatever adverse effects to residential and other property owners which result from such farming activities are more than offset by the benefits to the Township of Green, the County of Sussex and the State of New Jersey of such agricultural operations which include the preservation of open space, the preservation of a desirable agricultural visual environment and the provision of agricultural products and farm output. Consequently, the purpose of this Ordinance is to assure the continuation and expansion of commercial and home-based agricultural pursuits by encouraging a positive agricultural business climate and protecting the farmer against unnecessary municipal regulation and private nuisance suits while approved agricultural practices are utilized and agricultural production is engaged in consistent with relative Federal and State law, thereby establishing a proper balance among the varied and sometimes conflicting interests of the farm owners/operators and the residents of Green Township.

- a. Statement of Intent. This section shall not be construed as, in any manner, superseding any Zoning Ordinance provision with respect to principally permitted, accessory or conditional uses permitted or prohibited in any particular zone district. Rather, it is the sole intent of this section to prohibit farming and agricultural operations, when conducted in accordance with accepted agricultural

management and farming practices, from constituting or being found to constitute, a public or private nuisance.

- b. Activities permitted and protected under this Section include all uses and structures ordinarily and customarily incidental to agricultural uses permitted by the Zoning Ordinance, including, but not limited to, the following uses:
 1. The storage, processing and sale of farm products subject, however, to all other conditions and limitations applicable thereto as set forth in the Zoning Ordinance.
 2. The use of irrigation pumps and equipment.
 3. The application of chemical fertilizers, insecticides, herbicides, pesticides *and liquid/liquefied manure and/or fertilizer. Liquid/liquefied manure and/or fertilizer shall only be applied to ground which is not frozen and shall be tilled into the soil within 24 hours after its application.*
 4. On-site distribution of organic agricultural wastes.
 5. Use of the land for the grazing of animals, subject to all applicable restrictions for intensive fowl or livestock farms.
 6. The use of farm laborers employed by the farm owner and/or operator.
 7. The use of public roadways for the transportation of tractors and other large slow-moving vehicles and equipment.
 8. The construction of fences for retention of animals and livestock.
 9. The use of customary farm machinery and equipment.
 10. The creation of noise, dust, odors and fumes conventionally associated with such agricultural activities.
 11. The engaging in farm practices at any and all times deemed reasonably necessary, including, but not limited to, Sundays, holidays and in the evenings.
 12. The raising and keeping of farm animals, including, but not limited to: dairy cattle, beef cattle, sheep, goats, swine, fowl, horses, ponies and mules provided, however, that proper sanitation measures, minimum recommended acreage limitations and appropriate setbacks between fencing and enclosures for such farm animals and adjoining properties are established and maintained.
 13. Installation of physical facilities for soil and water conservation and the harvesting of timber.

14. Provisions for the wholesale and retail marketing of the agricultural output of the farm, which include the building of temporary and permanent structures and parking areas for said purpose, providing same conform to all applicable provisions of the Green Township Zoning Ordinance and the Green Township Site Plan Review Ordinance.

c. For the purpose of giving due notice of nearby uses to present and future residents, the Planning Board of the Township of Green shall require an applicant for a major or minor subdivision, as a condition of approval thereof, to include the following notice, both on the subdivision plat itself and in an instrument in recordable form, to provide constructive record notice to buyers of the existence of any proximate agricultural uses, such instrument to be approved by the Planning Board of Green prior to the filing of the final subdivision plat or recording of any deed(s), as the case may be. Such notice shall read as follows: *Grantee is hereby noticed that there is, or may in the future be, farm use near the described premises from which may emanate noise, odors, dust and fumes associated with the agricultural practices permitted under Section 30-76, Right to Farm, of the Green Township Zoning Ordinance. A copy of this Ordinance is herewith attached to this deed(s).*

Except as specifically repealed by the foregoing (Section 30-76), said Land Use Regulations shall remain in full force and effect.

