

DECEMBER 2009

# FARMLAND PRESERVATION PLAN

*for the  
County of*

# CUMBERLAND

NEW JERSEY



prepared by:

DELAWARE VALLEY  
**dvrpc**  
REGIONAL  
PLANNING COMMISSION

for:

The Cumberland  
County Agriculture  
Development Board



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*Hay bales on a Cumberland County farm*





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*Photo Courtesy of Linda Pisarski*

# CUMBERLAND COUNTY FARMLAND PRESERVATION PLAN

## EXECUTIVE SUMMARY

The Cumberland County Farmland Preservation Plan addresses the ways in which Cumberland County will increase protection and preservation of agricultural resources and businesses in the community. The document conforms to guidelines of the State Agricultural Development Committee (SADC) for county Farmland Preservation Plans. It includes the required plan components and maps, along with information about farmland preservation in the county, the farming industry in the county, and various actions that the county will take to enhance and support the local agricultural industry.

Cumberland County is located in southern New Jersey and is bordered by Salem County to the northwest, Gloucester County to the north, Atlantic County to the northeast, Cape May County to the southeast, and the Delaware Bay to the south. The county is composed of 14 municipalities, including three cities, one borough, and ten townships. The United States Census Bureau estimates that the population of Cumberland County was 155,544 in 2007, a 6 percent increase from its 2000 population of 146,438. With few major roads other than the limited access highway Route 55, it is one of the most remote and rural counties in New Jersey. In fact, the most recent land cover data from 2002 reveals that only 12 percent of the county is characterized as urban, or developed. In particular, much of Cumberland County's coastal region has been generally untouched by development since its original colonial settlement.

Agriculture has long been an important cultural aspect of Cumberland County and has attracted people to the region from around the world. This has made Cumberland County one of the most ethnically diverse rural settings in the United States. In the 1870s, Charles Landis, the founder of Vineland, discovered that the soil was ideal for growing grapes. He started the first Italian newspaper in the United States, *The Echo of Italy*, and attracted large numbers of Italians to move to the new city to start vineyards. In the 1880s, many Jews facing persecution in Russia came to America and formed agricultural colonies across the country, many of which were in New Jersey. One such Jewish colony called Alliance was located in Pittsgrove Township, Salem County, on the border of Cumberland County and was home to 500 settlers at its height. During World War II, the Seabrook Farms plant in Upper Deerfield responded to wartime labor shortages by recruiting Japanese Americans living in internment camps. Today, jobs in the agricultural industry draw many workers from Mexico and Central America to Cumberland County. The county's cultural and ethnic diversity is evident in data from the 2006 American Community Survey of the United States Census, which estimated that 23 percent of Cumberland County is Hispanic or Latino, higher than the national average of 15 percent.

According to the Cumberland County Planning Department, over 5,000 people are employed in the county's \$2 billion agricultural industry. Not only is agriculture the number one industry in the county, but the agricultural industry in Cumberland County is number one in the state. Cumberland County was ranked by the 2007 United States Census of Agriculture as New Jersey's highest grossing county with a market value of agricultural products sold totaling nearly \$157 million. This figure has increased substantially since that year. Cumberland County is the largest producer in the state of nursery and horticulture products, producing nearly \$100 million worth (wholesale) of plants annually. Cumberland County also has higher sales of vegetables than any other county in the state, totaling over \$40 million in 2007. Land cover data reveal that 22 percent of the county's land is used for agriculture.

Cumberland County's historically strong agricultural base gave rise to a growing food processing industry, which continues to enhance the county's economy. The recently expanded Food Innovation Center in Bridgeton is a nationally recognized incubator facility designed to allow food and value-added agricultural businesses to experiment and develop. According to the director of the center, "To create jobs in this region, a strong, viable food industry is critically needed, and the Food Innovation Center was developed as a catalyst for this growth."

Over half of all cropland in the county is dedicated to field crops and cover such as soybeans, barley, and wheat. Of the total cropland in the county, about a quarter is used to grow vegetables, nursery is grown on about 20 percent, and 4 percent is used to grow fruits and berries. Although nursery plants are grown on less land than field crops or vegetables, they are a high value crop and contribute significantly to the local economy. Many farms raise livestock as well, including many egg-laying chickens, cattle and calves, and hogs and pigs.

In recent years, Cumberland County has seen an increase in development pressure. Between 2000 and 2007, building permits were issued for a total of 3,811 units, three-fourths of which were in the cities of Bridgeton, Millville, and Vineland where sewer and water are available. The municipality with the fourth-highest number of building permits issued during this time period was Upper Deerfield, which also has areas of current and proposed sewer service but has substantial farmland as well. In addition to residential building permits, hundreds of site plan applications for commercial, industrial, and multi-family residential construction have been approved in Cumberland County within the past five years. Between 2003 and 2007, the Development Review Committee has approved 320 site plan applications with a total area of 6.5 million square feet. However, of the 67 site plans approved in 2007, nearly half (32) were in Vineland. Lastly, subdivision applications for the creation of nearly 5,000 new lots have been submitted to the county between 2003 and 2007.

Cumberland County is rich in unique natural resources including abundant farmland, the Delaware Bayshore, the Pinelands, and rivers such as the Cohansey and Maurice. The Delaware Bayshore in particular has international significance as a stopover for birds on their migration from South America to the Arctic. These migratory birds feed on the

eggs of countless horseshoe crabs that spawn on the shores of the Delaware Bay every spring, as the crabs have done for the past 350 to 500 million years. Numerous organizations and agencies are involved in protecting the Delaware Bayshore from development due to its global importance as a stopover on the Atlantic Flyway. There are also extensive efforts to restore the oyster industry of Delaware Bay that was a major economic force in Cumberland County until diseases and pests destroyed it in the 20<sup>th</sup> century.

The Cumberland County Farmland Preservation, Open Space, Parks, and Recreation Trust Fund Plan was established in 1996 as part of a comprehensive planning effort to coordinate public and private investments in land preservation. To date, 13,501 acres have been preserved, using the Trust Fund and State monies. This Farmland Preservation Plan is an extension of that comprehensive strategy. The Plan lays out various methods for protecting farmland, including an application to the State Agriculture Development Committee (SADC) for a Farmland Planning Incentive Grant (PIG). The balance of the Plan consists of information gathered from a wide variety of sources about programs, opportunities, and business services that assist farmers, enhance the farming industry, or are available to protect resources on farms. This is essentially a menu of options for use at the county and municipal levels, and provides substantial information for farmers.

Section Five of this Plan describes the strategic goals for the future of farmland preservation in Cumberland County. The Plan identifies fourteen Project Areas in Cumberland County, which are areas of reasonably contiguous farmland on high value soils. Within those project areas, there are a total of 457 target farm parcels covering 17,843 acres that have the highest priority for preservation. This section also outlines the potential ten-year funding cost to protect a high percentage of these lands and illustrates how the cost would be shared between the state and county. This section also describes the philosophy of farmland preservation that the County Agricultural Development Board has used in its program and lists various options for funding Cumberland County's share in the future.

As the county with the highest agricultural market value in the state, Cumberland County is distinguished by its rural working landscapes. Many farmers in Cumberland County operate highly successful and productive businesses that contribute to the area's economy and quality of life. Maintaining the county's focus on farmland protection and industry needs is critical to continued success, especially in the face of the development pressure of recent years. This Plan is a first step in positioning Cumberland County to take advantage of farmland preservation options and to explore coming trends that will protect and enhance agriculture generally. Both farming and non-farming residents place great value on the open lands of the community. Protecting the rural quality of the county, while conducting thoughtful planning for the future, will assure that Cumberland County's farming heritage and quality of life is sustained.



# CUMBERLAND COUNTY FARMLAND PRESERVATION PLAN

## 1.0 CUMBERLAND COUNTY’S AGRICULTURAL LAND BASE

### 1.1 OVERVIEW

Farm acreage and farming in Cumberland County and throughout New Jersey changed dramatically during the second half of the 20<sup>th</sup> century. About half of the agricultural land in the state was lost between 1954 and 1997. Most of that decline occurred between 1954 and 1974 when an average of 35,192 acres of farmland were lost every year. The rate of decline slowed after 1974 and from then until 2002, farmland in the state declined by an average of 5,561 acres per year.

Although Cumberland County certainly has far less farmland than it did in 1950, the county did not experience a dramatic loss in farmland within the past twenty years, unlike the rest of New Jersey. As shown below in *Table 1: Cumberland County Farms*, the number of farms, amount of farmland, and average farm size were about the same in 2007 as they were in 1987. The number of farms and amount of farmland decreased between 1987 and 1997, but increased between 1997 and 2007. However, the loss of farmland since 1950 has certainly been dramatic. In 2007, Cumberland County had roughly a quarter of the number of farms and slightly more than half of the farmland it had in 1950. According to the 2007 Census of Agriculture, there were 615 farms in Cumberland County covering over 69,000 acres. Farmland assessment data from 2007, however, puts the total farm acres much higher at 92,474 acres, of which 85,703 acres were for agricultural use and 6,771 acres were for non-agricultural use. Farmland assessment data includes many farms not accounted for by the USDA Census of Agriculture, which only includes farms that produce \$1,000 or more of agricultural products per year.

*Table 1: Cumberland County Farms*

	2007	2002	1997	1992	1987	1950
<b>Number of Farms</b>	615	616	573	609	612	2,373
<b>Land in farms (acres)</b>	69,489	71,097	66,288	68,627	72,406	135,907
<b>Average farm size (acres)</b>	113	115	116	113	118	57
<b>Median farm size (acres)</b>	27	30	30	(N)	(N)	(N)
<i>(N) Not available</i>						

*Source: USDA Census of Agriculture, 1950, 1987, 1992, 1997, 2002, 2007*



Over the past few decades, farms in the United States have generally decreased in number but increased in size. This has held true in Cumberland County, where the average farm size nearly doubled between 1950 and 2007, from 57 acres to 113 acres. Of the 615 farms in Cumberland County in 2007, 38percent (234) were 50 acres or more in size compared with only 20 percent (303) in 1950. Conversely, the number of small farms (less than 10 acres) has shrunk from 36 percent (536) of all farms in 1950 to 22 percent (137) in 2007.

**Table 2: Size of Cumberland County Farms**

	2007	2002	1997	1992	1987	1950
<b>1 to 9 acres</b>	137	124	123	111	116	536
<b>10 to 49 acres</b>	244	263	231	245	219	661
<b>50 to 179 acres</b>	145	138	132	155	176	274
<b>180 to 499 acres</b>	54	58	60	68	67	29
<b>500 to 999 acres</b>	21	20	15	19	24	(N)
<b>1,000 acres or more</b>	14	13	12	11	10	(N)
* 1950: 50-199 acres						
**1950: Over 200 acres						

Source: USDA Census of Agriculture, 1950, 1987, 1992, 1997, 2002, 2007

Based on land cover data from the NJDEP, agricultural land is located in every township of Cumberland County, and particularly in the western portion of the county as shown in **Map 3: NJDEP Agricultural Land Cover 2002**. See also **Maps 1 and 2: Cumberland County Aerial Photo (2002)** and **Cumberland County Land Cover (2002)**.

According to the 2007 Census of Agriculture, Cumberland County has over 69,000 acres of farms, comprising about 22 percent of the county’s total area. There are over 52,000 acres of cropland, or three-fourths of the total farm acreage in the county. There are also 235 acres of land dedicated to equine use in 2007 according to state farmland assessment data. This figure may well be an undercount of total farm acreage that has equine use, including boarding and training of horses.

The Census of Agriculture reports that the average age of farmers in Cumberland County was 56 in 2007, three years higher than in 2002. Of the 907 total farm operators in 2007, 293 (32%) were female. About 53 percent (324) of the 615 principal operators in Cumberland County consider farming to be their primary occupation, while the rest have a primary employment other than farming. Individuals or families, rather than entities such as partnerships or corporations, owned 83 percent (513) of all farms in Cumberland County in 2007.

**Table 3: Cumberland County Farmland Acreage 1987-2007**

Category			2007	2002	1997	1992	1987
Total Cropland		farms	564	556	554	592	584
		acres	52,330	54,430	50,928	56,407	56,527
Harvested Cropland		farms	537	528	524	565	560
		acres	47,059	47,678	44,932	47,948	48,934
Cropland used only for pasture or grazing		farms	70	100	112	124	100
		acres	1,711	1,334	1,849	2,263	2,345
Other Cropland		farms	145	160	147	176	186
		acres	3,560	5,418	4,147	6,196	5,248
Total Woodland		farms	238	249	218	245	225
		acres	7,957	10,073	8,340	6,640	8,055
Woodland pastured		farms	43	54	23	46	34
		acres	1,123	1,625	1,452	1,375	981
Woodland not pastured		farms	208	211	200	220	202
		acres	6,834	8,448	6,888	5,265	7,074
Pastureland and rangeland (other than cropland and woodland)		farms	148	121	43	44	59
		acres	2,025	2,553	1,655	1,184	2,410

Source: USDA Census of Agriculture, 2007, 2002, 1997, 1992, 1987

## 1.2 SOILS

Cumberland County’s high quality soils and mild climate make growing conditions very favorable. In Cumberland County, there are 28 soil series types and 55 variations within those types as identified by the Natural Resources Conservation Service (NRCS). The vast majority of soils in the county (86%) are considered important agricultural soils. Over 131,000 acres in the county (41%) are classed as prime farmlands. Prime farmlands are lands that have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. They can sustain high yields of crops when managed with correct farming methods. Prime farmlands are not excessively erodible or saturated with water for long periods of time and do not flood frequently.

Another 17 percent of Cumberland County’s soils are classed as farmland of statewide importance. Statewide importance soils are close in quality to prime farmland and can sustain high yields of crops when correctly managed with favorable conditions. Many of the soils bordering the Delaware Bay and other waterways in Cumberland County are ranked as farmland of unique importance, which make up 28 percent of soils in the county. Unique importance soils are those that can support the production of high value regional or specialty crops such as horticultural crops or indigenous foods.

These agricultural designations of soils within Cumberland County are shown on **Map 5: Soil Agricultural Classifications**. All soil types in the county are listed in *Table 5* and are shown graphically on **Map 4: Soils 2004**. Common soil series include Aura, Downer, and Hammonton.

**Table 4: Classification of Cumberland County's Soils**

Classification	Area (Acres)	% of municipality
All areas are prime farmland	131,085.16	41%
Farmland of statewide importance	54,162.75	17%
Farmland of unique importance	90,324.07	28%
Not prime farmland	45,016.44	14%
<b>Total</b>	<b>320,588.42</b>	<b>100%</b>

Source: USDA Natural Resource Conservation Service, 2004

**Table 5: Cumberland County Soils**

Soil Type	Description	Farm Class	Area (Acres)
AptAv	Appoquinimink-Transquaking-Mispillion complex, 0 to 1 percent slopes, very frequent	Farmland of unique importance	14,103.83
AtsAr	Atsion sand, 0 to 2 percent slopes, rarely flooded	Farmland of unique importance	2,545.37
AucB	Aura loamy sand, 0 to 5 percent slopes	All areas are prime farmland	4,885.19
AugA	Aura sandy loam, 0 to 2 percent slopes	All areas are prime farmland	11,228.40
AugB	Aura sandy loam, 2 to 5 percent slopes	All areas are prime farmland	13,883.57
AuhB	Aura gravelly sandy loam, 2 to 5 percent slopes	All areas are prime farmland	8,340.51
AvuB	Aura-Urban land complex, 0 to 5 percent slopes	Not prime farmland	261.45
BEXAS	Berryland and Mullica soils, 0 to 2 percent slopes, occasionally flooded	Farmland of unique importance	23,984.74
BrvAv	Broadkill silt loam, 0 to 1 percent slopes, very frequently flooded	Farmland of unique importance	2,591.02
ChsAt	Chicone silt loam, 0 to 1 percent slopes, frequently flooded	Not prime farmland	11.23
ChtA	Chillum silt loam, 0 to 2 percent slopes	All areas are prime farmland	2,001.77
ChtB	Chillum silt loam, 2 to 5 percent slopes	All areas are prime farmland	7,442.12
DocB	Downer loamy sand, 0 to 5 percent slopes	Farmland of statewide importance	14,535.67
DocC	Downer loamy sand, 5 to 10 percent slopes	Farmland of statewide importance	4,818.63
DoeA	Downer sandy loam, 0 to 2 percent slopes	All areas are prime farmland	9,152.88
DoeB	Downer sandy loam, 2 to 5 percent slopes	All areas are prime farmland	8,680.78
DouB	Downer-Urban land complex, 0 to 5 percent slopes	Not prime farmland	2,394.91
EveB	Evesboro sand, 0 to 5 percent slopes	Not prime farmland	11,058.66
EveC	Evesboro sand, 5 to 10 percent slopes	Not prime farmland	2,063.42
EveD	Evesboro sand, 10 to 15 percent slopes	Not prime farmland	411.52
EvuB	Evesboro-Urban land complex 0 to 5 percent slopes	Not prime farmland	1,082.16
FamA	Fallsington sandy loam, 0 to 2 percent slopes	Farmland of statewide importance	7,159.40
FodB	Fort Mott loamy sand, 0 to 5 percent slopes	Farmland of statewide importance	4,379.07
GamB	Galloway loamy sand, 0 to 5 percent slopes	Farmland of statewide importance	6,666.93
HbmB	Hammonton loamy sand, 0 to 5 percent slopes	Farmland of statewide importance	10,403.25
HboA	Hammonton sandy loam, 0 to 2 percent slopes	All areas are prime farmland	15,323.52
HboB	Hammonton sandy loam, 2 to 5 percent slopes	All areas are prime farmland	1,840.76

### **1.3 WATER RESOURCES IN CUMBERLAND COUNTY**

Some farmers rely solely on precipitation to nourish crops during the growing season. Others depend also on either surface water or groundwater to meet their water needs. Based on historic data from 1895 to 2007, the mean yearly precipitation in the state is 45 inches per year, and stations in Cumberland County are within a few inches of that amount. Through a number of monitoring networks, climate in Cumberland County is measured at six stations: Upper Deerfield, Millville (Municipal Airport), Bivalve, Seabrook Farms, and two stations in Maurice Township. Statewide, the greatest amount of precipitation occurs during July and August, while February is the driest month in the state.

Cumberland County is entirely within Watershed Management Area 17 (WMA 17), which includes Stow Creek, the Cohansey River, Maurice River, Manumuskin River, and Salem River, as well as a number of smaller creeks and runs. Cumberland County lies entirely within the Kirkwood-Cohansey aquifer system, which is a large unconfined aquifer composed of clay, sand, and quartz of fine to coarse grain size. This aquifer is recharged directly by precipitation, since there are no confining layers above the Kirkwood-Cohansey. Depths range from 20 to 350 feet moving from the western side of South Jersey towards the southeast and the Atlantic coast. The water is of good quality and is utilized by Cumberland County residents for their drinking water. Farmers in Cumberland County who irrigate land from wells are tapping the Kirkwood-Cohansey aquifer for their irrigation water.

#### ***Irrigation***

There are various ways to irrigate a farm. A farm pond may be dug to capture surface water from the surrounding area. The pond may also tap groundwater if the water table is close enough to the surface. Another method is to withdraw water from a stream, especially for irrigating land near the stream. Drilling one or more wells and pumping from groundwater is a more costly, but frequently used, method. Irrigation methods are also variable, with sprinklers distributing water in a variety of ways. Drip irrigation relies on watering the subsurface and is the most efficient method of irrigation in terms of water use.

According to Albert Jarrett of Penn State University, irrigating cropland by sprinkler requires supply rates as high as 10 gallons per minute (gpm) per acre. Drip irrigation requires 3 to 7 gpm per acre. Farm ponds can lose 40 percent to 60 percent in volume through evaporation, and so a farm pond requires roughly four acres of upland watershed to supply one acre-foot of usable water per year.

Water Allocation rules of the NJ DEP require that farmers must obtain a water use registration or certification to withdraw surface or groundwater in large quantities for agricultural, horticultural, or aquaculture use. If an applicant has the capacity to divert and/or withdraw 100,000 gallons per day (equivalent hydraulically to 70 gallons per minute) even if he/she does not need to do so, a water use registration is required. If that amount or greater is actually proposed to be withdrawn, the applicant must obtain water

Soil Type	Description	Farm Class	Area (Acres)
HbrB	Hammonton-Urban land complex, 0 to 5 percent slopes	Not prime farmland	735.26
LakB	Lakehurst sand, 0 to 5 percent slopes	Not prime farmland	2,370.62
LasB	Lakewood sand, 0 to 5 percent slopes	Not prime farmland	3,039.63
MakAt	Manahawkin muck, 0 to 2 percent slopes, frequently flooded	Farmland of unique importance	16,468.96
MbrA	Matapeake silt loam, 0 to 2 percent slopes	All areas are prime farmland	2,939.45
MbrB	Matapeake silt loam, 2 to 5 percent slopes	All areas are prime farmland	6,911.95
MbrC	Matapeake silt loam, 5 to 10 percent slopes	Farmland of statewide importance	2,168.65
MbuA	Mattapex silt loam, 0 to 2 percent slopes	All areas are prime farmland	3,906.93
MbuB	Mattapex silt loam, 2 to 5 percent slopes	All areas are prime farmland	2,404.09
MmtAv	Mispillion-Transquaking-Appoquinimink complex, 0 to 1 percent slopes, very frequent	Farmland of unique importance	4,251.12
OTKA	Othello and Fallsington soils, 0 to 2 percent slopes	Farmland of statewide importance	48.68
OTMA	Othello, Fallsington, and Trussum soils, 0 to 2 percent slopes	Farmland of statewide importance	22.36
OthA	Othello silt loam, 0 to 2 percent slopes	Farmland of statewide importance	1,483.35
PHG	Pits, sand, and gravel	Not prime farmland	5,472.29
PdwAv	Pawcatuck-Transquaking complex, 0 to 1 percent slopes, very frequently flooded	Farmland of unique importance	6,036.84
PstAt	Psammments, sulfidic substratum, 0 to 3 percent slopes, frequently flooded	Not prime farmland	32.42
PsvAr	Psammments, wet substratum, 0 to 3 percent slopes, rarely flooded	Not prime farmland	177.04
SacA	Sassafras sandy loam, 0 to 2 percent slopes	All areas are prime farmland	10,179.30
SacB	Sassafras sandy loam, 2 to 5 percent slopes	All areas are prime farmland	7,372.51
SacC	Sassafras sandy loam, 5 to 10 percent slopes	Farmland of statewide importance	1,272.25
SadA	Sassafras gravelly sandy loam, 0 to 2 percent slopes	All areas are prime farmland	1,159.13
SadB	Sassafras gravelly sandy loam, 2 to 5 percent slopes	All areas are prime farmland	4,190.65
SadC	Sassafras gravelly sandy loam, 5 to 10 percent slopes	Farmland of statewide importance	1,204.53
SapB	Sassafras-Urban land complex, 0 to 5 percent slopes	Not prime farmland	669.91
TrkAv	Transquaking mucky peat, 0 to 1 percent slopes, very frequently flooded	Farmland of unique importance	20,342.18
UR	Urban land	Not prime farmland	847.50
UdrB	Udorthents, refuse substratum, 0 to 8 percent slopes	Not prime farmland	15.81
WATER	Water	Not prime farmland	13,599.04
WoeA	Woodstown sandy loam, 0 to 2 percent slopes	All areas are prime farmland	7,706.78
WoeB	Woodstown sandy loam, 2 to 5 percent slopes	All areas are prime farmland	1,534.88
WooB	Woodstown-Urban land complex, 0 to 5 percent slopes	Not prime farmland	773.57
<b>Total</b>			<b>320,588.42</b>

Source: USDA Natural Resource Conservation Service, 2004

use certification, which lasts for five years. The forms for applying for these usages are submitted to the Rutgers Cooperative Agricultural Extension Agent in the County Extension office and are forwarded to the NJDEP Bureau of Water Allocation. Annual reporting of usage is also a requirement. The program includes the right to construct, repair, or reconstruct dams or other structures, in addition to the right to divert water for irrigation, frost protection, harvesting and other agriculturally-related purposes.

According to the 2007 Census of Agriculture, 232 farms in Cumberland County (38% of all county farms), irrigated a total of 18,357 acres of farmland (26% of all county farmland). In recent years, more and more Cumberland County farming operations have turned to growing very water-intensive crops such as sod and nursery products, increasing the demand for water in the county. It is becoming more difficult to obtain permissions for water withdrawals so it is important to keep current certifications active and not allow them to lapse. Competition from other land uses and strict environmental regulations are leading to reduced water diversions for agriculture, which is a source of concern to farmers. As seen in **Appendix A: Agricultural Water Certifications and Registrations in Cumberland County**, there are 198 currently effective agricultural certifications and registrations in Cumberland County.



*A center pivot irrigation rig - a type of overhead irrigation.*



**Table 6: Market Value of Agricultural Products Sold in Cumberland County, 1987-2007**

	2007	2002	1997	1992	1987
Market value of agricultural products sold, total sales (\$1,000)	156,939	122,672	94,152	72,993	58,235
Market value of agricultural products sold, total sales (\$1,000) - in 2007 \$, adjusted for inflation	156,939	140,688	121,205	106,620	104,978
Market value of agricultural products sold, total sales, average per farm (dollars)	255,186	199,143	164,315	119,857	95,155
Market value of agricultural products sold, total sales, average per farm (dollars) - in 2007 \$, adjusted for inflation	255,186	228,390	211,528	175,074	171,532

Source: USDA Census of Agriculture, 1987, 1992, 1997, 2002, 2007

## 2.2 CROP AND PRODUCTION TRENDS

The abundance of prime and high quality soil makes Cumberland County ideal for growing crops. According to farmland assessment data from tax year 2007, field crops occupy the greatest amount of acreage in the county by far, followed by vegetables, nursery and sod, and fruit and berries, as seen in the table below. Over the past two decades, the amount of land in Cumberland County used to grow vegetables, field crops, and fruits and berries has decreased, while the amount of land dedicated to nursery and sod has nearly quadrupled in size.

**Table 7: Acres of Crop Types in Cumberland County, 1984 and 2007**

Crop Type	1984	1991	2001	2007	% change 1984-2007
Total field crops	28,091	31,969	29,602	26,473	-6%
Total vegetables	19,180	17,851	13,447	12,252	-36%
Total nursery & sod	2,501	5,686	7,997	12,024	381%
Total fruit and berries	2,357	2,294	2,303	1,998	-15%

Source: Farmland Assessment, 1984, 1991, 2001, 2007

The following chart shows the top ten crops in Cumberland County in 2007 and their corresponding acreages in 1984, 1991, and 2001 according to farmland assessment records. The number one crop in the county in 2007, soybeans, covered nearly 10,850 acres. However, this was only about three-fourths its 1984 total of 14,097 acres. Other major field crops in 2007 include wheat, corn for grain, other hay, and alfalfa hay. Trees and shrubs are the second most common crop, covering 9,738 acres. This is nearly six times its 1984 total of 1,413 acres. Other or mixed vegetables are the most common fruit or vegetable crop and are grown on 4,149 acres, followed by peaches, tomatoes, and lettuce.

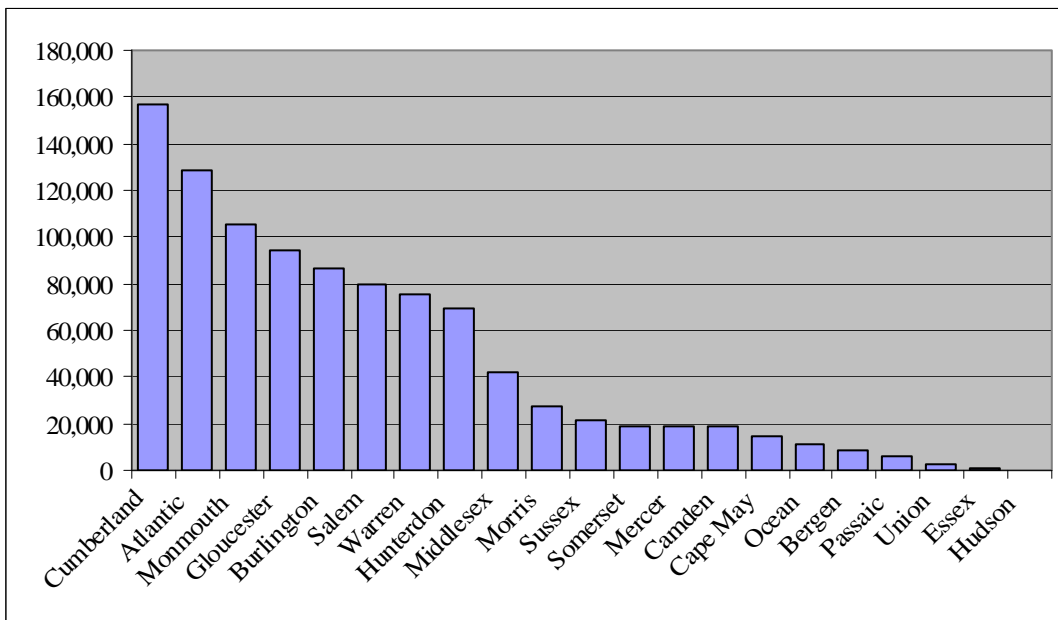


## 2.0 AGRICULTURAL INDUSTRY IN THE REGION

### 2.1 MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD

According to the 2007 Census of Agriculture, Cumberland is first among New Jersey counties in the value of its agricultural products, with a total sales value of nearly \$157 million. Cumberland County is significantly higher than all other counties in New Jersey in terms of its agricultural market value, as seen below in *Chart 1: Agricultural Market Value (\$1,000) in New Jersey, 2007*. Cumberland County had the highest total sales in the state in two commodity groups: vegetables (including melons, potatoes, and sweet potatoes) and nursery and greenhouse products (including floriculture and sod). According to the Cumberland County Agricultural Development Board, farming and related businesses contributed \$2 billion in sales, payroll, and expenditures to the county's economy in 2002, or one-third of the gross county product.

*Figure 1: Agricultural Market Value (\$1,000) in New Jersey, 2007*



Source: USDA Census of Agriculture, 2007

As seen in the following table, both the market value of agricultural products sold and the average market value per farm have steadily increased over the last twenty years, outpacing the rate of inflation.

primary use of the number two crop, trees and shrubs, is landscaping rather than food for human consumption.

### **2.3 AGRICULTURAL SUPPORT SERVICES AND RELATED BUSINESSES**

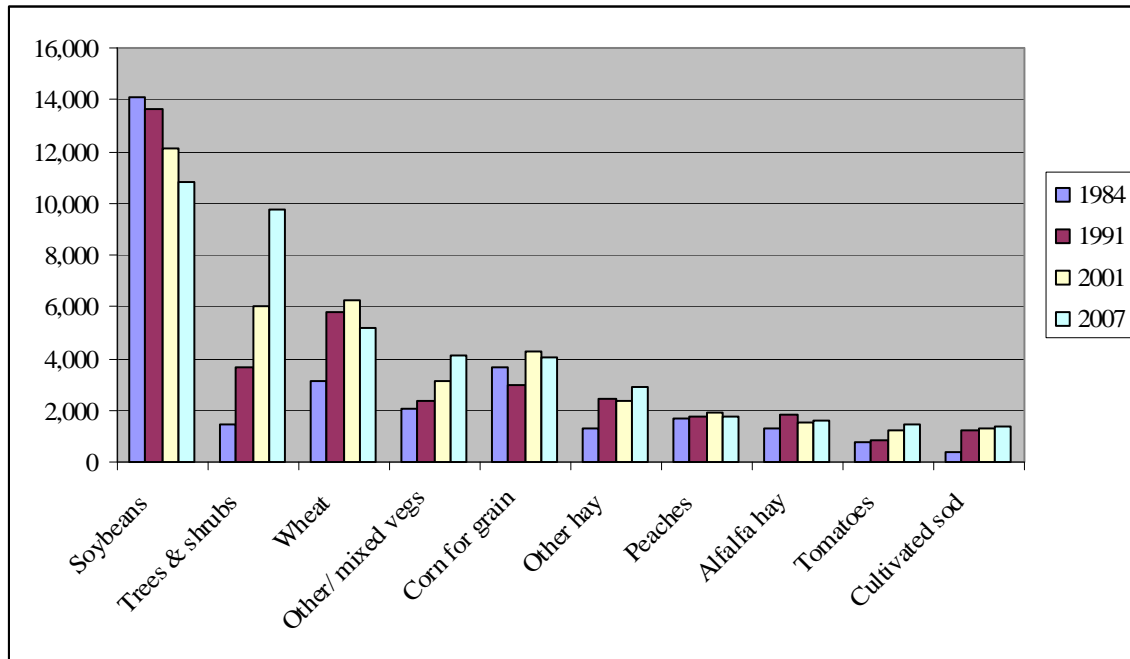
Cumberland County farms are served by many businesses on both the input and output side of the agricultural and food industry. On the input side, there are numerous businesses in the Cumberland County region that offer agricultural supplies and services such as farming equipment and supplies, seeds, fertilizer, animal feed, and irrigation systems. Many of these agricultural support businesses are quite large in scale, such as Lee Rain, the largest irrigation supplier on the East Coast.

On the output side, local farms are well-served by food processors and distributors, produce and livestock auctions, produce wholesalers, and cold storage warehouses in addition to local roadside and farmers markets. For example, the Vineland Produce Auction is one of the largest fruit and vegetable auctions in the country. Additionally, South Jersey has one of the greatest concentrations of cold storage warehouses on the East Coast due to its strategic location within the metropolitan Northeast corridor. Cumberland County's vast agricultural base, rail and highway accessibility, and proximity to major cities are major factors for attracting and maintaining agricultural and food businesses. Highway accessibility in particular is extremely important since goods trucked out of Cumberland County can easily reach cities across the country through the interstate network. The agricultural land base is also a key factor in attracting food and value-added agricultural businesses, many of which use produce or meat from local farmers.