ATTEST

TOWNSHIP OF GREEN

Linda Peralta, Clerk

Daniel Conkling, Mayor

INTRODUCED:

ADVERTISED:

PUBLIC HEARING:

ADOPTED:

ADVERTISED:

Vote on Adoption of Ordinance No. 09-15:

	AYE	NAY	ABSTAIN	ABSENT
Mr. Chirip				
Mrs. Esenlohr				
Mr. Michaud				
Mr. Raffay				
Mr. Conkling				

Farm Parcels Meeting the SADC Minimum Eligibility Criteria for Agricultural Soils and Tillable Land

Block	Lot	Property Location	Property Class	Owner's Name	Acres	Tillable Acres	Tillable Percent	Project Area
13	4	14 HEDDEN RD	3A	MEIER, BART	12.06	8.46	70%	Pequest Valley
13	5	1 QUAKER RD	3A	SZEWCZYK, FRANK	10.46	6.64	63%	Pequest Valley
14	1	6 QUAKER RD	3A	ZANE, ALICE & TREMBLAY, DONALD	22.10	12.54	57%	Pequest Valley
14	2	38 QUAKER RD	3A	GIBBS ALICE TST, C/O GOODENOUGH	16.19	10.61	66%	Pequest Valley
16	15	CREEK RD	3B	CALASIBETTA, JOHN ET AL	43.52	42.09	97%	Pequest Valley
16	15.01	130 CREEK RD	3A	PITTENGER, LORI	19.01	17.56	92%	Pequest Valley
16	19	OFF CREEK RD	3B	QUARTER MOON FARMS, LLC	21.29	13.90	65%	Pequest Valley
17	10	PEQUEST RD	3B	CARRETTA, MICHAEL	17.54	12.60	72%	Pequest Valley
17	8.04	PEQUEST RD	3B	FRACCHIA, MAGELA B	7.18	6.23	87%	Pequest Valley
17	9	73 PEQUEST RD	3A	CARRETTA, MICHAEL	44.37	24.34	55%	Pequest Valley
19	10	CREEK RD	3B	SCILLIERI, TAMMY K ET AL	20.50	13.57	66%	Pequest Valley
19	13	145 CREEK RD	3A	PITTENGER, JENNIE	101.00	69.60	69%	Pequest Valley
19	17	21 SUMMIT RD	3B	MICIKAS FAMILY, LLC	58.98	34.12	58%	Pequest Valley
19	18.03	PEQUEST RD	3B	VOHDEN, RICHARD A III	16.12	8.97	56%	Pequest Valley
19	18.07	120 PEQUEST RD	3A	GIGANTE, JOSEPH & NANCY	9.78	5.09	52%	Pequest Valley
19	19	84 PEQUEST RD	3A	POST, JOHN	114.74	63.04	55%	Pequest Valley
19	21.01	PEQUEST RD	3B	KOMSA, REBECCA V	14.88	9.45	64%	Pequest Valley
19	7	53 CREEK RD	3A	PITTENGER, RUSSELL	57.52	40.25	70%	Pequest Valley
35	2	AIRPORT RD	3B	QUARTER MOON FARMS, LLC	12.18	10.39	85%	Pequest Valley
35	3.02	DECKER POND RD	3A	QUARTER MOON FARMS, LLC	42.76	28.29	66%	Pequest Valley
31	6	WHITEHALL RD	3B	WASHER, RICHARD JR	6.99	5.55	79%	Tranquility Valley
34	18	DECKER POND RD	3B	NEW JERSEY CONF 7TH DAY ADVENTISTS	342.37	66.66	19%	Tranquility Valley
1	12.03	YELLOW FRAME RD	3B	REDLICH, DAVID H & LORRAINE ET AL	1.70	1.27	75%	Whittingham
1	21	OFF RT 94	3B	SCHRADER-VAN DYKE, DONNA TST	1.13	0.94	83%	Whittingham
1	8.05	WINTERMUTE RD	3B	REDLICH, DAVID H & LORRAINE ET AL	5.80	4.48	77%	Whittingham
10	1.05	21 HAMILTON RD	3A	KELLY, DOUGLAS & DANIELLE	9.77	5.48	56%	Whittingham
10	1.06	17 HAMILTON RD	3A	LALLY, NICHOLAS J & THERESA M	8.45	7.51	89%	Whittingham
18	3.01	24 WOLFS CORNER RD	3A	ZEPKA, GARY & VIVIAN	9.29	8.46	91%	Whittingham
18	3.04	40 WOLFS CORNER RD	3A	EIGNER, JOHN F	16.87	13.94	83%	Whittingham
21	14.01	150 WOLFS CORNER RD	3A	KROTJE, JACOB & JOSEPHINE I	56.41	44.04	78%	Whittingham
21	14.08	186 WOLFS CORNER RD	3B	KROTJE, JACOB & JOSEPHINE I	2.87	2.36	82%	Whittingham
21	2	PHILLIPS RD	3B	KIRBY, ALLAN P JR	11.53	6.86	60%	Whittingham
21	3	PHILLIPS RD	3B	KIRBY, ALLAN P JR	75.79	58.96	78%	Whittingham
21	3.02	76 PHILLIPS RD	3A	CHRISTIE, RUSSELL III & JOHN	17.83	11.35	64%	Whittingham
21	4.03	216 WOLFS CORNER RD	3A	SAWYER, DENNIS & OLIVER, BARBARA	7.00	5.46	78%	Whittingham