There is a long and significant history of value-added agricultural products and general food processing in Cumberland County. The processed fruit juice industry began in Vineland in 1869 when Dr. Thomas Branwell Welch began making nonalcoholic wine for services at his local church. After being first introduced by Dr. Welch's son at the Chicago World's Fair of 1893, Welch's grape juice quickly gained national popularity. Since 1912, Cumberland County has been home to the Seabrook Farms industry, which operated on an international level and occupied 19,000 acres at its height. Seabrook Farms recruited cultivators and workers from many parts of the world to Cumberland County, including large numbers of Japanese-American internees during World War II. Cumberland County continues to be home to many food processing companies with national or international distribution, including Manischewitz, Progresso, and Whitewave. According to the United States Census Bureau's 2002 (most recent) Economic Census, food manufacturing is the most prominent industry in the county with a value of shipments totaling over \$900 million. In 2002, the food manufacturing industry in Cumberland County employed nearly 2,500 people at 33 establishments.

See also **Appendix C: Agricultural Support and Service Businesses in the Cumberland County Region** and **Appendix D: Agricultural Markets and Sales in the Cumberland County Region**.

**Figure 2: Dominant Crops in Cumberland County, 1984, 1991, 2001, 2007**



Source: Farmland Assessment, 1984, 1991, 2001, 2007

According to the Census of Agriculture, corn for grain or seed more than doubled in acreage during the past two decades, increasing from 2,300 acres in 1987 to 4,673 acres in 2002. The amount of land in vegetables harvested for sale decreased 34 percent, from 19,963 acres in 1987 to 13,151 acres in 2002. Although vegetables as a whole decreased in acreage during this period, some specific vegetables increased in acreage, including collards, cucumbers, cantaloupes, kale, pumpkins, squash, tomatoes, and sweet corn. In particular, sweet corn more than quadrupled in acreage from 404 acres in 1987 to 1,929 acres in 2002, nearing its 1950 total of 2,254 acres. Some specific vegetables that decreased in acreage during this time period include asparagus, green lima beans, snap beans, beets, cabbage, eggplant, green peas, peppers (hot and sweet), and spinach.

Most livestock inventories in Cumberland County also decreased between 1987 and 2002. The numbers of cattle and calves, hogs and pigs, and layers and pullets (egg-laying chickens) all decreased during this time period. The number of layers and pullets plummeted from 210,110 in 1987 to only 1,801 in 2002 according to the Census of Agriculture, nowhere near the county’s 1950 inventory of 1.3 million layers and pullets. However, state farmland assessment data from 2007 shows an inventory of over 41,000 egg-laying chickens.

Crop data from both the Census of Agriculture and farmland assessment data reveal dramatic changes in Cumberland County farms over the past two decades. There is less livestock and less county farmland used to grow produce, while more land has been dedicated to nursery products, grain, and potential sources of energy. Although the number one crop in the county, soybeans, can be intended for human consumption, it is primarily used for animal feed, in addition to its potential use in biofuel. Similarly, the

## 3.0 LAND USE PLANNING

### 3.1 STATE AND REGIONAL PLANNING

#### 3.1.1 New Jersey Development and Redevelopment Plan

The *New Jersey State Development and Redevelopment Plan* (the State Plan) was created to accommodate a growing population while protecting the state's diversity, natural features, agricultural production, economic interests, and quality of life. The State Plan is a policy guide to be used by state, regional, and local agencies to increase the consistency of planning efforts. Municipal, county, and regional plans will be reviewed by the State Planning Commission to evaluate consistency with the State Plan. If the Commission finds a plan to be consistent, then the plan will be eligible for priority assistance and incentives. There is a 10-step Plan Endorsement Process that encourages municipalities to engage in cooperative regional planning.

The State Plan has designated planning areas that share common development and environmental conditions and that provide a balance between growth and conservation. The seven planning areas (excluding water) delineated in the State Plan are, in decreasing scale of development: Metropolitan (PA1), Suburban (PA2), Fringe (PA3), Rural (PA4), Rural Environmentally Sensitive (PA4B), Environmentally Sensitive (PA5), and Parks or Natural Areas (Parks). According to the State Plan, Cumberland County contains all seven planning areas, as well as four Pinelands Management Areas discussed in **3.2.1 Pinelands**.

Within Cumberland County, Metropolitan Planning Areas (PA1) are located within and around Bridgeton, Millville, and Vineland. The State Plan proposes that growth be promoted in Centers and appropriate areas in the Metropolitan Planning Area. Where agriculture in the PA1 area is appropriate, the State Plan recommends "intensive agricultural production, packaging and processing, value-added operations, marketing, exporting and other shipping. Provide opportunities for farms, greenhouses, farmers markets and community gardens." The Metropolitan Planning Areas in Cumberland County are surrounded by Suburban areas (PA2), as well as a small Fringe Planning Area (PA3) located in Upper Deerfield. Regarding agriculture in Suburban and Fringe Planning Areas, the State Plan recommends strategic retention of productive farmland and the promotion of "more intensive, new-crop agricultural enterprises [to] meet the needs of agricultural industry for intensive packaging, processing, value-added operations, marketing, exporting, and other shipping through development and redevelopment."

Park or Natural Areas (Parks) correspond with preserved Wildlife Management Areas (WMA), such as the large Millville WMA covering over 12,000 acres. Rural Planning Areas (PA4) and Rural Environmentally Sensitive Planning Areas (PA4B) are mostly in the western part of the county. Within the two Rural Planning Areas, the State Plan intends to preserve large contiguous areas of farmland and other lands and to restrict sewer and public water service to Centers. Environmentally Sensitive Planning Areas (PA5) are located mostly in wetlands areas near the Delaware Bay and along the Cohansey and

Maurice Rivers. In both Environmentally Sensitive Planning Areas PA4B and PA5, the State Plan recommends the promotion of “agricultural practices that prevent or minimize conflicts with sensitive environmental resources.” See **Map 6: Preliminary Policy Map of State Development and Redevelopment Plan**, which depicts these planning areas.

In addition to Planning Areas, the State Plan has designated Centers where growth should be concentrated. Within each center, there are three components: Center Boundaries (or edges), Cores, and Neighborhoods. These Centers are existing areas of development and serve as hubs for commerce, government, culture, residences, and community life. In more rural areas, sewer service is only to be extended to designated centers. The five types of Centers in order of decreasing scale are Urban Centers, Regional Centers, Towns, Villages, and Hamlets. There are four designated Centers in Cumberland County, as seen below in **Table 8**. There are also five Certified Pinelands Villages and State Plan Centers, as listed in **Table 9**. There are an additional seven Centers which have passed their expiration date, as shown in **Table 10**.

**Table 8: State Plan Designated Centers in Cumberland County**

Designated Centers				
Center	Municipality	Type	Start	Expire
Bridgeton	Bridgeton City	Regional Center	12/5/2001	12/31/2010
Cedarville	Lawrence Twp	Town	6/18/2003	6/18/2009
Mauricetown-Haleyville	Commercial Twp	Village	6/19/2002	12/31/2010
Millville-Vineland	Millville City, Vineland City	Regional Center	5/20/1994	12/31/2010

Source: New Jersey State Planning Commission, 2009

**Table 9: State Plan Certified Pinelands Villages and Centers in Cumberland County**

Center	Municipality	Type
Cumberland-Hesstown	Maurice River Twp	Hamlet
Delmont	Maurice River Twp	Village
Dorchester-Leesburg	Maurice River Twp	Hamlet
Milmay *	Maurice River Twp	Hamlet
Port Elizabeth	Maurice River Twp	Village

\* Milmay is located in Maurice River Township (Cumberland) and Buena Vista Township (Atlantic)

Source: New Jersey State Planning Commission, 2009

**Table 10: State Plan Expired Centers in Cumberland County**

Center	Municipality	Type	Start	Expire
Delmont	Delmont	Village	2/2/2000	1/7/2008
Dorchester-Leesburg	Dorchester-Leesburg	Village	2/2/2000	1/7/2008
Heislerville	Heislerville	Village	2/2/2000	1/7/2008
Laurel Lake	Laurel Lake	Village	6/19/2002	6/19/2008
Mauricetown Station	Mauricetown Station	Hamlet	2/2/2000	1/7/2008
Port Norris	Port Norris	Village	6/19/2002	6/19/2008
Port Elizabeth-Bricksboro	Port Elizabeth-Bricksboro	Village	2/2/2000	1/7/2008

Source: New Jersey State Planning Commission, 2009

According to the State Plan, areas outside Centers are called “Environs.” Environs include large continuous areas of open space, forests, and farmland. These areas are typically found in the Fringe, Rural, and Environmentally Sensitive Planning Areas. In order to protect Environs from development, a number of actions can be taken, including density transfer to Centers, the purchase or donation of development easements, restricting the extension of sewer and water infrastructure, and adopting ordinances to limit development.

### **3.1.2 Agricultural Smart Growth Plan for New Jersey**

The State issued an *Agricultural Smart Growth Plan for New Jersey* in April 2006 which applies the principles of smart growth planning to preserve and enhance agriculture in the state. The plan focuses on five components: farmland preservation, agricultural land use planning, economic development, natural resource conservation, and agricultural industry sustainability. The plan emphasizes a more streamlined and strategic process of farmland preservation, as well as better coordination with local land use planning. In addition, the plan examined a number of ways to enhance the agricultural industry while protecting environmental quality to ensure a thriving future for farming in New Jersey.

## **3.2 SPECIAL RESOURCE AREAS**

### **3.2.1 Pinelands**

The eastern portion of Cumberland County, including most of Maurice Township, is within the Pinelands National Reserve, also known as the Pine Barrens. The 1.1 million acre reserve was dedicated by Congress under the National Parks and Recreation Act of 1978. The following year, the state passed the Pinelands Protection Act, which created the Pinelands Commission. The mission of the Pinelands Commission is to protect the significant natural resources of the Pinelands and to accommodate growth responsibly. The Pinelands Commission administers the Pinelands Comprehensive Management Plan (CMP) in cooperation with local, state, and federal governments. The CMP designates nine different Pinelands Management Areas, each of which varies in recommended density and permitted uses. Within Cumberland County, there are four Pinelands Management Areas: Forest Area, Agricultural Production Area, Rural Development Area, and Pinelands Village. See **Map 7: Pinelands and CAFRA**.

*Forest Areas* are composed of undeveloped lands containing high quality water resources and wetlands and provide suitable habitat for many threatened and endangered species. There is a permitted density of one home for every 28 acres on Forest Area lands. *Agricultural Production Areas* are active agricultural lands in which farm housing on 10 acres and non-farm housing on 40 acres are allowed. *Rural Development Areas* are transitional lands that balance conservation with growth, with residential density averaging one home for every 5 acres. *Pinelands Villages* are existing settlements appropriate for infill development. Residential development is permitted on 1-acre lots if not sewered. Within Cumberland County, there are 9,872 acres of farm-assessed land within the Pinelands located within all four of these types of Pinelands Management Areas. Most of

this farm-assessed land, however, is classified as forest under woodland management plans. Only 2,171 acres are tilled agricultural land, based on land cover data. The preservation of agricultural land in the Pinelands through the Pinelands Development Credit (PDC) program is discussed in **Section 4.2.6**.

### **3.2.2 Coastal Area Facilities Review Act (CAFRA)**

The Coastal Area Facilities Review Act (CAFRA) was passed by the state in 1973 to regulate development and land use along New Jersey's coastal wetlands and shores to protect public safety and the environment. CAFRA covers the Delaware Bayshore, an important stopover for migratory birds who feed on the eggs of horseshoe crabs in the spring. CAFRA regulations help protect the Delaware Bayshore in Cumberland County from overdevelopment, preserving this sensitive habitat for birds and other plant and animal wildlife. CAFRA law regulates nearly all development activities involved in residential, commercial, public, and industrial developments. Such activities include excavation, grading, construction, relocation, and enlargement of buildings and structures. Within 150 feet of the mean high water line, CAFRA regulates any new developments, residential projects with three or more units, and commercial projects with five or more parking spaces. Beyond 150 feet of the mean high water line, CAFRA regulates residential projects with 25 or more units and commercial projects with 50 or more parking spaces.

Ten municipalities in Cumberland County, both coastal and inland, are partially or completely within the CAFRA boundary. There are 34,664 acres of farm-assessed land within the CAFRA boundary in Cumberland County. Much of this farm-assessed land is composed of wetlands or forest, although 21,165 acres are classified as agricultural land based on land cover data. Appraisers are made aware of CAFRA boundaries when valuing land for farmland preservation, although CAFRA has never been cited as a specific limitation on value. More significant than CAFRA in limiting property values are municipal zoning regulations, as well as ordinances, including those ordinances in Greenwich, Hopewell, and Stowe Creek prohibiting construction of new roads.

## **3.3 CUMBERLAND COUNTY PLANNING**

### **3.3.1 Cumberland County Farmland Preservation Plan**

The *Cumberland County Farmland Preservation, Open Space, Parks, and Recreation Trust Fund Plan*, published in 1996, was an implementation plan for the county's Open Space and Farmland Preservation Tax approved by referendum in 1994. This plan was updated in 2005 with the ***Cumberland County Farmland Preservation Plan***, which provided data on farmland preservation in the county and described the various preservation techniques and programs that were available to the county and its municipalities. It also identified planning and zoning measures to promote and develop the agricultural industry within the County. This current 2008-09 plan is an update of the 2005 plan and satisfies the content requirements of the SADC.

### **3.3.2 Western/Southern Cumberland Region Strategic Plan**

The *Western/Southern Cumberland Region Strategic Plan*, issued in draft form in 2005, is a smart growth and economic development plan. Its goal is to address the balance between economic development and environmental protection for each community in the county, with the exclusion of the urbanized centers of Millville and Vineland. The plan recommends strategies to protect natural, historic, and cultural resources; balance agricultural preservation with continued development; strengthen the local economy; and improve transportation, housing, and community facilities and services. In addition, the plan addresses inter-municipal agreements and cooperation regarding revenue sharing, shared services, and regional planning. Lastly, the plan identifies and maps 32 existing centers throughout Cumberland County where future residential and commercial growth should be concentrated.

The regional plan recommends a number of strategies to promote agriculture in the county, including continuing to support the farmland preservation program of which this plan is a key element. These strategies include ensuring equitable payments for farm easements, protecting farm properties through planning tools like cluster zoning and transfer of development rights (TDR), and promoting the development of new practices and products to increase the value of farming. Specific economic development strategies to promote agriculture include targeting specific food processors to establish additional plants, encouraging the development of a mechanism to enable the direct delivery of local produce to retail and restaurants, and continuing to encourage farmers markets as an ecotourism strategy. As of May 2009, the plan was receiving public comment.

### **3.3.3 Cumberland County Master Plan**

Cumberland County's most recent Master Plan was drafted in 1967. Although the plan is over forty years old, it contains many concepts which are still relevant, such as the recommendation for large lot zoning. The county is in the initial stage of a process to update the Master Plan. Cumberland County recently solicited a Request for Proposals (RFP) for "Developing a Vision Statement and a Ten (10) Year Strategic Plan for the County of Cumberland." Years one through five of the Strategic Plan will focus on the implementation of tangible objectives, and years six through ten will look at long-term goals for the future of the county. The Vision Statement and Plan is meant to be a "living" document that will be able to adapt to changing conditions within Cumberland County.

## **3.4 CURRENT LAND USE, ZONING, AND OTHER RESTRICTIONS**

### **3.4.1 Current Land Use**

According to the most recent NJDEP land cover data from 2002, only 12 percent of land in Cumberland County is classified as urban, or developed, land. Nearly one-third (32%) of Cumberland County is forested, which is concentrated mostly in the Pinelands and the central portion of the county. Wetlands cover 30 percent of the county, located mostly



along the Delaware Bayshore and along waterways such as the Maurice and Cohansey Rivers. About 19 percent of Cumberland County is occupied by agriculture, which is mostly concentrated in the northwestern part of the county near the border with Salem County. Another 6 percent of the county is water, and barren land occupies the remaining 1 percent of land. As seen in the table below, forest, wetlands, agriculture, and barren land have decreased in acreage while urban land and water have increased in recent years.

As discussed in **Section 3.4.5: County Development Pressures and Land Value Trends**, development pressure in the county has increased in recent years. There has been an increase in the number of applications for residential, commercial, and industrial construction, as well as subdivisions. Most new development has occurred in the more developed areas of the county, with most growth located in Bridgeton, Millville, and Vineland.

**Table 11: Cumberland County Land Use/Land Cover Data, 1995-2002**

Type	1995 Acres	2002 Acres	% Total 2002	Net Change	% change
Forest	102,425	101,336	32%	-1,089	-1%
Wetlands	97,288	95,754	30%	-1,534	-2%
Agriculture	62,864	61,758	19%	-1,106	-2%
Urban	37,526	39,968	12%	2,442	6%
Water	18,096	19,402	6%	1,306	7%
Barren Land	3,448	3,427	1%	-21	-1%
<b>Total</b>	<b>321,647</b>	<b>321,645</b>	<b>100%</b>	<b>-2</b>	

Source: NJDEP 1995/1997, 2002

### 3.4.2 Zoning

Various innovative zoning ordinances that provide incentives to preserve farmland can be adopted by a municipality. Most municipalities in Cumberland County have some form of agriculture-specific zoning, with the exceptions of Bridgeton and Maurice River Township. This can mean zoning for very low density or the creation of zoning districts with an average minimum lot size of at least three acres. Right-to-Farm ordinances are discussed in **Section 8.1.1 Right-to-Farm Ordinance**.

**Commercial Township** has a Residence-Agriculture District (R-A) that requires a minimum of one acre for a single family dwelling unit and a minimum of five acres for a farm. Permitted land uses in the R-A District include single family detached dwellings, agricultural uses, home occupations, and housing facilities for transient or migrant farm workers. Nurseries, small animal, and livestock-raising are permitted agricultural uses, although pigs must be grain fed, not “garbage fed.” There is a maximum of 15 percent building coverage allowed in the R-A District.

**Deerfield Township** has an Agriculture District (A) that requires a minimum of six acres for a farm. Deerfield Township also has an Agricultural Industrial and Commercial Overlay that requires a minimum lot size of 5 acres for a farm and 20 acres for a processing plant, warehouse, distribution center, or other type of facility. According to Deerfield’s

municipal ordinance, the purpose of this Overlay District is “to provide for innovative and necessary industrial and commercial activities directly related to agriculture use of the lands of the Township by permitting such activities to occur within specific areas of the municipality's agricultural lands so as to promote and encourage the continued viability of farming within the Township and surrounding area.”

**Downe Township** has a Rural Residential District (R-1) which permits customary and conventional farming operations and farm dwellings, farm storage buildings, and roadside farm stands. The Rural Residential District requires a minimum lot size of one acre. Downe also has a Rural Conservation District (C-1) which requires a minimum lot size of five acres and which permits the same agricultural uses as the Rural Residential Zone.

**Fairfield Township** has an Agriculture District (A) with a minimum lot size of five acres.

**Hopewell Township** has an Agricultural District (A) that permits agricultural materials and equipment, sales and service, and agricultural product processing of crops produced on the farm of the processor. The Agricultural District also allows conventional agriculture and accessory agricultural buildings, although it does not allow livestock feed lots or other intensive animal feeding operations. Hopewell also has an Agricultural Industrial District (A-I) with minimum lot sizes of 1.5 acres for residential use, 2 acres for a farm, and 10 acres for food processing, storage, packaging and distribution facilities. Some of the many conditional uses in the A-I District include wholesale warehousing and distribution, light manufacturing, scientific and research laboratories, and cultural uses.

**Lawrence Township** has an Agriculture District (A) that requires minimum lot sizes of three acres for general purpose agriculture, recreation or open space, public uses or facilities, or single-family detached dwellings. This district also requires minimum lot sizes of five acres for environmental conservation uses and six acres for a farm. There are fifteen conditional uses for the Agriculture District, including agricultural employee housing, kennels and animal hospitals, farming businesses, and riding academies and stables.

**Millville's** Agricultural Conservation District is intended to preserve and enhance the economic viability and quality of existing agriculturally productive lands, farms, and agricultural homesteads in outlying areas of the City of Millville. This district permits agricultural or horticultural uses, farms, single-family detached dwellings on five acres, planned agri-community development, forests and wildlife conservation, parks and recreational facilities, educational facilities, and cemeteries. Agri-community developments require a minimum of 100 acres and must consist of at least 50 percent open space. These communities are intended to incorporate both residential and farming uses to accommodate new growth while preserving rural character.

**Shiloh Township** has a Residential-Agriculture District (R-A) which requires at least five acres for a farm. Farms are to be used for general purpose agriculture which includes the raising of agricultural or horticultural products, livestock, poultry and their resultant products. Farms may include small retail outlets, business offices, aquaculture facilities,

hydroponic, and other new technological innovations that advance the science of agriculture and the production of agricultural commodities. Intensive feed lots for raising of poultry, cattle, or other livestock are not permitted.

**Stow Creek Township** has an Agricultural District (A) that Permits farms and agricultural activities including nurseries, small animals, and the raising of livestock. This district also allows for the sale of farm or dairy produce which has been raised on the farm from which it is to be sold. Single-family detached dwellings are permitted in the Agricultural District for those employed in agricultural production. Single family detached dwellings for those not employed in agricultural production shall be permitted as a conditional use. In Stow Creek Township's Residential District (R) and Historic Residential District (HR), all agricultural uses allowed in the Agricultural District are permitted except the commercial raising of livestock and fowl.

**Upper Deerfield Township** has an Agricultural District (A) that permits parks and recreational facilities, conservation areas, farms, commercial stables and riding academies, kennels and animal hospitals, and warehousing or storage facilities for farm produce or products. These uses require minimum lot sizes of two to fifteen acres depending on use. There are a number of conditional uses allowed in the Agricultural District, including rural residences, home occupations, food processing plants, land mining and earth extraction, slaughterhouses or meat processing plants, and agricultural or open space experimental or research centers. Minimum lot sizes for these conditional uses range from one acre for a rural residence to 25 acres for land mining and earth extraction. Accessory uses include agricultural buildings, farm residences, windmills, and roadside stands. The Residential District (R-1) in Upper Deerfield also permits farms and roadside stands.

**Vineland** has two Agricultural Districts: A-5 and A-6. The A-5 Agricultural District requires minimum lots sizes of 250,000 square feet (about 5.7 acres) for a farm and 100,000 square feet (about 2.2 acres) for a single-family detached dwelling or other uses. Vineland's A-6 Agricultural District requires minimum lot sizes of 250,000 square feet for farms, single-family detached dwellings, and other uses.

**Greenwich** also has an Agricultural District, although its municipal ordinance was unavailable at the time of publication.

Only two municipalities in Cumberland County, Deerfield and Upper Deerfield, require a buffer around agricultural areas.

Bridgeton and Maurice River Township do not have agricultural zoning as the following table shows. See **Map 8: Zoning – General**, **Map 9: Agricultural Zoning**, and **Map 14: Agricultural Development Areas**.

**Table 12: Agricultural Zoning and Planning in Cumberland County**

Municipality	Cluster zoning	Non-contiguous cluster zoning	Lot size averaging	Transfer of Development Rights	Right-to-Farm Ordinance	Agricultural zoning
Bridgeton	no	no	no	no	no	No
Commercial	no	no	no	no	yes	Yes
Deerfield	yes	no	no	no	yes	Yes
Downe	yes	no	no	no	yes	Yes
Fairfield	yes	no	no	no	yes	Yes
Greenwich	no	no	no	no	yes	Yes
Hopewell	no	no	no	In process	yes	Yes
Lawrence	yes	no	no	no	yes	Yes
Maurice River	yes	no	no	no	no	No
Millville	yes	no	no	no	no	Yes
Shiloh	yes	no	no	no	no	Yes
Stow Creek	no	no	no	no	no	Yes
Upper Deerfield	yes	no	no	no	yes	Yes
Vineland	yes	no	no	no	yes	Yes

Source: [www.ordinance.com](http://www.ordinance.com), 2008

### 3.4.3 Innovative Planning Techniques

#### *Cluster Zoning*

Nine municipalities in Cumberland County permit cluster developments as seen above in *Table 12: Agricultural Zoning in Cumberland County*. A zoning ordinance may have a provision that allows residential development to be clustered on smaller lots than the ordinance allows by-right, with the same number of units permitted as would be allowed under conventional development. Clustering involves a requirement to preserve a percentage of the site’s land as open space, or as farmland. To the greatest extent possible, prime agricultural lands should be preserved as farmland. This open space portion may be protected with a conservation easement and is typically owned by a homeowners association or by the municipality. This technique can be used on a mandatory basis, or can be voluntary with incentives for the developer. A cluster ordinance can include elements of conservation design, discussed below. Set-asides on adjacent properties could be sited in a way that could preserve the greatest amount of contiguous agricultural land. In the same way, clustered development could be sited next to developed areas on adjacent properties, ideally with connecting streets and consistent form and design.

Homeowners in a cluster development may object to the preserved open land being used for commercial agriculture due to the noise, dust, and odors. Conversely, housing units may be, and often are, of higher value in clustered subdivisions because of the adjacent farmland views and rural feel. The protected land may also not be large enough to support agriculture, and access to the site by equipment and trucks could be limited. Clustering does protect open space and farmland where development is inevitable and does so without the use of public funding. It does not reduce the number of residential units that are possible or direct their placement in planned growth areas, however. Clustering is not always a popular technique because of these factors and because density bonuses encouraging clustering may allow what some consider to be too many additional units. The thoughtfulness of ordinance provisions and the design and placement of clustered housing are important components for successful clustering.

### ***Non-contiguous Cluster Zoning***

Non-contiguous cluster zoning allows a parcel to be preserved by transferring its development potential to a non-contiguous parcel. This technique, first authorized in 1996 by the New Jersey Municipal Land Use Law, allows a “sending area” parcel to be preserved as open space or farmland, and the “receiving area” parcel is allowed to be developed at a higher density than would otherwise be permitted. This technique is much simpler to administer than conventional TDR programs since it can involve as little as two parcels, although it has not been used in Cumberland County. Unlike TDR, non-contiguous cluster zoning must be implemented through planned development or between properties under common ownership. Also, unlike TDR, there is not the ability to focus development in designated receiving areas such as with TDR, except if within a planned development.

### ***Conservation Design***

Conservation Design is a form of site design that usually involves clustering but that primarily requires careful analysis of the environmental resources and farming potential so that the housing layout is situated to protect these features. The Growing Greener model for conservation design, developed by planner and landscape architect Randall Arendt of the Natural Lands Trust, lays out a four-step process for such development. Key provisions are that the protection of open space/farmland is mandatory and that there must be at least 50 percent retention of open space/farmland. The number of units that can be built is determined by the underlying zoning for the site, after primary (non-buildable) and secondary resources are deducted from the land area calculation. The placement of the housing and deed-restricted open space/farmland is designed through an interactive process with the town. A key element is that the open space/farmland must be linked to other land areas, rather than being isolated. In Pennsylvania Conservation Design and the Growing Greener model has been fostered by the state throughout all of its communities, and several New Jersey towns have also adopted this approach, which can preserve substantial acreage.

### ***Transfer of Development Rights***

Transfer of Development Rights (TDR) is a municipal planning technique that allows for increased development while preserving farmland. It is discussed in greater detail in **Section 4.2.5 Transfer of Development Rights (TDR)**.

### ***Lot Size Averaging***

Lot size averaging is a way to allow flexibility in lot sizes on relatively smaller parcels (about 10-20 acres) that are slated for subdivision and development. Like cluster zoning, flexible lot sizes can situate development to allow for the greatest conservation of resources. Stow Creek is the only municipality in Cumberland County to have adopted lot size averaging.

Cumberland County supports cluster zoning, conservation design, TDR, and lot size averaging, although these techniques are adopted at the municipal level. However, when municipal reexamination of a Master Plan involves the Cumberland County Planning Board, these techniques may be recommended where appropriate.

### **3.4.4 Water and Sewer Infrastructure**

Most farms in Cumberland County obtain drinking water from private wells and rely on private septic systems for sewage treatment. As shown in **Map 10: Sewer and Water Infrastructure**, there are six different facilities that provide sewer service in Cumberland County. (It should be noted that the map shows what is approved for sewer service, rather than what is actually constructed.) The largest three of the sewerage facilities are the Landis Sewerage Authority, the Millville Sewer Utility, and the Cumberland County Utilities Authority which serves Bridgeton, Fairfield, Hopewell, Shiloh, and Upper Deerfield.

Public water is available in the same general areas as approved sewer service, although the piping infrastructure, like that for sewer, does not necessarily exist throughout all parts of the area. On **Map 10**, public community wells are plotted. These are wells that provide public water to larger populations, as compared to “non-community wells that serve a specific smaller facility. There is public water in Bridgeton and parts of Fairfield, Hopewell, Millville, Shiloh, Upper Deerfield, and Vineland. There are also larger water systems serving the NJ Bayside Prison, the town of Port Norris, and the Fairview Manor Mobile Home Park. Some smaller water supply wells serve eight other facilities and mobile home parks in the county. All of these public systems tap the Kirkwood-Cohansey aquifer.

According to the 1996 New Jersey Water Supply Plan, present water supplies are adequate but should be carefully monitored in order to prevent the demand from exceeding available water. The possibility of future deficits is a threat to surface water streams in the area, which rely heavily on groundwater for 80 percent to 90 percent of their annual flow. It is also a threat to farming that requires irrigation. A new state water supply plan is expected to be issued in 2009, which will certainly update the projections for use and clarify the availability of potable water in the county.

Most residents within agricultural areas rely on wells that also tap the Kirkwood-Cohansey aquifer. This aquifer has abundant water in this part of southern New Jersey, but its unconfined nature makes it subject to potential contamination from both surface sources and septic systems. Recharge of the aquifer is also heavily dependent on maintenance of open land that has high permeability. Such land also tends to be the best farmland in the region, which makes farmland preservation and protection of soils a particularly high priority.

### **3.4.5 County Development Pressures and Land Value Trends**

Growth in Cumberland County has been moderate but steady, and development pressure is likely to greatly increase in the coming years. The pace of development in Cumberland County is evident in the county’s growth in population, residential building permits, site plan applications, and approval of subdivisions. According to the United States Census Bureau, the county’s estimated population in 2007 was 155,544 residents, a 6 percent increase from its 2000 population of 146,438.

Growth in the county is also apparent in the number of new privately-owned residential building permits that have been authorized, as shown in *Table 13: New Residential Building Permits*

(Units) in Cumberland County, 2000-2007. The total number of residential unit permits issued annually in Cumberland County has increased from only 255 in 2000 to 683 units in 2007, which included 111 units in multi-unit buildings. In 2007, only four other counties in the state issued fewer new residential building permits than Cumberland County's 683 units: Salem (148), Warren (258), Hunterdon (316), and Sussex (359).

Most new residential development in Cumberland County has occurred in the already highly-developed municipalities of Bridgeton, Millville, and Vineland. Between 2000 and 2007, nearly three-fourths of all new residential building permits were located in these three cities.

**Table 13: New Residential Building Permits (Units) in Cumberland County, 2000-2007**

Type	2000	2001	2002	2003	2004	2005	2006	2007	Total 2000-2007
Single	226	250	297	364	564	597	693	572	3563
Multi	29	6	13	10	2	33	44	111	409
<b>Total</b>	<b>255</b>	<b>256</b>	<b>310</b>	<b>374</b>	<b>566</b>	<b>630</b>	<b>737</b>	<b>683</b>	<b>3972</b>

Source: US Census Bureau Construction Statistics Division, 2000-2007

In addition to residential building permits, development pressure in Cumberland County is evident in the number of site plan applications, which are approved by the Development Review Committee of the county. Site plan applications are for commercial and industrial construction as well as multi-family residences of 5 units or more. These applications are for the construction of both new buildings and additions to existing buildings. There were a total of 320 site plan applications approved between 2003 and 2007 totaling 6.5 million square feet. Approximately half of all approved development during this time period occurred in Vineland, which had 163 site plans totaling 2.8 million square feet. Millville had 64 site plans totaling 2.2 million square feet between 2003 and 2007, which includes the half-million square foot Goodmill regional shopping center approved in 2005.

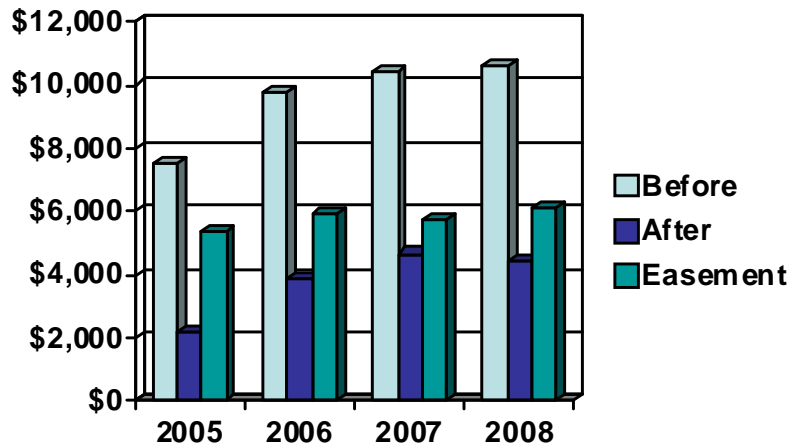
A third indicator of development pressure is the number of approvals of subdivisions, which are also reviewed by the Development Review Committee. In addition to the approval of minor and major subdivisions, there may also be line adjustments that do not result in the creation of new lots. A minor subdivision is one that creates three or fewer new lots, while a major subdivision creates 4 or more new lots. Although the subdividing of lots does not guarantee that there will be construction on the new lots, it is an indicator of development interest and potential. Between 2003 and 2007, a total of 4,893 new lots were created in Cumberland County. Over half of all new lots (2,589) were proposed in Vineland, followed by Millville (1,084) and Upper Deerfield (787).