Farm Parcels Meeting the SADC Minimum Eligibility Criteria for Agricultural Soils and Tillable Land

Block	Lot	Property Location	Property Class	Owner's Name	Acres	Tillable Acres	Tillable Percent	Project Area
21	4.05	PEBBLES RD	3B	SAWYER, DENNIS & OLIVER, BARBARA	3.70	3.40	92%	Whittingham
21	5	91 PHILLIPS RD	3A	KIRBY, CORAY S	162.57	85.55	53%	Whittingham
22	2.01	PEQUEST RD	3B	PEQUEST 201, LLC	2.78	2.76	99%	Whittingham
22	2.02	PEQUEST RD	3B	PEQUEST 202, LLC	3.39	3.36	99%	Whittingham
3	3	WINTERMUTE RD	3B	MILLER, CATHY A	14.90	7.90	53%	Whittingham
3	5	WINTERMUTE RD	3B	FAZENBAKER, DORSEY F JR & DIANE K	4.57	4.13	90%	Whittingham
3	6	147 WINTERMUTE RD	3A	MILLER, CATHY A	21.57	12.34	57%	Whittingham
4	4	WINTERMUTE RD	3B	BLANCHARD, L C/O VIOLA ROSSI	64.76	30.19	47%	Whittingham
4	4.01	206 WINTERMUTE RD	3A	DRIESSE, JAMES & JUDITH	12.18	6.25	51%	Whittingham
5	2	140 SHOTWELL RD	3A	SHOTWELL, PHOEBE H	10.39	5.37	52%	Whittingham
6	16	162 HIBLER RD	3B	GUIDI, RICHARD	2.83	2.56	90%	Whittingham
6	2	HENRY RD	3A	A P KIRBY, JR TRUSTEE	53.17	52.62	99%	Whittingham
6	3	HENRY RD	3B	DOBSON, ANNE C ET AL	91.18	48.06	53%	Whittingham
6	5.01	HIBLER RD	3B	GUIDI, RICHARD	143.29	103.27	72%	Whittingham
6	5.05	154 HIBLER RD	3A	GUIDI, RICHARD & ROSEMARY	18.27	14.44	79%	Whittingham
7	12	134 WINTERMUTE RD	3A	PELLEGRINO, DOUGLAS D & TARA L	11.49	6.59	57%	Whittingham
8	2.04	38 YELLOW FRAME RD	3B	JONES, ROBERT ET AL	5.58	4.92	88%	Whittingham
9	17	71 HENRY RD	3B	TURKO, JUDITH	5.25	5.23	100%	Whittingham
9	4.01	81 HENRY RD	3A	JUDITH TURKO CASTLES TRUST	21.64	18.30	85%	Whittingham
19	15	93 AIRPORT RD	3B	TOWNSHIP OF GREEN	91.27	68.13	75%	