All three communities have considerable farmland within their boundaries and this is where subdivisions are being located, in Vineland and Millville. In Upper Deerfield the southwest quadrant of the township abuts Bridgeton and has been the location of most of the residential and commercial growth in that community. This section of the township was largely forested land, rather than farmland.

The average per-acre certified value of farmland easements has remained relatively steady over the past few years. In the 2005-2006 round of applicants for the farmland preservation program,

the average certified value for easements was approximately \$5,480 per acre. The average certified value in the 2006-2007 round was \$5,200, and the average in 2007-2008 was \$5,500. In the 2007-2008 round of applicants, certified values ranged from \$3,200 to \$7,300 per acre. Parcels with lower easement values tend to contain significant wetlands areas in townships such as Downe, Lawrence, and Greenwich. Higher easement values tend to be found in upland areas of townships such as Fairfield, Upper Deerfield, Hopewell, and Stow Creek.

*Figure 1: Before, After, and Easement Values in Cumberland County, 2005-2008*



*Source: Cumberland County Planning Department, 2009*





*Photo Courtesy of Cumberland County Department of Planning and Development*

*Renne Farm*

## 4.0 FARMLAND PRESERVATION IN CUMBERLAND COUNTY

### 4.1 COUNTY AGRICULTURAL DEVELOPMENT AREA

#### 4.1.1 Designation Criteria

The ADA is the area within which farms are eligible for preservation funding by the county and state. An ADA is an area of relatively contiguous productive agricultural land that has a strong potential for continued productive use in the future and where agriculture is the preferred but not necessarily exclusive use. The statutory criteria for ADAs are described in N.J.S.A. 4:1C-18. On the county level, the CADB approved the location of the ADA on the basis of specific criteria, amended in 2004. Those criteria are:

- The ADA encompasses lands that are currently in production or have a strong potential for future production in agriculture, and in which agriculture is a permitted use under the current municipal zoning ordinance or in which agriculture is permitted as a non-conforming use;
- The ADA land is reasonably free of suburban and conflicting commercial development;
- The ADA comprises not greater than 90 percent of the agricultural land mass of the county;
- The ADA encompasses entire tax lots only, and if any part of the tax lot meets the criteria for the ADA, then the entire tax lot shall be included within the ADA;
- The ADA only incorporates tax parcels that are eligible for Farmland Tax Assessment;
- The ADA consists of those areas where a majority of the land has been classified by the USDA-NRCS as prime soils or soils of statewide importance and those that are located in State Planning Areas 3, 4, 4B or 5.

In Cumberland County, the ADA was originally divided into Primary and Secondary ADA areas based on location in State Planning Areas. Areas PA4 and PA4B were considered primary and farmland in PA3 and PA5 was secondary. The subdivision of the ADA was eliminated in 2004 when the criteria listed above were adopted. **Map 14: Agricultural Development Areas** shows no subdivision of the ADA.

Farms outside of the ADA can be preserved with state and county funds, but the ADA must first be amended to incorporate them. Amending the ADA for farms that are outside, although contiguous to, the ADA boundaries is a relatively simple process, if they meet the criteria.

#### 4.1.2 Description of County ADA

Cumberland County has 92,474 acres that are assessed as farmland for tax purposes

according to farmland assessment data from tax year 2007. Of this, 1,965 parcels totaling 88,634 acres (96%) are greater than 10 acres in size. Cumberland County’s Agricultural Development Area (ADA) covers 56,779 acres, which is approximately 61 percent of all farmland-assessed land in the county. The ADA is located mostly in the northwestern part of the county and includes large portions of Hopewell, Upper Deerfield, Stow Creek, and seven other municipalities as shown in **Table 14: Cumberland County Agricultural Development Area**.

The ADA land is concentrated in the watersheds of Stow Creek, the Cohansey River, and Back Creek, as well as a portion of southeast Vineland (Maurice River watershed). **Map 14: Agricultural Development Areas** depicts the ADA acreage per municipality shown below in Table 14.

**Table 14: Cumberland County Agricultural Development Areas**

<b>Municipality</b>	<b>Total (Acres)</b>
Hopewell Township	11,942.66
Upper Deerfield Township	10,820.65
Stow Creek Township	9,115.06
Greenwich Township	6,725.52
Deerfield Township	5,925.47
Fairfield Township	4,910.19
Lawrence Township	4,304.38
Vineland	2,458.72
Millville	458.67
Shiloh Borough	117.71
<b>TOTAL</b>	<b>56,779.02</b>

Source: Cumberland County Department of Planning and Development, 2008

#### **4.1.3 County Agriculture Development Board (CADB)**

The CADB is appointed by the county government and is authorized by the Agriculture Retention and Development Act. The seven members of the CADB represent local farmers and residents, the county planning board, the soil conservation district, and the county agricultural extension agent. The main responsibilities of the CADB are to develop minimum standards for agricultural development areas (ADAs); review, approve, and coordinate applications for farmland preservation; coordinate SADC grants and provide the county share of funding; and ensure compliance with the requirements of the farmland preservation program. The CADB has formulated its policies and procedures to serve its constituency of agricultural operations and farm families working and living in Cumberland County. The CADB serves the agricultural community and advocates for the interests of farming in the county. The CADB is assisted by the Cumberland County Planning Board, with legal assistance provided by the County of Cumberland.

## **4.2 DESCRIPTION OF FARMLAND PRESERVATION OPTIONS**

### **4.2.1 Purchase of Development Easements**

The most common technique of farmland preservation in Cumberland County is the purchase of development easements through which landowners sell the development rights on their land. Since 1992, over 13,000 acres of farmland in Cumberland County have been preserved through this option. Once the development rights are purchased, the land is deed-restricted by a development easement while the land continues to be privately owned. The easement value is determined by two independent professional appraisals and is equal to the difference between the fair market development value of the land and the value of the land as farmland. The land continues to be farmed and can be sold to another farmer in the future at whatever market price is then current for preserved farmland in the area. Land must be farm-assessed to be eligible and taxes continue to be paid on the land.

Landowners may sell development easements either through the Cumberland County program, which is administered by the CADB, or directly to the State of New Jersey through the State Agriculture Development Committee (SADC). In both cases, the farmland is ranked on a number of criteria and high-ranking farms may be approved for purchase of development easements. An offer is then made to the landowner who can accept or reject it.

Within state and county programs, appraisal rules dictate that the value of an easement is to be based on comparable recent sales of farmland in the area. This puts the preservation programs at a disadvantage in relation to the higher, speculative land offers that can be made by developers. In addition, easement acquisition offers by the state or county are only for the easement value, not for the entire value of the land.

It can be difficult to compare the financial, as well as the more intangible, benefits of preservation versus development. The advantage of preserving farmland with the easement purchase method is that a landowner is allowed to continue living on his or her land and can sell it or bequeath it to heirs with the knowledge that the land will remain as farmland. In addition, the sale of development easements nearly always reduces estate taxes. None of this holds true if the land is sold to a developer. A disadvantage of most land offers by developers is that there tends to be contingencies attached to them which may significantly delay a final sale. These may include conditions that must be met, such as Planning Board approvals for a proposed development, before the offer will be finalized.

The advantage that a developer has is that an offer for land can be above market value due to the speculative nature of development. The developer can offer more than land is currently selling for, both because the cost can be incorporated into each future residential housing unit and because the increased amount will not actually be paid out for a few years.

#### 4.2.2 Planning Incentive Grants

The SADC has established a farmland preservation Planning Incentive Grant (PIG) program to provide grants to eligible counties and municipalities. PIG grants are now the primary means of preserving farmland. This funding has as its goal the protection of large areas of contiguous farmland on high quality soils in order to enhance the long-term viability of the farming industry in a given area. PIG funding requires development of a Farmland Preservation Plan that meets current SADC standards. This Farmland Preservation Plan is an update of the plan completed by Cumberland County in 2005.

On the municipal level, to be eligible for PIG funding, a municipality must adopt a farmland preservation plan element into their municipal Master Plan, appoint an Agricultural Advisory Committee (AAC), and delineate one or more project areas where farms are “targeted” for preservation if owners are interested. In addition, the AAC is expected to consider measures that the municipality could take to promote the farm industry and remove barriers to farming. Two other eligibility requirements for the municipal PIG program are a dedicated source of funding and a Right to Farm Ordinance consistent with the Right to Farm Act and the SADC model.

Funding for farmland preservation is provided by the Cumberland County Open Space and Farmland Preservation Trust Fund Tax, discussed in **Section 5.6.1: County Funding Sources**. Eligibility is similar for the county PIG program, although the County Agriculture Development Board (CADB) substitutes for the municipal Agricultural Advisory Committee.

PIG funding allows a community to obtain its own state funding and to promote preservation and farming within the community directly, in addition to other local preservation efforts. A community can receive up to \$1.5 million per year through this funding source, although new SADC rules require that a given year’s appropriation must be spent within three years or the funding will be withdrawn. The new rules also include a provision that a non-profit organization can obtain PIG funding for farmland preservation, which must be spent within two years. A municipality must generate some matching funds, although it can do so in partnership with the County Agriculture Development Board and county funding. Targeted farms within the planning areas are “pre-approved” and are ranked by the county or municipality prior to submittal to the SADC instead of being ranked by the SADC as with the County Easement Purchase Program. The county or municipality can select the licensed appraisers it wishes to use and can work more directly with farm landowners through its AAC or CADB. This tends to strengthen interest in preservation by landowners in the community.

PIG funding does impose a financial obligation on the municipality and/or county, since the state funds must be matched at a ratio of about 60 percent state to 40 percent municipal and/or county, depending on land values. However, the PIG funding is like a line of credit from the state: only when a municipal and/or county commitment is made for an easement or fee-simple purchase does the funding come into use. It is at that point that municipal and county funding is also required.

Overall, PIG funding increases farmland preservation in a community, but it does require additional effort and financing, especially at the county level. The County Open Space and Farmland Preservation Trust continues to grow substantially, due in part to expanding assessment value of total county property. However, this growth in the Trust Fund is offset by rising land values in Cumberland County in recent years.

Recently enacted procedural rules for the SADC place a greater emphasis in program participation and SADC grant allocations on the county PIG program, along with the use of other techniques that will support the maintenance of agricultural lands and industry viability.

#### **4.2.3 Fee-Simple Acquisition**

Farmland can be purchased outright through a fee-simple sale. This approach is sometimes used when a landowner wishes to retire but has no heirs to continue farming, or does not want to go through the process of severing the development rights and then selling the land to another farmer.

Fee-simple acquisition is available to the Cumberland County program but has not typically been used due to limited financial resources as it is more expensive than the purchase of development rights. Only about 660 acres in Cumberland County have been preserved through fee-simple acquisition. The State of New Jersey through the SADC can also purchase farmland outright, especially in cases where there is an imminent threat of development. After severing the development rights, the state then re-sells the land to interested farmers through an auction.

#### **4.2.4 Nonprofit Organizations**

Some nonprofit land trusts are actively preserving farmland in southern New Jersey, either through fee-simple acquisition or purchase of development rights. Funding for nonprofit preservation has largely been through Green Acres Planning Incentive Grants, but the SADC will also provide PIG funding for delineated planning areas. In addition, funding from nonprofit organizations could be found for Important Bird Areas identified by the New Jersey Audubon Society. Cumberland County includes nine Important Bird Areas, which are areas that provide essential habitat for one or more bird species native to New Jersey, many of which rely on agricultural grasslands. The Natural Lands Trust has protected land in Cumberland County from development since the 1960s through acquisition, conservation easements, and partnerships with other groups. South Jersey Land and Water Trust has also helped preserve hundreds of acres of farmland since 1990, including 600 acres in Cumberland County. The SADC provides cost share grants to nonprofit organizations to fund up to 50 percent of the fee-simple or development easement values on farms.

#### **4.2.5 Transfer of Development Rights (TDR)**

In 2004, the New Jersey legislature authorized the establishment of Transfer of Development Rights (TDR) programs throughout the state. Prior to that, only Burlington County could preserve farmland through this market-based program. In 2005, six municipalities were selected by the state to develop their own TDR programs as demonstration projects, including Hopewell Township in Cumberland County. Hopewell Township proposed the adoption of a TDR program in its 2007 Master Plan and is currently undergoing initiatives to preserve agricultural land and develop a town center along Route 49 adjacent to Bridgeton.

A TDR program involves the establishment of a geographical sending area within a municipality where development is to be restricted, and of a receiving area where development is to be encouraged. Sale of the transferred development rights involves establishing a TDR bank or other financial mechanism by which landowners in a sending area are compensated for relinquishing their development rights and where development rights for the receiving area are purchased. The development rights generate greater density of development in the receiving area, which is the principal incentive for their purchase by a developer. Sending and receiving areas must be approximately equal in development potential for the TDR program to work, and the receiving area generally needs water and sewer infrastructure in order to support the increased development density.

A TDR program has the distinct advantage of preserving land and containing sprawl development without any expenditure of public funds. It is complicated and expensive to establish, however, and does not reduce overall growth, although growth is directed to the most appropriate areas. For a town that has the proper infrastructure in place and a sufficiently sized, well-planned receiving area, a TDR program can generate significant land preservation and responsible development.

Most Cumberland County towns with substantial farmland have considered enacting a TDR program. Costs of doing so are daunting, however, and many towns have been waiting to see what Hopewell Township's experience with the process will be. Of the six towns in the state pilot program that began working on a TDR programs in 2005, only Woolwich Township in Gloucester County has achieved an approved and adopted plan. Farmland preservation is a major focus of Hopewell's TDR program and although implementation has been difficult and expensive, the cost of the program is far less than it would cost to purchase development easements on all farms in the sending area. With an average easement value of \$5,977, the cost to purchase easements from all 9,204 acres of farmland in the sending area would be over \$55 million.

#### **4.2.6 Pinelands Development Credit (PDC) Program**

The Pinelands Development Credit (PDC) Program is a Transfer of Development Rights (TDR) program in the Pinelands that helps to redirect development to regional growth areas already supported by infrastructure, while limiting development in preservation and

agricultural districts. PDCs are development rights allocated to sending areas that can be purchased and transferred to receiving areas to increase the allowable residential development. Each PDC is equivalent to the right to build four homes and can be bought and sold in one-fourth (or one right) increments. When the PDCs are transferred from sending area properties, conservation or agricultural easements are placed on those lands. PDCs can be bought and sold privately or through the publicly chartered Pinelands Development Credit Bank. Most PDCs are sold to developers, although New Jersey initiated programs beginning in 1999 to buy PDCs in order to remove them from the market altogether.

As of July 2008, 5,861 development rights have been severed from Pineland properties, equivalent to 1,465.25 PDCs. Of that, 4,189 development rights (1,047.25 PDCs) have been sold. Through PDC purchases, there has been a private sector investment of \$42,784,548 that has preserved over 50,500 acres of environmentally sensitive forest and agricultural land.

#### **4.2.7 Regional Transfer of Development Rights (TDR) Programs**

The TDR legislation enacted in 2004 allows for regional TDR programs involving more than one municipality. Such programs would be similar to the PDC program where growth areas are equivalent to receiving areas and PDCs are the medium of transfer of development rights and the payment for severing those rights within sending areas.

No group of municipalities has yet developed a regional program, although this would address the difficulties in rural communities that lack infrastructure or that lack sufficient acreage for a receiving area. A regional program would also direct growth to those towns in need of growth or redevelopment. The principal barriers to regional TDR relate to the sharing of costs for the growth to be borne by the receiving municipalities. The New Jersey legislature is considering an impact fee program that would offset these costs. New Jersey law does not permit a transfer of tax revenues between municipalities, which may be needed before such programs can be developed.

Another barrier to regional TDR may exist in the nature and current status of municipalities that would be logical receiving areas. That is, developers may not be attracted to these towns because of their declining infrastructure or services, especially pertaining to schools. Conversely, the increased density benefits, if shared revenues were possible, might offset and actually improve these communities to a degree that would make regional transfer highly attractive.

Conversations with Bridgeton and other surrounding municipalities have been undertaken in recent years but need to be continued and expanded to determine if a regional approach could be made to work and if there is sufficient development pressure to justify a regional TDR program.



#### **4.2.8 Other Programs and Partnerships**

Public Service Electric and Gas (PSE&G), the large public utility that operates the Salem Nuclear Power Plant, entered into an agreement with NJ DEP in 1994 to preserve and restore extensive tracts of wetlands and adjacent uplands in the Delaware estuary, in exchange for not having to build a second cooling tower at its plant on the Delaware Bay in Pennsville. These Estuary Enhancement Program lands are located along the bay at eight sites and total 14,500 acres. Four of the sites are in Cumberland County: Cohansey River, Maurice River Township, Commercial Township, and Bayside Tract (largely in Greenwich Township). All of this land is permanently deed restricted. In addition, PSE&G makes payments in lieu of taxes (PILOT monies) to the townships in which these lands are located.

Both regular farming and salt hay farming occur on the PSE&G lands, especially in the Bayside Tract. None of this farmland is included in this plan's project areas.

#### **4.2.9 Installment Purchase Agreement**

Development easements may be purchased through an installment purchase agreement (IPA) that spreads payment over a period of time, typically 20 to 30 years. Payments to the landowner are semi-annual, tax-exempt interest payments and the principal is due at the end of the contract term. A landowner is able to sell or securitize the IPA at any time to receive the outstanding balance. IPAs can also be transferred to heirs and are useful in estate planning. The jurisdiction typically purchases zero-coupon US Treasury bonds (known as STRIPS) to cover the cost of the principal. Unlike typical bonds, STRIPS yield a lump sum when the bond matures but do not generate regular interest income. STRIPS cost a fraction of their full value, enabling jurisdictions to better leverage their funds.

One of the challenges of IPAs is that the jurisdiction must have a dedicated source of funding to cover the semi-annual interest payments to farmers over the total term of the contract. There are also additional administrative costs involved in establishing and operating the program. The settlement costs of IPAs may be greater than other preservation methods due to the involvement of bond counsel, a paying agent, and a financial advisor.

However, in spite of these additional administrative resources, IPAs offer substantial benefits to both landowners and jurisdictions. The landowner is guaranteed a steady stream of secondary income through the semi-annual payments and is able to defer capital gains taxes until the principle is paid at the end of the contract term. For jurisdictions, IPAs offer a risk-adverse way to preserve more land with less funding. The installment purchase system has been used frequently in Burlington County and some counties in Maryland and Virginia, although Cumberland County has not used this system. However, IPAs are now mandatory in Salem County, New Jersey.

#### **4.2.10 Donation**

Land, or the development rights to the land, can be donated by a landowner to a public entity or a non-profit organization, either directly or through a will. The contribution is tax-deductible and can be used effectively in estate planning. Such a donation will, of course, ensure that the land remains free from development.

#### **4.2.11 Agricultural Enterprise District**

Like an Urban Enterprise Zone program, an Agricultural Enterprise District is a designated area where businesses (in this case, farm operators) have the opportunity to voluntarily participate and take advantage of important economic benefits. These can include benefits similar to those provided by the SADC eight-year preservation program, in addition to streamlined and expedited water allocation certification, cost-free business plans, management and training services, financial and estate planning, expedited approvals on government loans and costs shares, minimum wage offset grants, broader exemption from sales tax, and other incentives. In turn, the farm owner enters into a term agreement during which the farm is preserved through an agricultural easement. The program also has right of first refusal if the owner chooses to sell the property.

The Cumberland County Board of Agriculture and the Cumberland County Agriculture Development Board proposed this concept in 1990 in a white paper produced by the two organizations. In 2006, a Pilot Agricultural Enterprise District was proposed for the Gloucester, Salem, and Cumberland County region by the Tri-County Agricultural Retention Partnership (TARP), which is a collaboration of farmers and organizations working in support of agriculture and farm preservation in the area. Such a project requires state approval and allocation of funding similar to the state's eight-year preservation program. It also requires approval by the three counties. At this time (Summer 2008), Salem and Cumberland County's Boards of Agriculture and County Agricultural Development Boards have all approved the concept and Gloucester County approval is currently being sought. Municipalities could opt into such a program if it is approved at the state and county levels.

#### **4.2.12 Eight-Year Program**

Farmers can participate in an eight-year farmland preservation program to temporarily preserve their land for eight years. This program can serve as a trial period for farmers to see if preservation is the right choice for them. There is both a municipal and non-municipal eight-year program, although Cumberland County utilizes the non-municipally approved eight-year program. This program requires that the property remain in agricultural production and places restrictions on allowable non-agricultural development on the property during the eight-year period. Although this program offers no direct compensation, farmers are offered a number of incentives to participate in the program, including grants covering up to 50 percent of the cost of approved soil and water

conservation projects, use of farm structures without approval from an architect or engineer, and points towards the purchase of development easements. According to the SADC, Cumberland County currently has 13 farms participating in the eight-year program, covering over 400 acres of farmland in five municipalities. Renewed funding of the eight-year program is necessary to continue the soil and water conservation programs it supports.

#### **4.3 CONSISTENCY WITH SADC STRATEGIC TARGETING PROJECT**

The goals of the Strategic Targeting Project of the SADC are to protect large areas of reasonably contiguous, high-quality farmland that will promote the long-term economic viability of the agriculture industry through the Planning Incentive Grant (PIG) program, as discussed in **Section 4.2.2: Planning Incentive Grants**. The targeting of farms in this plan is consistent with the goals and strategies of the Strategic Targeting Project. The Strategic Targeting Project has three primary goals: to coordinate farmland preservation and agricultural retention efforts with proactive planning initiatives; to update or create maps used to target preservation efforts; and to coordinate farmland preservation efforts with open space, recreation, and historic preservation investments. The Strategic Targeting Project focuses prioritization on areas containing soils of prime farmland and statewide importance and which are located outside of sewer service areas. For this plan, a number of considerations were taken into account to determine which farms to target, including proximity to preserved farmland and the size of the farm. As discussed in **Section 4.1.1: Designation Criteria**, the ADA was identified based on agricultural land containing soils of prime farmland or of statewide importance located in a PA3, PA4, PA4B, or PA5 Planning Area. The Project Areas were drawn around concentrations of preserved farmland, all of which are within those Planning Areas, and the majority of which have high-quality soils.

#### **4.4 COORDINATION WITH OPEN SPACE PRESERVATION PROGRAMS**

Farmland preservation in Cumberland County is a key component of open space planning that protects valuable and sensitive ecosystems from development. New Jersey's Landscape Project is an initiative to map wildlife habitat critical to the conservation of imperiled species. The Landscape Project identifies emergent wetlands, forested wetlands, upland forest, grassland, and beach areas that are critical or suitable as habitat for threatened or endangered wildlife. Critical habitat consists of locations where occurrences of federal or state threatened or endangered species (T & E species) have been documented. Suitable habitat lacks documented records of T & E species but is the type and extent of habitat that could support such species, or it is habitat that does support documented occurrences of species of special concern in New Jersey.

In Cumberland County, an overwhelming 77 percent of land has been identified as either critical or suitable habitat, as shown in the table below. Cumberland County has an enormous wealth of natural resources and thriving ecosystems, and preserving farmland in the county is an essential element of open space planning that prevents development from

encroaching on the habitat of threatened and endangered species. See **Map 11: Landscape Project Priority Habitats (2007)**.

**Table 15: Landscape Project Priority Habitats (2007)**

Category	Rank	Area (Acres)	% of Total Habitat	% of All Land
Emergent Wetlands	Critical Habitat	43,490.97	17.57%	13.55%
	Suitable Habitat	5,792.30	2.34%	1.80%
		<b>49,283.27</b>	<b>19.91%</b>	<b>15.35%</b>
Forested Wetlands	Critical Habitat	30,158.45	12.18%	9.39%
	Suitable Habitat	14,663.99	5.92%	4.57%
		<b>44,822.44</b>	<b>18.11%</b>	<b>13.96%</b>
Upland Forest*	Critical Habitat	81,293.55	32.84%	25.32%
	Suitable Habitat	15,247.30	6.16%	4.75%
		<b>96,540.84</b>	<b>39.00%</b>	<b>30.07%</b>
Grassland	Critical Habitat	26,723.88	10.80%	8.32%
	Suitable Habitat	30,025.55	12.13%	9.35%
		<b>56,749.43</b>	<b>22.93%</b>	<b>17.68%</b>
Beach	Critical Habitat	133.30	0.05%	0.04%
	Suitable Habitat	11.82	0.00%	0.00%
		<b>145.13</b>	<b>0.06%</b>	<b>0.05%</b>
<b>Total Habitat</b>		<b>247,541.11</b>	<b>100.00%</b>	<b>77.11%</b>
<b>Total Cumberland Co Land</b>		<b>321,015.04</b>		<b>100.00%</b>
*Due to overlap of forested wetlands and upland forest layers, upland forest acres and percentages were calculated excluding area where overlap occurs.				

Source: NJDEP, 2007

The New Jersey Natural Heritage Program is another state initiative to identify natural areas where rare plant and animal species are present. The Natural Heritage Program maintains a comprehensive inventory of the distribution, biology, status, and preservation needs of more than 1,000 species and ecological communities. Natural Heritage Priority Sites are locations that have been identified as critically important areas with the highest priority for the conservation of New Jersey's biological diversity. Cumberland County contains all or part of nineteen Natural Heritage Priority Sites, as shown in the table below. Each site is ranked according to its significance for biological diversity on a scale from B1 (outstanding significance) to B5 (general biodiversity interest).

**Table 16: Natural Heritage Priority Sites**

Site Name	Municipality	Biodiversity Rank	Area (Acres)
Bear Swamp	Downe Twp ; Commercial Twp	B2	6,808.055
Belleplain Pond South	Dennis Twp ; Maurice River Twp	B2	4.493
Bluebird Branch	Fairfield Twp ; Millville City	B3	2,764.019
Cedarville Middle Brook	Lawrence Twp	B3	731.045
Cumberland Woods	Maurice River Twp ; Millville City	B4	28.891

Site Name	Municipality	Biodiversity Rank	Area (Acres)
Hansey Creek Road Site	Downe Twp	B4	77.069
Hunters Mill Site	Maurice River Twp; Estell Manor City	B2	172.314
Lanings Wharf Site	Fairfield Twp	B4	331.195
Lummis Pond	Lawrence Twp	B3	884.490
Main Avenue Station	Vineland City	B4	12.630
Manumuskin River	Maurice River Twp; Millville City	B2	1,650.452
Maurice River North	Commercial Twp; Millville City; Maurice River Twp	B3	2,282.089
Odd Pond	Maurice River Twp	B3	85.685
Parvin Lake	Pittsgrove Twp; Deerfield Twp	B3	72.987
Peaslee Pond	Maurice River Twp	B3	126.896
Shaws Mill Pond	Lawrence Twp; Downe Twp	B2	1,009.845
Shermans Avenue Site	Vineland City; Millville City; Deerfield Twp	B4	787.016
Sockwell Road Pond	Commercial Twp	B5	227.575
Stathems Neck and Mad Horse Creek	Lower Alloways Creek Twp; Greenwich Twp; Stow Creek Twp	B4	408.722
<b>Total</b>			<b>18,465.466</b>

Source: NJDEP, 2007

The state, county, and nonprofit organizations have been very effective at preserving large tracts of open space in Cumberland County. In addition to its 13,500 acres of preserved farmland, there are over 100,000 acres of preserved open space. The vast majority of this, nearly 72,000 acres, is state-owned open space, much of which is located in Downe Township and Maurice River Township. Much, but not all, of this consists of tidal or freshwater marshes. See **Map 16: Project Areas, Farm Assessed, Target & Preserved Farms**.

The *Cumberland County Farmland Preservation, Open Space, Parks, and Recreation Trust Fund Plan* published in 1996 identifies Easement Purchase Target areas that are largely consistent with the project areas in the farmland plan. The Easement Purchase Target areas are concentrated in the western portion of the county in addition to an area in eastern Vineland. Among other goals, the plan promotes purchasing easements to preserve farmland, adopting conservation design ordinances by municipalities, increasing collaboration to strategically target preservation, creating a coordinated network of agriculture and open space, and cultivating a philosophy of preservation. So far, the Cumberland County Open Space and Farmland Preservation Trust Fund Tax has been used solely for farmland preservation rather than for other open space purchases. Although agricultural preservation has been the priority of this fund, the county is committed to participate in the open space and recreation planning process.

There are no specific county policies regarding open space purchases in agricultural areas or purchases of farmland for open space purposes and no existing or planned trail networks in agricultural areas. The Cumberland County Board of Freeholders has recently decided

to develop an Open Space and Recreation Plan for the county. Undoubtedly, many of these issues will be addressed in that planning process.

#### 4.5 CUMBERLAND COUNTY FARMLAND PRESERVATION PROGRAM

According to the 2007 Census of Agriculture, Cumberland County contains 615 farms and 69,489 acres of farmland. Of this, over 100 farms on 274 parcels covering 13,501 acres (19% of all farmland) had been preserved as of August 2008. The vast majority of these farms have been preserved by the county. The state (SADC) preserved 27 parcels through easement purchases, six by fee-simple, and five by donation. Nonprofit conservation groups preserved four farm parcels through easement purchases and one parcel by fee-simple. Additionally, 26 farms and 1,790 acres received final approval and were pending preservation as of August 2008.

*Table 17: Preserved Farmland by Municipality*

Municipality	Number of Preserved Parcels	Amount of Preserved Farmland (Acres)
Upper Deerfield	71	3,846.07
Hopewell	67	3,004.85
Greenwich	39	1,684.03
Fairfield	32	1,347.82
Maurice River	5	1,170.60
Lawrence	8	864.13
Stow Creek	18	697.07
Deerfield	3	344.30
Vineland	25	319.04
Downe	4	184.83
Shiloh	2	38.67
<b>Total</b>	<b>274</b>	<b>13,501.42</b>

*Sources: SADC and Cumberland County Department of Planning and Development, August 2008*

Most preservation activity in the county has been focused in Hopewell and Upper Deerfield townships, although all municipalities are encouraged to have their farmers apply for preservation. Bridgeton, Millville, and Commercial Township are the only municipalities without preserved farmland. The table above shows the amount of preserved farmland in each municipality in Cumberland County.

All preserved and pending preservation farms as of August 2008 are shown on **Map 15: Protected Open Space, Preserved Farms, & Eight-Year Farms** and are listed in **Appendix B: Preserved Farms in Cumberland County, August 2008**.

#### 4.6 FARMLAND PRESERVATION PROGRAM FUNDING TO DATE

Preservation of the 13,501 acres of preserved farmland in Cumberland County as of August 2008 has been achieved primarily through the efforts of the county and state. Additional funding has been provided by nonprofit organizations such as the Nature Conservancy, as

well as federal money from the Farm and Ranch Lands Protection Program. The total cost of farmland preservation has been over \$23 million, of which over \$17 million has come from the state. The county's funds are generated by the Cumberland County Open Space and Farmland Preservation Trust Fund Tax, which is discussed in more detail in **Section 5.6.1: County Funding Sources**. There have been no municipal contributions to farmland preservation in Cumberland County so far.

#### **4.7 MONITORING PRESERVED FARMLAND**

The Cumberland County Farmland Preservation Program conducts annual monitoring of preserved farmland through its regular monitoring program. The CADB is responsible for monitoring easements held by the county, and the SADC is responsible for easements held by the state. Each farm that has been in the Farmland Preservation Program for at least 12 months is inspected to ensure compliance with the requirements of the program. The monitoring program checks to make sure that no new non-agricultural buildings have been constructed without prior approval, that pre-existing non-agricultural uses have not been expanded, and that the site appears to be a functioning and viable agricultural operation.

#### **4.8 COORDINATION WITH TDR PROGRAMS**

The *Hopewell Township Development Transfer Plan Element* of the municipal Master Plan describes the Transfer of Development Rights (TDR) program in Hopewell Township. The details of TDR programs are described in **Section 4.2.5: Transfer of Development Rights (TDR)**. The purpose of Hopewell's TDR program is to preserve large contiguous areas of farmland and to concentrate growth within a town center along Route 49 adjacent to Bridgeton. The areas recommended for preservation are consistent with the project areas in this plan, and TDR receiving areas have been excluded from the project areas. The one exception to this is a farm on the southern edge of the receiving area that has applied for farmland preservation through purchase of its development easement. This property, consisting of five parcels, is adjacent to preserved farms and all soils consist of prime farmland.

The Western/Southern Cumberland Region Strategic Plan includes discussion of TDR possibilities in Cumberland County. The project areas in this Farmland Plan are consistent with those ideas, as well.

## **5.0 FUTURE FARMLAND PRESERVATION PROGRAM**

### **5.1 FARMLAND PRESERVATION PLANNING GOALS AND OBJECTIVES**

The 2005 Cumberland County Farmland Preservation Plan stated that the main goal of the preservation program was “to preserve, to the greatest extent possible, lands that make up the core areas of the Cumberland County agricultural industry.” The plan proposed a one year goal of 600 acres, a five year goal of 5,000 acres, and a ten year goal of 10,000 acres. This current plan increases those preservation goals only modestly. The main purpose of the preservation program remains the same.

To arrive at meaningful goals for county preservation efforts is always difficult, given the entirely voluntary nature of the farmland preservation program. Nonetheless, the total area of target farms within designated project areas can be divided across a ten year period of time. To the degree that Cumberland County can increase preservation in the earlier years above these goal levels, it can maximize the benefits of the Planning Incentive Grant funding.