Farm Assessed Property

Block	Lot	Property Location	Property Class	Owner's Name	Acres	Project Area
13	4	14 HEDDEN RD	3A	MEIER, BART	12.06	Pequest Valley
13	5	1 QUAKER RD	3A	SZEWCZYK, FRANK	10.46	Pequest Valley
14	1	6 QUAKER RD	3A	ZANE, ALICE & TREMBLAY, DONALD	22.10	Pequest Valley
14	2	38 QUAKER RD	3A	GIBBS ALICE TST, C/O GOODENOUGH	16.19	Pequest Valley
14	2.07	10 OLD FORGE LN	3B	CUROVIC, VASILIJ & GORICA	14.29	Pequest Valley
16	14	82 CREEK RD	3A	RUSBY LLC C/O C FRAGNITO	21.60	Pequest Valley
16	15	CREEK RD	3B	CALASIBETTA, JOHN ET AL	43.52	Pequest Valley
16	15.01	130 CREEK RD	3A	PITTENGER, LORI	19.01	Pequest Valley
16	15.06	100 CREEK RD	3A	MULLIGAN, RICHARD A JR	18.49	Pequest Valley
16	15.07	104 CREEK RD	3A	HEIN, RONALD E & AIMEE L	21.25	Pequest Valley
16	19	OFF CREEK RD	3B	QUARTER MOON FARMS, LLC	21.29	Pequest Valley
16	20	OFF CREEK RD	3B	QUARTER MOON FARMS, LLC	31.42	Pequest Valley
17	10	PEQUEST RD	3B	CARRETTA, MICHAEL	17.54	Pequest Valley
17	8	PEQUEST RD	3B	COSTABEL, CARLOS A & FRACCHIA, M	25.39	Pequest Valley
17	8.02	KENNEDY RD	3B	POST, JOHN A	31.55	Pequest Valley
17	8.04	PEQUEST RD	3B	FRACCHIA, MAGELA B	7.18	Pequest Valley
17	9	73 PEQUEST RD	3A	CARRETTA, MICHAEL	44.37	Pequest Valley
19	10	CREEK RD	3B	SCILLIERI, TAMMY K ET AL	20.50	Pequest Valley
19	13	145 CREEK RD	3A	PITTENGER, JENNIE	101.00	Pequest Valley
19	13.01	143 CREEK RD	3A	PITTENGER, LORI ELAINE	6.26	Pequest Valley
19	17	21 SUMMIT RD	3B	MICIKAS FAMILY, LLC	58.98	Pequest Valley
19	18.01	106 PEQUEST RD	3A	CLOSE, WILLIAM K	10.65	Pequest Valley
19	18.03	PEQUEST RD	3B	VOHDEN, RICHARD A III	16.12	Pequest Valley
19	18.05	110 PEQUEST RD	3A	MOYANO, FAUSTO	11.01	Pequest Valley
19	18.06	PEQUEST RD	3A	GUTOWSKI, MARTIN R & SUSAN	10.07	Pequest Valley
19	18.07	120 PEQUEST RD	3A	GIGANTE, JOSEPH & NANCY	9.78	Pequest Valley
19	18.08	124 PEQUEST RD	3A	ELWELL, ARTHUR F	9.75	Pequest Valley
19	19	84 PEQUEST RD	3A	POST, JOHN	114.74	Pequest Valley
19	20	50 PEQUEST RD	3A	CHIRIP, JAMES	21.65	Pequest Valley
19	21.01	PEQUEST RD	3B	KOMSA, REBECCA V	14.88	Pequest Valley
19	21.02	PEQUEST RD	3B	KOMSA, REBECCA V	22.80	Pequest Valley
19	7	53 CREEK RD	3A	PITTENGER, RUSSELL	57.52	Pequest Valley
19	9	CREEK RD	3B	RUSBY LLC C/O C FRAGNITO	4.34	Pequest Valley
35	2	AIRPORT RD	3B	QUARTER MOON FARMS, LLC	12.18	Pequest Valley
35	3.02	DECKER POND RD	3A	QUARTER MOON FARMS, LLC	42.76	Pequest Valley
19	16	AIRPORT RD	3A	MOONEY, C RAYMOND	57.42	Tranquility Valley

Farm Assessed Property

Block	Lot	Property Location	Property Class	Owner's Name	Acres	Project Area
27	2	WHITEHALL RD	3B	MOONEY, C RAYMOND	56.01	Tranquility Valley
27	6.02	95 WHITEHALL RD	3A	WASHER, RICHARD JR	91.03	Tranquility Valley
27	7	ADJOINS ANDOVER TWP	3B	SUSSEX PROPERTIES, C/O WISS & CO	0.71	Tranquility Valley
27	9	OFF WHITEHALL RD	3B	OCCHIFINTO, ROBERT C/O NVE	12.01	Tranquility Valley
28	1	WHITEHALL RD	3B	TRI-FARMS, INC	50.31	Tranquility Valley
28	1.02	WHITEHALL RD	3B	TRI-FARMS, INC	9.05	Tranquility Valley
30	1	184 AIRPORT RD	3A	MOONEY, C RAYMOND	21.48	Tranquility Valley
30	1.01	198 AIRPORT RD	3A	MOONEY, C RAYMOND	0.92	Tranquility Valley
31	2	AIRPORT RD	3B	MOONEY, C RAYMOND	161.88	Tranquility Valley
31	6	WHITEHALL RD	3B	WASHER, RICHARD JR	6.99	Tranquility Valley
31	7	DECKER POND RD	3B	TRI-FARMS, INC	74.94	Tranquility Valley
31	7.01	DECKER POND RD	3B	TRI-FARMS, INC	10.68	Tranquility Valley
31	8	299 DECKER POND RD	3B	ZECKENDORF, R & FROELICH, C ET AL	58.05	Tranquility Valley
31	8.02	275 DECKER POND RD	3A	FELDSTEIN, STUART & CAROL	19.89	Tranquility Valley
32	2	AIRPORT RD	3B	MOONEY, C RAYMOND	2.13	Tranquility Valley
34	11.03	290 DECKER POND RD	3A	MILLER, RANDY & GINA	8.96	Tranquility Valley
34	13	DECKER POND RD	3B	TRI-FARMS, INC	315.05	Tranquility Valley
34	13.01	DECKER POND RD	3B	TRI-FARMS, INC	21.57	Tranquility Valley
34	18	DECKER POND RD	3B	NEW JERSEY CONF 7TH DAY ADVENTISTS	342.37	Tranquility Valley
34	22.01	OFF WHITEHALL RD	3B	MASLOW, RINA	0.04	Tranquility Valley
34	29	1 HIGHLAND AVE	3A	TURBA, GLENN & DIANA	6.20	Tranquility Valley
34	3	228 DECKER POND RD	3A	LUTZ, HENRY & LUCILLE	47.88	Tranquility Valley
34	31	2 HIGHLAND AVE	3A	CINOTTI, MICHAEL J & JENNIFER	16.80	Tranquility Valley
34	32	4 HIGHLAND AVE	3A	SHELTON, ROBERT C JR	11.96	Tranquility Valley
34	33	144 WHITEHALL RD	3A	TRI-FARMS, INC	11.29	Tranquility Valley
34	4	232 DECKER POND RD	3A	SMITH, RICHARD E	42.70	Tranquility Valley
34	5	236 DECKER POND RD	3A	SMITH, LESLIE E III & MONIKA V	55.88	Tranquility Valley
34	8	DECKER POND RD	3B	A J ROVELL ASSOCIATES, LLC	23.79	Tranquility Valley
34	8.01	DECKER POND RD	3B	A J ROVELL ASSOCIATES, LLC	4.66	Tranquility Valley
1	11	85 YELLOW FRAME RD	3A	REDLICH, DAVID H & LORRAINE ET AL	6.80	Whittingham
1	12.03	YELLOW FRAME RD	3B	REDLICH, DAVID H & LORRAINE ET AL	1.70	Whittingham
1	20	OFF RT 94	3B	NORMAN, JEANINE DENISE	5.11	Whittingham
1	21	OFF RT 94	3B	SCHRADER-VAN DYKE, DONNA TST	1.13	Whittingham
1	3	YELLOW FRAME RD	3B	KIRBY DEVELOPMENT CORP	61.20	Whittingham
1	5	WINTERMUTE RD	3B	LEO, JOHN & URSALA	32.25	Whittingham
1	6	HUNTS RD	3A	HUNT, RALPH	17.54	Whittingham