An expanded purpose statement for the Cumberland County Farmland Preservation Plan is as follows:

*Agriculture is a leading industry and way of life for Cumberland County and of the region’s character. Preservation of the lands essential to that industry is a major purpose of this Plan, along with strengthening efforts to support farmers, farming, and the agricultural industry of Cumberland County whenever possible.*

### **5.2 PROJECT AREAS**

“Project areas” are areas with high concentrations of farm-assessed parcels, preserved farmland, and high quality farmland soils. A total of fourteen project areas have been identified in Cumberland County. These project areas are consistent with the State Plan because they are within the Rural, Rural Environmentally Sensitive, and Environmentally Sensitive Planning Areas. The summaries in this section describe six categories of land within each project area:

- i. Target farms
- ii. Parcels from which an application for the sale of a development easement has been granted final approval
- iii. Parcels from which development easements have been purchased
- iv. Other permanently deed restricted farmlands
- v. Parcels enrolled in an eight-year preservation program
- vi. Other permanently preserved lands dedicated for open space

Target farm parcels are those with the highest priority for preservation. Farm-assessed parcels were identified as target farms based on contiguity with preserved farmland, size (greater than 10 acres), high-quality farmland soils, and local knowledge. In some cases, parcels less than



ten acres were targeted if they were contiguous to one or more parcels with the same owner, and the aggregate size was greater than 10 acres. The percentage of each category of land refers to its percentage of each project area. The density of each project area is expressed as a ratio between the total area of all properties listed in categories ii, iii, iv, v, and vi and the total area of the project area. There are no “other permanently deed restricted farmlands” in Cumberland County, and so this category has been excluded. The following two tables summarize the county’s fourteen project areas. **Table 19: Soil Productivity on Target Farms** shows the amount of prime, statewide, and unique soils within the targeted farms, not the entire project area.

The Project Areas within Cumberland County are depicted on **Map 16: Project Areas, Farm Assessed, Target & Preserved Farms** and are shown individually on **Maps 17A through 17K**.



**Table 18: Cumberland County Project Areas**

Project Area Name	Total Acres	Target Farms		Final Approval Farms				Preserved Farms		Eight Year Farms		Open Space Lands		Density
		#	Acres	Final & Target #	Final & Target Acres	Final & Non-Target #	Final & Non-Target Acres	#	Acres	8 Year & Target #	8 Year & Target Acres	#	Acres	
Deerfield-Upper Deerfield South	4,932	21	678	7	135	0	0	4	195	0	0	0	0	7%
Deerfield-Upper Deerfield North	10,152	97	3,148	7	182	4	67	67	3,851	0	0	1	19	41%
Fairfield East	539	1	181	0	0	0	0	1	23	0	0	0	0	4%
Fairfield- Lawrence	4,958	30	1,161	0	0	0	0	30	1,309	0	0	12	393	34%
Greenwich	5,610	50	2,560	8	694	2	17	38	1,610	0	0	2	19	42%
Hopewell South	5,595	45	1,786	0	0	0	0	28	1,376	1	58	7	559	36%
Lawrence Central	985	2	96	0	0	0	0	1	172	0	0	12	336	52%
Lawrence East	616	6	209	2	47	0	0	1	20	0	0	5	130	32%
Lawrence West	2,255	8	418	0	0	0	0	6	672	0	0	7	467	51%
Shiloh- Hopewell Central	3,067	23	1,336	0	0	0	0	17	727	3	234	1	2	31%
Shiloh- Hopewell North	6,031	47	1,989	3	154	0	0	21	908	0	0	0	0	18%
Stow Creek	7,783	76	3,191	1	77	0	0	18	697	1	30	3	89	11%
Stow Creek North	1,051	7	577	0	0	0	0	0	0	0	0	0	0	0%
Vineland	2,564	44	513	2	28	0	0	25	319	6	55	1	8	16%
<b>Total</b>	<b>56,138</b>	<b>457</b>	<b>17,843</b>	<b>30</b>	<b>1,317</b>	<b>6</b>	<b>84</b>	<b>257</b>	<b>11,881</b>	<b>11</b>	<b>377.3</b>	<b>51</b>	<b>2,021</b>	

Source: SADC, Cumberland County Department of Planning and Development, DVRPC, 2008

**Table 19: Soil Productivity on Target Farms**

Project Area Name	Target Farm Soil Acres	Prime Acres	Prime %	Statewide Acres	Statewide %	Unique Acres	Unique %	Total Productive Soil Acres	Total Productive Soil %
Deerfield-Upper Deerfield South	678	560	83%	58	9%	57	8%	675	100%
Deerfield-Upper Deerfield North	3,148	2,814	89%	255	8%	62	2%	3,131	99%
Fairfield East	181	156	86%	25	14%	0	0%	181	100%
Fairfield-Lawrence	1,161	740	64%	347	30%	72	6%	1,159	100%
Greenwich	2,560	1,416	55%	719	28%	320	13%	2,456	96%
Hopewell South	1,786	1,139	64%	370	21%	197	11%	1,706	96%
Lawrence Central	96	16	16%	71	74%	3	3%	90	94%
Lawrence East	209	206	98%	0	0%	3	2%	209	100%
Lawrence West	418	220	53%	109	26%	88	21%	417	100%
Shiloh-Hopewell Central	1,336	1,024	77%	249	19%	19	1%	1,292	97%
Shiloh-Hopewell North	1,989	1,802	91%	107	5%	80	4%	1,988	100%
Stow Creek	3,191	1,980	62%	887	28%	229	7%	3,095	97%
Stow Creek North	577	500	87%	61	11%	17	3%	577	100%
Vineland	513	331	65%	128	25%	54	11%	513	100%
<b>Total</b>	<b>17,843</b>	<b>12,902</b>	<b>72%</b>	<b>3,387</b>	<b>19%</b>	<b>1,201</b>	<b>7%</b>	<b>17,490</b>	<b>98%</b>

Source: SADC, Cumberland County Department of Planning and Development, DVRPC, 2008

### **5.2.1 Deerfield-Upper Deerfield South**

The Deerfield-Upper Deerfield South project area encompasses 4,932 acres in the southern portions of both Deerfield and Upper Deerfield Townships. This project area contains 21 target farm parcels which cover 678 acres (14%). There are seven parcels with applications that have been granted final approval, all of which are targeted farms. There are four parcels covering 195 acres (4%) from which development easements have been purchased. There are no other permanently deed restricted farmlands, nor are there any farms currently enrolled in an eight-year farmland preservation program. Additionally, there are no permanently preserved lands dedicated for open space. The density (ratio of all preserved categories to total project area) of this project area is 7 percent. Of the 678 acres of target farms, 675 (100%) are on important farmland soils.

### **5.2.2 Deerfield-Upper Deerfield North**

The Deerfield-Upper Deerfield North project area covers 10,152 acres in the northern portions of Deerfield and Upper Deerfield Townships bordering Salem County. This project area contains 97 target farm parcels covering 3,148 acres (31%). There are 11 parcels with applications that have been granted final approval, seven of which have been targeted. The remaining four parcels with final approval cover 67 acres (0.7%). There are 67 parcels covering 3,851 acres (38%) that have been permanently preserved through the sale of development easements. There are no other permanently deed restricted farmlands, nor are there any farms currently enrolled in an eight-year farmland preservation program. There is one parcel covering 19 acres (0.2%) that has been locally preserved as open space. The density of this project area is 41 percent. Of the 3,148 acres of target farms, 3,131 (99%) are on important farmland soils.

### **5.2.3 Fairfield East**

The Fairfield East project area totals 539 acres in the eastern portion of Fairfield Township. This project area contains only one large target farm parcel that covers 181 acres (34%). There are no farms with applications that have been granted final approval. There is one 23-acre parcel (4%) that has been preserved through the purchase of a development easement. There are no other permanently deed restricted farmlands, nor are there any farms in an eight-year preservation program. There is also no preserved open space in the Fairfield East project area. The density of the Fairfield East project area is 4 percent. All 181 target farm acres (100%) are on important farmland soils.

### **5.2.4 Fairfield-Lawrence**

The Fairfield-Lawrence project area encompasses 4,958 acres in both Fairfield and Lawrence Townships. There are 30 target farm parcels covering 1,161 acres (23%). There are no farms with applications that have been granted final approval. This project area contains 30 farmland

parcels covering 1,309 acres (26%) that have been preserved through easement purchases. There are no farms enrolled in an eight-year preservation program. There are also 12 parcels totaling 393 acres (8%) that have been preserved as open space by either the state or the Nature Conservancy. The density of the Fairfield-Lawrence project area is 34 percent. Of the 1,161 acres of target farms, 1,159 (100%) are on important farmland soils.

### **5.2.5 Greenwich**

The Greenwich project area totals 5,610 acres and covers most of the eastern side of Greenwich Township. There are 50 target farm parcels totaling 2,560 acres (46%). There are 10 parcels that have been granted final approval for preservation, eight of which are target farm parcels. The remaining two parcels with final approval cover 17 acres (0.3%). There are 38 farmland parcels covering 1,610 acres (29%) that have been preserved through direct easement purchases. There are no other permanently deed restricted farmlands, nor are there any farms enrolled in an eight-year preservation program. There is one state-owned and one locally-owned open space parcel which total 19 acres (0.3%). The density of the Greenwich project area is 42 percent. Of the 2,560 acres of target farms, 2,456 (96%) are on important farmland soils.

### **5.2.6 Hopewell South**

The Hopewell South project area totals 5,595 acres and is located in the southern third of Hopewell Township. There are 45 target farm parcels covering 1,786 acres (32%). There are no farms with applications that have received final approval for preservation. There are 28 farmland parcels covering 1,376 acres (25%) from which development easements have been purchased. There are no other permanently deed restricted farmlands. There is one 58-acre parcel (1%) that is currently enrolled in an eight-year preservation program, which is also targeted. There are seven parcels covering 559 acres (10%) that have been permanently preserved as open space. The density of the Hopewell South project area is 36 percent. Of the 1,786 acres of target farms, 1,706 (96%) are on important farmland soils.

### **5.2.7 Lawrence Central**

The Lawrence Central project area totals 985 acres. There are two target farm parcels totaling 96 acres (10%). There are no farms with applications that have received final approval for preservation. There is one 172-acre farmland parcel (17%) that has been preserved by the Nature Conservancy. There are no farms enrolled in an eight-year preservation program. There are 12 parcels covering 336 acres (34%) that have been permanently preserved as open space. The Lawrence Central project area has a density of 52 percent. Of the 96 acres of target farms, 90 (94%) are on important farmland soils.

### **5.2.8 Lawrence East**

The Lawrence East project area covers 616 acres in the eastern portion of Lawrence Township near the border with Millville. This project area contains six target parcels covering 209 acres (34%). There are two farms with applications that have received final approval, both of which have been targeted. This project area contains one 20-acre farm (3%) from which a development easement has been purchased. There are no other permanently deed restricted farmlands, nor are there any farms enrolled in an eight-year preservation program. There are five parcels covering 130 acres (21%) that have been permanently preserved as open space. The density of the Lawrence East project area is 32 percent. All 209 acres of target farms (100%) are on important farmland soils.

### **5.2.9 Lawrence West**

The Lawrence West project area encompasses 2,255 acres in the southwest portion of Lawrence Township. There are eight target farms in this project area totaling 418 acres (19%). There are no farms with applications for preservation that have received final approval. This project area contains six parcels covering 672 acres (30%) from which development easements have been purchased. There are no other permanently deed restricted farmlands, nor are there any farms enrolled in an eight-year preservation program. There are seven parcels covering 467 acres (21%) that have been preserved as open space by the state or the Nature Conservancy. The density of the Lawrence West project area is 51 percent. Of the 418 acres of target farms, 417 (100%) are on important farmland soils.

### **5.2.10 Shiloh-Hopewell Central**

The Shiloh-Hopewell Central project area covers 3,067 acres in the southern portion of Shiloh Borough and the central portion of Hopewell Township. There are 23 target farm parcels covering 1,336 acres (44%). There are no farms with applications for preservation that have received final approval. There are 17 parcels totaling 727 acres (24%) from which development easements have been purchased. There are no other permanently deed restricted farmlands. There are three farms that are enrolled in an eight-year preservation program, all of which have been targeted for permanent preservation. There is an additional 2-acre parcel that has been preserved as open space. The Shiloh-Hopewell Central project area has a total density of 31 percent. Of the 1,336 acres of target farms, 1,292 (97%) are on important farmland soils.

### **5.2.11 Shiloh-Hopewell North**

The Shiloh-Hopewell North project area covers 6,031 acres in the eastern portion of Shiloh Borough and the northern portion of Hopewell Township. There are 47 target farm parcels covering 1,989 acres (33%). There are three farms with applications for preservation that have received final approval, all of which have been targeted for preservation. There are 21 parcels

totaling 908 acres (15%) from which development easements have been purchased. There are no other permanently deed restricted farmlands, nor are there any farms enrolled in an eight-year preservation program. There are no other lands that have been preserved as open space. The Shiloh-Hopewell North project area has a total density of 18 percent. Of the 1,989 acres of target farms, 1,988 (100%) are on important farmland soils.

#### **5.2.12 Stow Creek**

The Stow Creek project area totals 7,783 acres and encompasses the majority of land in Stow Creek Township. There are 76 target farm parcels covering 3,191 acres (41%). Many target farms in the Stow Creek project area have been specifically identified as important areas to be preserved even if not contiguous to already preserved farmland. There is one farm with an application for preservation that has received final approval and which has been targeted for preservation. There are 18 parcels totaling 697 acres (9%) from which development easements have been purchased. There are no other permanently deed restricted farmlands. There is one 30-acre farm (0.4%) enrolled in an eight-year preservation program, which has also been targeted. There are three parcels covering 89 acres (1%) that have been preserved as open space. The Stow Creek project area has a total density of 11 percent. Of the 3,191 acres of target farms, 3,095 (97%) are on important farmland soils.

#### **5.2.13 Stow Creek North**

The Stow Creek North project area covers 1,051 acres in the northeastern portion of Stow Creek Township. There are 7 target farm parcels covering 577 acres (55%). Like the Stow Creek project area, many of these farms are not contiguous to already preserved farmland, although they were specifically identified as important farms for preservation. There are no farms with applications for preservation that have received final approval. There are no parcels from which development easements have been purchased. There are no other permanently deed restricted farmlands, nor are there any farms enrolled in an eight-year preservation program. There are no other lands that have been preserved as open space. The Stow Creek North project area therefore has a zero total density. However, all 577 acres of target farms (100%) are on important farmland soils.

#### **5.2.14 Vineland**

The Vineland project area covers 2,564 acres in the eastern portion of Vineland City. There are 44 target farm parcels covering 513 acres (20%). There are two farms covering 28 acres (1%) with applications for preservation that have received final approval, which have also been targeted. There are 25 farmland parcels covering 319 acres (12%) from which development easements have been purchased. There are no other permanently deed restricted farmlands. There are six parcels totaling 55 acres (2%) enrolled in an eight-year preservation program, which have been targeted. There is one 8-acre parcel (0.3%) that has been preserved as open

space. The total density of the Vineland project area is 16 percent. All (100%) of the 513 acres of target farms are on important farmland soils.

### **5.3 MINIMUM ELIGIBILITY CRITERIA**

The SADC's new rules at N.J.A.C. 2:76-6.20 set forth minimum eligibility criteria for all farms participating in preservation programs such as the Planning Incentive Grant, and Cumberland County's program is consistent with these criteria. According to these standards, all participating farms in Cumberland County must meet the following criteria:

For lands less than or equal to 10 acres in size:

- the land must produce agricultural or horticultural products of at least \$2,500 annually;
- at least 75 percent of the land must be tillable or a minimum of five acres, whichever is less;
- at least 75 percent of the land, or a minimum of five acres, whichever is less, must consist of soils that are capable of supporting agricultural or horticultural production; and
- the land must exhibit development potential based on certain standards.

For lands greater than 10 acres in size:

- at least 50 percent of the land or a minimum of 25 acres, whichever is less, must be tillable;
- at least 50 percent of the land, or a minimum of 25 acres, whichever is less, must consist of soils that are capable of supporting agricultural or horticultural production; and
- the land must exhibit development potential based on standards set forth in the rule.

Cumberland County has chosen 12 acres as the minimum size for Target farms. However, farms less than 12 acres will also be considered if they meet the other criteria and are in a strategic location adjacent to two or more preserved farms.

### **5.4 RANKING CRITERIA**

The Cumberland County Agriculture Development Board (CADB) has developed an Easement Purchase Program Scoring Worksheet that ranks farms based on six criteria: soil quality, boundaries and buffers, local commitment, size and density, degree of imminence of change, and special considerations. See **Appendix F: Ranking Criteria**.

Within the boundaries and buffers criteria, a compatible perimeter buffer may include deed-restricted farms, farms in the eight-year preservation program, state or municipal restricted wild areas, streams, parks, and woodlands.

Within the degree of imminence of change criteria, parcels are judged to be highly developable if they are suitable for septic. Also, they are judged to be under threat of development based



on current zoning, size (and if the farm is greater than six acres in size), and location. The location is judged to be under threat of development if it lacks large wetlands areas and is located outside a conservation zone or historic district. Under these criteria most farms that apply to the current county program receive a “yes” score.

The County intends to continue using the Scoring Worksheet, especially because it has succeeded in the past in directing county preservation funding to the best and most viable farms among applicants.

## **5.5 POLICIES RELATED TO FARMLAND PRESERVATION APPLICATIONS**

### **5.5.1 Approval of Housing Opportunities**

Agricultural labor housing must be approved by the SADC and the CADB, who both recognize the need to house those who work on farms. The housing must be determined to be for an agricultural purpose and shall not be used as a residence for the landowner or contract purchaser or their family members. The application shall be submitted directly to the agency that holds the easement, either the CADB or the SADC. The location and construction of the residential unit must be in compliance with all municipal ordinances. As discussed in **Section 6.2.1: Farmer Support**, there are a number of financing opportunities to enable farmers to construct housing for agricultural labor.