Farm Assessed Property

Block	Lot	Property Location	Property Class	Owner's Name	Acres	Project Area
1	7.01	103 WINTERMUTE RD	3A	HENRICH, PAUL L & DIANE	6.72	Whittingham
1	8.05	WINTERMUTE RD	3B	REDLICH, DAVID H & LORRAINE ET AL	5.80	Whittingham
10	1	1 HAMILTON RD	3A	FRASCELLA, MICHAEL	22.99	Whittingham
10	1.01	45 HAMILTON RD	3B	EVANS, DEREK & MARISA	74.67	Whittingham
10	1.05	21 HAMILTON RD	3A	KELLY, DOUGLAS & DANIELLE	9.77	Whittingham
10	1.06	17 HAMILTON RD	3A	LALLY, NICHOLAS J & THERESA M	8.45	Whittingham
10	2	1 HAMILTON RD	3A	FRASCELLA, MICHAEL	3.75	Whittingham
18	3	50 WOLFS CORNER RD	3A	LUDWIG, MELVIN R	47.70	Whittingham
18	3.01	24 WOLFS CORNER RD	3A	ZEPKA, GARY & VIVIAN	9.29	Whittingham
18	3.04	40 WOLFS CORNER RD	3A	EIGNER, JOHN F	16.87	Whittingham
2	1	HUNTS RD	3B	HUNT, RALPH	2.44	Whittingham
2	2	HUNTS RD	3B	FULLER, CYNTHIA Q TST	1.37	Whittingham
21	13	OFF MACKERLEY RD	3B	SNYDER, STEPHEN	4.92	Whittingham
21	14.01	150 WOLFS CORNER RD	3A	KROTJE, JACOB & JOSEPHINE I	56.41	Whittingham
21	14.07	190 WOLFS CORNER RD	3A	KROTJE, JACOB & JOSEPHINE I	2.97	Whittingham
21	14.08	186 WOLFS CORNER RD	3B	KROTJE, JACOB & JOSEPHINE I	2.87	Whittingham
21	15	LAUREL DR	3B	VOHDEN, RICHARD A JR & FAITH	29.19	Whittingham
21	15.04	8 PEBBLES RD	3A	SNYDER, STEPHEN	69.92	Whittingham
21	16	OFF PHILLIPS RD	3B	NATURE CONSERVANCY C/O BARDACH	0.57	Whittingham
21	2	PHILLIPS RD	3B	KIRBY, ALLAN P JR	11.53	Whittingham
21	3	PHILLIPS RD	3B	KIRBY, ALLAN P JR	75.79	Whittingham
21	3.02	76 PHILLIPS RD	3A	CHRISTIE, RUSSELL III & JOHN	17.83	Whittingham
21	4.03	216 WOLFS CORNER RD	3A	SAWYER, DENNIS & OLIVER, BARBARA	7.00	Whittingham
21	4.05	PEBBLES RD	3B	SAWYER, DENNIS & OLIVER, BARBARA	3.70	Whittingham
21	5	91 PHILLIPS RD	3A	KIRBY, CORAY S	162.57	Whittingham
21	7.05	12 MACKERLEY RD	3A	BRESLOF, STEPHEN & CLARE	16.16	Whittingham
22	1	311 PEQUEST RD	3A	CAHILL, ROBERT T & EILEEN O	14.00	Whittingham
22	11	231 PEQUEST RD	3A	DERBY, ERIC T	13.04	Whittingham
22	11.01	OFF PEQUEST RD	3B	KIRBY, CORAY S	7.25	Whittingham
22	12	227 PEQUEST RD	3A	K & O ASSOCIATES	10.31	Whittingham
22	13	PHILLIPS RD	3B	SAND SPRINGS PROPERTIES	14.43	Whittingham
22	14	58 PHILLIPS RD	3A	MEYER, RICHARD P & MARIE J	12.01	Whittingham
22	14.01	68 PHILLIPS RD	3B	CHRISTIE, JANET R	13.35	Whittingham
22	17	PHILLIPS RD	3B	CHRISTIE, JANET R	70.79	Whittingham
22	18	OFF PHILLIPS RD	3B	KIRBY, ALLAN P JR	62.66	Whittingham
22	19	BRIGHTON RD	3B	KIRBY, CORAY S	2.89	Whittingham

Farm Assessed Property

Block	Lot	Property Location	Property Class	Owner's Name	Acres	Project Area
22	2.01	PEQUEST RD	3B	PEQUEST 201, LLC	2.78	Whittingham
22	2.02	PEQUEST RD	3B	PEQUEST 202, LLC	3.39	Whittingham
22	20	OFF PHILLIPS RD	3B	SAND SPRING PROPERTIES	75.67	Whittingham
22	21	BRIGHTON RD	3B	KIRBY, CORAY S	43.19	Whittingham
24	6	PEQUEST RD	3B	CAHILL, ROBERT T & EILEEN O	14.92	Whittingham
25	1	225 BRIGHTON RD	3A	CALECA, ERIC	4.61	Whittingham
25	3	141 BRIGHTON RD	3B	KIRBY, CORAY S	5.49	Whittingham
26	3	OFF BRIGHTON AVE	3B	CAHILL, ROBERT T & EILEEN O	14.14	Whittingham
3	2	15 HUNTS RD	3A	HUNT, RALPH	7.83	Whittingham
3	3	WINTERMUTE RD	3B	MILLER, CATHY A	14.90	Whittingham
3	4.02	HUNTS RD	3B	SANSONE, THOMAS & CHRISTINE C	3.09	Whittingham
3	5	WINTERMUTE RD	3B	FAZENBAKER, DORSEY F JR & DIANE K	4.57	Whittingham
3	6	147 WINTERMUTE RD	3A	MILLER, CATHY A	21.57	Whittingham
3	7	145 WINTERMUTE RD	3B	ADY ASSOCIATES, LLC C/O MILLER	4.46	Whittingham
4	1	HUNTS RD	3B	LOBO, PAUL A ET AL	3.36	Whittingham
4	2	SHOTWELL RD	3B	SHOTWELL PARTNERSHIP, LLC	13.13	Whittingham
4	2.02	SHOTWELL RD	3B	SHOTWELL PARTNERSHIP, LLC	8.42	Whittingham
4	3	SHOTWELL RD	3B	KERWIEN, HENRY F & STACEY L	18.31	Whittingham
4	4	WINTERMUTE RD	3B	BLANCHARD, L C/O VIOLA ROSSI	64.76	Whittingham
4	4.01	206 WINTERMUTE RD	3A	DRIESSE, JAMES & JUDITH	12.18	Whittingham
4	4.03	21 HUNTS SCHOOL RD	3A	SKOVE, B CATHERINE	8.18	Whittingham
4	4.05	53 HUNTS SCHOOL RD	3A	WARE, MICHAEL A & SHEILA	6.37	Whittingham
4	4.06	55 HUNTS SCHOOL RD	3A	GRUENDIG, KENNETH K & PATRICIA	11.57	Whittingham
4	4.07	25 HUNTS SCHOOL RD	3A	SKOVE, MARK C	6.73	Whittingham
5	1	SHOTWELL RD	3B	SHOTWELL PARTNERSHIP, LLC	9.87	Whittingham
5	2	140 SHOTWELL RD	3A	SHOTWELL, PHOEBE H	10.39	Whittingham
5	2.02	SHOTWELL RD	3B	SHOTWELL PARTNERSHIP, LLC	63.18	Whittingham
5	4	50 SHOTWELL RD	3A	PINSEN, JACK & ANN	9.53	Whittingham
5	4.04	52 SHOTWELL RD	3A	AMBJOR, ERIK R & RACHEL M	2.80	Whittingham
5	4.05	SHOTWELL RD	3B	AMBJOR, ERIK R & RACHEL M	2.95	Whittingham
6	10	35 SHOTWELL RD	3A	SERRATELLI, CLAIRE & GREGORY, CLAIR	6.69	Whittingham
6	10.02	35 SHOTWELL RD	3B	SERRATELLI, JOHN Q & CLAIRE A	6.86	Whittingham
6	16	162 HIBLER RD	3B	GUIDI, RICHARD	2.83	Whittingham
6	17	17 SHOTWELL RD	3A	CASQUEIRA, ELIO B & SUSANA	27.34	Whittingham
6	2	HENRY RD	3A	A P KIRBY, JR TRUSTEE	53.17	Whittingham
6	3	HENRY RD	3B	DOBSON, ANNE C ET AL	91.18	Whittingham

Farm Assessed Property

Block	Lot	Property Location	Property Class	Owner's Name	Acres	Project Area
6	4.03	55 WOLFS CORNER RD	3B	GUIDI, RICHARD & ROSEMARY	6.07	Whittingham
6	5.01	HIBLER RD	3B	GUIDI, RICHARD	143.29	Whittingham
6	5.05	154 HIBLER RD	3A	GUIDI, RICHARD & ROSEMARY	18.27	Whittingham
7	1.01	22 WINTERMUTE RD	3A	QARMOUT, BADER G & JENNIFER S	17.33	Whittingham
7	12	134 WINTERMUTE RD	3A	PELLEGRINO, DOUGLAS D & TARA L	11.49	Whittingham
7	13.01	WINTERMUTE RD	3B	BILLING, SHERYL L	155.48	Whittingham
7	14	88 WINTERMUTE RD	3A	RANLEY, JUSTIN S TRUSTEE	19.50	Whittingham
7	15	38 WINTERMUTE RD	3A	WILLIAMS, RICHARD P & DONNA M	17.71	Whittingham
7	15.06	WINTERMUTE RD	3A	RUTENBERG, MARTIN L	7.84	Whittingham
7	15.08	64 WINTERMUTE RD	3B	STRUBLE, CHRISTINE M	8.08	Whittingham
7	2	27 HIBLER RD	3B	MANY, ROBERT H & GEORGENE C ET AL	6.43	Whittingham
7	2.01	43 HIBLER RD	3B	DEOLD, GEORGE R & MAXINE	6.03	Whittingham
7	4.01	51 HIBLER RD	3A	ESENLOHR, ALLAN & FRANCES	6.86	Whittingham
7	4.02	HIBLER RD	3B	SODERSTROM, BENGT	13.16	Whittingham
7	4.03	81 HIBLER RD	3A	SODERSTROM, BENGT	14.79	Whittingham
7	4.04	HIBLER RD	3B	SODERSTROM, BENGT	11.87	Whittingham
7	5	HIBLER RD	3A	LOBO, PAUL A ET AL	150.06	Whittingham
7	7	SHOTWELL RD	3B	SHOTWELL PARTNERSHIP, LLC	1.25	Whittingham
7	9.01	24 HUNTS SCHOOL RD	3A	WARGO, JEANNE A	11.36	Whittingham
8	2.01	28 YELLOW FRAME RD	3A	BAGGOTT, CATHERINE	3.19	Whittingham
8	2.04	38 YELLOW FRAME RD	3B	JONES, ROBERT ET AL	5.58	Whittingham
8	4	WINTERMUTE RD	3B	STITES, PHILIP A	70.97	Whittingham
9	17	71 HENRY RD	3B	TURKO, JUDITH	5.25	Whittingham
9	3	42 HIBLER RD	3B	STREITER, RICHARD	8.03	Whittingham
9	4.01	81 HENRY RD	3A	JUDITH TURKO CASTLES TRUST	21.64	Whittingham
9	5	67-69 HENRY RD	3A	LUCKEY, JAMES T	82.71	Whittingham
113	3	31 KENNEDY RD	3B	FREEBORN, LARRY & CAROL	77.76	
12	11	23 HEDDEN RD	3B	KUHL, PHILLIP & BELINDA	17.30	
12	11.01	HEDDEN RD	3B	POTTEN, KEITH J	9.42	
12	12	HAMILTON RD	3A	KAERCHER, JAMES G & MORGAN, JANENE	17.55	
12	12.01	HAMILTON RD	3B	MORGAN, JANENE	52.58	
15	3	MAPLE LANE RD	3B	FREEBORN, LARRY & CAROL	17.57	
16	21.02	50 KENNEDY RD	3B	CHURCH, KENNETH & TASOULAS, EVELYN	6.61	
18.01	14	PEQUEST RD	3B	SIDOTI, MISTY V	21.75	
18.01	17	161 PEQUEST RD	3A	MELILLO, DARYL & MISTY	10.24	
18.01	19	187 PEQUEST RD	3B	ENGLEHART, SHAWN	8.59	

Farm Assessed Property

Block	Lot	Property Location	Property Class	Owner's Name	Acres	Project Area
19	15	93 AIRPORT RD	3B	TOWNSHIP OF GREEN	91.27	
24	1	AIRPORT RD	3B	MOONEY, C RAYMOND	11.23	
26	1.01	OFF BRIGHTON AVE	3B	SUSSEX PROPERTIES, C/O WISS & CO	0.88	
31	1	120 AIRPORT RD	3A	AIRPORT ROAD LLC	26.98	
31	1.01	134 AIRPORT RD	3B	JMM REALTY HOLDINGS LLC	22.57	
33	1	DECKER POND RD	3B	ESTELL, BRUCE J ET AL	43.80	
33	2	AIRPORT RD	3A	AIRPORT ROAD LLC	56.28	
33	4	50 AIRPORT RD	3A	VIERSMA, ROBERT & THERESA L	54.42	
81	26	111 MACKERLEY RD	3A	SMITH, MARIAN C	7.60	
				TOTAL:	5,522.18	