Replacement housing must also be approved by the SADC and the CADB. The county has no additional policies on replacement housing beyond the state requirements.

According to SADC Policy P-31, the intent of a Residual Dwelling Site Opportunity (RDSO) is to provide the limited future construction of a residential unit or units for agricultural purposes on presently preserved farms. Each request must first be approved by the CADB and then evaluated by the SADC. The landowner must complete a CADB/SADC application and adequately explain how the construction and use of the residential unit is for agricultural purposes. The residential unit must be occupied by at least one person engaged in farming activities, including production, harvesting, storage, grading, packaging, processing, or sale of crops, plants, or animals. The location of the dwelling unit must be approved by the municipal planning board. RSDOs are to be allocated at a density not to exceed one unit per 100 acres, including existing dwellings. There are no restrictions on the relationship of the occupant(s) of the unit and the owner of the premises; therefore, the unit can be used for agricultural labor housing. If approved, the applicant has up to three years from the date of approval to construct the residential unit. If approved, the RDSO cannot be transferred to another individual.

### **5.5.2 Division of the Premises and Approval of Exceptions**

Cumberland County policies pertaining to division of premises, and approval of exceptions will accord with all state requirements. The application for farmland preservation allows for a portion of the property to be excepted from (not included in) the preservation. This exception

can be either severable or non-severable. A severable exception can be sold separately from the remainder of the premises and can be subdivided, neither of which is possible with a non-severable exception.

As described in SADC Policy P-30-A, a landowner wishing to divide a permanently deed-restricted parcel must receive the joint approval to do so from the CADB and the SADC. The SADC's main objective in preserving land is to retain large masses of viable agricultural land; agricultural parcels become less viable if reduced in size. A landowner requesting a division of premises must answer a series of questions relating to the current and proposed lot lines of the parcel, the current and proposed agricultural use of the parcel, and future agricultural viability, such as access and soil quality, of the preserved parcel(s). The division must also be for an agricultural purpose. If a landowner can satisfactorily demonstrate that the new parcels can support viable agricultural operations, the CADB and the SADC may approve the division.

The current view of the CADB is that these issues are very site-specific and may need to be dealt with on a case-by-case basis, as they are now. However, the Board does intend to review policies regarding housing opportunities, division of the premises, and approval of exceptions over the course of the next 12 months.

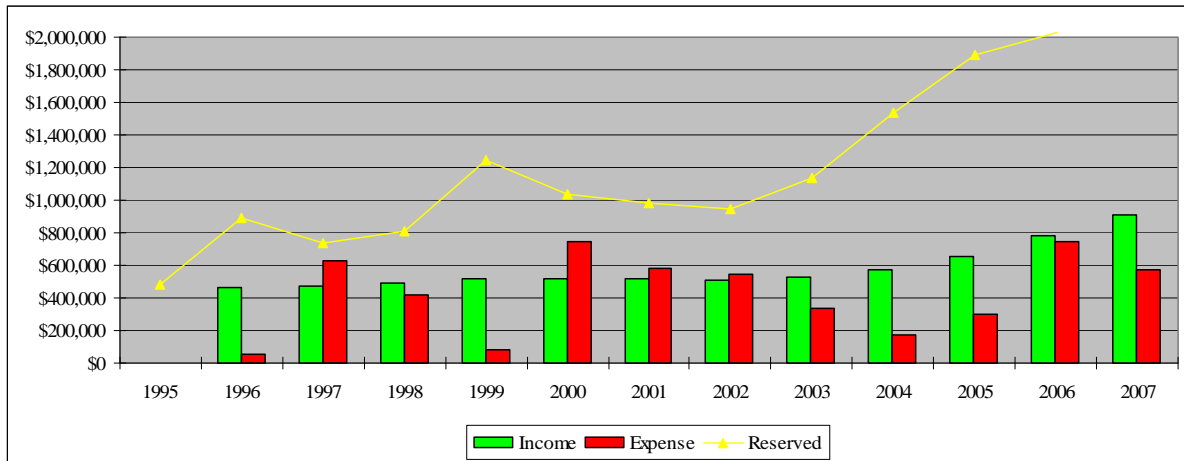
## **5.6 FUNDING PLAN**

### **5.6.1 County Funding Sources**

Farmland preservation in Cumberland County has primarily been funded by state and county sources. Conservation groups (such as the Nature Conservancy) have played a much smaller role. For future preservation, potential sources of funding could include municipalities, the federal government, corporations, or private organizations.

Cumberland County purchases development easements with a combination of county and state funds. County funds come from the Cumberland County Open Space and Farmland Preservation Trust Fund Tax, which is generated from a one-cent tax on every \$100 of assessed property and which is dedicated to preserving farmland and open space in the county. The Trust Fund was established after it passed a ballot resolution in 1994. The Trust Fund began accumulating income in 1995 while expenditures began in the following year, which created a surplus account balance. In eight of the last 12 years, the Trust Fund has generated more income than it has spent, as seen in the chart below. In 2007, the Trust Fund yielded \$906,205 from tax and accumulated interest.

**Figure 4: Cumberland County Open Space and Farmland Preservation Trust Fund**



Source: Cumberland County Department of Planning and Development, 2008

### 5.6.2 Financial Policies Related to Cost-Share Requirements

The county share of funding has ranged from 20 percent to 40 percent, depending on the per-acre value of the farm to be preserved. As the certified values of farms increased, the county share of funding also increased while the state share decreased. In the western side of the county where certified values typically ranged between \$1,500 and \$2,700 per acre, the state share was about 75 percent. In the Vineland area where certified values were typically greater than \$3,000 per acre, the state share was about 65 percent. See **Table 20: SADC Cost Share Scale** for the breakdown based on per-acre easement value.

The state funding has come from the New Jersey Garden State Preservation Trust, 40 percent of which is allocated for local acquisition and development projects through the administration of the State Agriculture Development Committee (SADC). The Garden State Preservation Trust (GSPT) was originally intended to continue until 2009, but funds from the Trust were expended more rapidly than expected. A resolution on the November 2007 ballot in which GSPT funding was proposed for a one-year period (fiscal year 2009: July 1, 2008 to June 30, 2009) was approved by the voters, but provided only \$75 million for the whole state. Another resolution on the November 2009 ballot proposed GSPT funding for a two-year period (fiscal year 2010 and 2011). This resolution was approved by New Jersey voters.

The SADC also reimburses the County Agricultural Development Board (CADB), which administers the county funding, for 50 percent of the costs of appraisals, title work, and surveying.

In addition to county funding of preservation, many New Jersey municipalities have adopted a municipal tax to support an Open Space and Farmland Preservation Trust Fund. This typically begins as a one-cent tax per \$100 of assessed property value but can be as high as nine cents per \$100. These funds usually also support historic preservation. They can be used for direct acquisition or as the municipal match to county and state funding. Trust funds are the source of matching dollars for most active recreation land acquisitions and their match to county

funding for farmland preservation often increases the ranking level of a particular farm. If the tax impacts of expanded school enrollments due to increased development are compared to the impact of a preservation tax, the preservation tax impact will always be substantially less. Since the 1980s, the American Farmland Trust has conducted Cost of Community Services Studies that determine the cost versus revenues for each type of land use. The findings of these studies not only reveal the high cost of residential development, but also the fiscal surplus generated by farmland.

A community may choose to fund its Preservation Trust through a means other than a tax. Annual allocations from general funds or direct bonding are two means used by some New Jersey communities. The objective is to have a dedicated source of funding for preservation within the community. In general, the amount of funding a municipality can generate is not enough to accomplish much direct preservation of land. Municipal funding can, however, provide bond financing that will provide substantial dollars for the preservation effort. A municipal Preservation Trust can also fund the planning and other direct costs of the municipal preservation program.

So far, no municipalities in Cumberland County have enacted a tax to support an Open Space and Farmland Preservation Trust. Only Upper Deerfield has established a Trust Fund, which is funded through an annual allocation from the operating budget. The township's leaders are considering enactment of a preservation tax, which would increase the amount flowing into the Trust Fund annually.

### **5.6.3 Cumberland County Preservation Goals, Cost Projections and Funding Plan**

Targeted farms in all the county Project Areas total 17,843 acres, of which 1,317 acres are currently under final preservation approval, leaving 16,526 acres of target farms. Using 65 percent of this figure results in a 10-year goal of 10,742 acres, rounded to 10,500 acres for estimation purposes. This is only 500 acres greater than the previous Cumberland County Farmland Preservation Plan's goal of 10,000 acres.

#### **Goals of the Plan – Easement Acquisitions**

One year = 1,050 acres  
Five years = 5,250 acres  
Ten years = 10,500 acres

The estimated cost to preserve farmland within Cumberland County's project areas is based on an average per-acre price of \$5,977. This price is the average per-acre appraisal valuation of easements on Cumberland County farms applying for preservation between 2005 and 2008. In each case, the value of the farm easement is based on appraisals by two independent state-certified appraisers. They each determine a fair market value for the farm based on comparable sales and also determine the agricultural value for the farm. The easement value or "development value" is the difference between these two market values. The two sets of appraisals are then reviewed by the SADC and a certified fair market value of the easement is

established, which can range from the lowest to the highest appraisal. This certified value becomes the offering price to the landowner.

The SADC has established a sliding scale for the amount it will contribute toward a farmland acquisition, based on the certified fair market value per acre, as shown below:

**Table 20: SADC Cost Share Scale**

<b>Certified Fair Market Value per Acre</b>	<b>SADC Cost Share Percentage</b>
From \$0.00 to \$1,000	80%
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
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

Source: SADC, 2008

The following table illustrates the amount of funding needed to preserve 65 percent of the Target Farms in Cumberland County's Project Areas over a ten-year time period, using the average per-acre easement price of \$5,977 as a starting point. To calculate estimated costs for the ten-year period, the average per-acre price has been increased by \$350 per year beginning in year three (2012).

**Table 21: Ten-Year Costs and Funding for 65 percent of Target Farms**

<b>State Fiscal Year</b>	<b>Goals-acreage</b>	<b>Per acre price</b>	<b>Total Cost</b>	<b>State share per-acre</b>	<b>State share</b>	<b>County Share</b>
2010	1,050	\$5,977	\$6,275,430	\$3,888	\$4,082,715	\$2,192,715
2011	1,050	\$5,977	\$6,275,430	\$3,888	\$4,082,715	\$2,192,715
2012	1,050	\$6,327	\$6,642,930	\$4,063	\$4,266,465	\$2,376,465
2013	1,050	\$6,677	\$7,010,430	\$4,238	\$4,450,215	\$2,560,215
2014	1,050	\$7,027	\$7,377,930	\$4,413	\$4,633,965	\$2,743,965
2015	1,050	\$7,377	\$7,745,430	\$4,588	\$4,817,715	\$2,927,715
2016	1,050	\$7,727	\$8,112,930	\$4,763	\$5,001,465	\$3,111,465
2017	1,050	\$8,077	\$8,480,430	\$4,938	\$5,185,215	\$3,295,215
2018	1,050	\$8,427	\$8,847,930	\$5,113	\$5,368,965	\$3,478,965
2019	1,050	\$8,777	\$9,215,430	\$5,288	\$5,552,715	\$3,662,715
<b>TOTAL</b>	<b>10,500</b>		<b>\$75,984,300</b>		<b>\$47,442,150</b>	<b>\$28,542,150</b>

Source: Cumberland County Department of Planning and Development and DVRPC, 2008

Revenue from the Cumberland County Open Space and Farmland Preservation Trust Fund Tax in 2007 was \$906,205, which is not adequate to meet the 2010 goal of preserving 1,050 acres.

Various options exist to increase this funding to a level that allows achievement of the goal, in addition to the natural increase in revenue that will come from rising assessment value during 2008 and 2009. These options include increasing the Trust Fund tax via voter approval and encouraging municipalities to establish their own trust funds. The county could also seek partial donations or bargain sales of easements to a greater degree and could consider setting up an installment purchase program that is beneficial to farm landowners, as well as to the county. The county could also reconsider the possibility of bonding and could pursue a regional Transfer of Development Rights (TDR) program rather than leaving TDR efforts at the municipal level where it is more difficult to accomplish.

The Cumberland County Agriculture Development Board and County Farmland Preservation Program have successfully protected over 13,500 acres of farmland since 1992, and especially since the establishment of the Trust Fund in 1995. The funding philosophy for farmland preservation throughout this period has been one of “pay-as-you-go,” with the amount spent and the number of farms acquired being only as great as trust fund revenues allowed directly. No form of indebtedness through bonding or other means has been necessary. This approach has the advantage of maintaining a high standard for preliminary acquisition approval, with only the top third of applicant easements being acquired. It has also permitted a steadier program of acquisition with roughly equal numbers of farms being preserved each year.



*Photo Courtesy of Ed Overdeest*

*Preserved Farm in Upper Deerfield Township*

Any program to increase funding that Cumberland County might consider will need to be structured to meet the county’s goals of maintaining both a high standard of quality and fiscal solvency. Bonding, for example, can be undertaken so that limits on expenditures are set for each year and the unspent portion of the bond actually generates additional revenue. An installment purchase program may require some effort to establish initially, but there are several models to follow. Burlington County in particular, with 20 years of experience, is willing to advise and assist.

**Municipal funding may actually become more available in Cumberland County. This is true for Upper Deerfield, which has completed a Farmland Preservation Plan and has applied for state Planning Incentive Grant funds. Their program could offset some of the county’s cost in that township by as much as 20 percent, freeing funds for other farmland preservation. Hopewell Township’s TDR Program is an additional option for landowners to compliment easement purchases. Other municipalities do not currently have programs in place to contribute to farmland preservation but might be interested in pursuing measures that would do so.**

## **5.7 FARMLAND PRESERVATION PROGRAM ADMINISTRATIVE RESOURCES**

The Cumberland County Planning Incentive Grant will be implemented by the Cumberland County Department of Planning and Economic Development, and particularly by the Farmland Preservation, Historic, and Cultural Program. The county staff and administration provide good support to these efforts and have extensive knowledge and experience, despite being modest in size. The CADB has its own legal counsel which is contracted annually by the Board of Freeholders. The county has a GIS coordinator to fulfill mapping needs and database development. There are also extensive resources on farming research, management, and practice available in Cumberland, as well as a very large number of equipment, processing, storing, and distribution facilities whose managers and owners are willing to lend assistance and support agricultural viability and growth. The farmers of Cumberland County are also highly committed to maintaining the health of well-being of the industry. See **Section 6: Economic Development** for specifics on resources, as well as the tables in **Appendix C**.

## **5.8 FARMLAND PRESERVATION PROGRAM LIMITATIONS**

The two primary limitations on the farmland preservation program in Cumberland County are funding and landowner interest. Farmland preservation depends upon the availability of adequate state funding and the county's ability to leverage those funds. The county may also consider the possibility of increasing the farmland preservation tax in the future. The need for funding could also be met by municipal contributions, which are currently not present in Cumberland County. The current uncertainty of state funding is a major challenge that needs to be addressed if farmland preservation is to be successful in the years to come.

Landowner interest in farmland preservation is the other major factor limiting the success of the program. Many landowners may be reluctant or unwilling to preserve their farms, especially if they do not feel the final appraisal values for an easement are reasonable.

A third limitation of farmland preservation is the rising cost of the program. As development pressure and land values have increased over the past few years, the costs of easements have increased as well.

Although land supply may be a limitation in many counties in New Jersey, it is not a significant factor in Cumberland County due to the county's wealth of agricultural land. However, if the pace of development continues or accelerates, the availability of land may also become a limitation.

Administrative resources are provided by the Farmland Preservation, Historic, and Cultural Program of the Cumberland County Department of Planning and Economic Development, and so this is not a limiting factor in the county.

## **6.0 ECONOMIC DEVELOPMENT**

### **6.1 CONSISTENCY WITH STATE AND COUNTY PLANNING EFFORTS**

The agricultural industry is recognized in the *New Jersey State Development and Redevelopment Plan* as an important industry which should be enhanced and sustained through state and local policies and actions. Active and productive farming, not simply the preservation of land, has environmental, educational, and economic benefits. Additionally, the New Jersey Department of Agriculture (NJDA) has incorporated economic development concepts into nearly all of its programs and planning efforts. The *2006 Agricultural Smart Growth Plan for New Jersey* recognizes that economic development can stabilize the active agricultural community and foster new farms by facilitating farmer investments, and creating new markets for goods.

Each year, the delegates of the State Agricultural Convention endorse economic development strategies for different sectors of New Jersey's food and agricultural industry. The latest document, *New Jersey Department of Agriculture 2007 Economic Development Strategies*, lists 121 strategies over ten key sectors covering horticulture, produce, dairy, aquaculture, field crops, livestock, organic farming, equine, wine production, and agritourism. Many of the strategies involve enhancing promotional activities, ensuring quality and health of agricultural and food products, and encouraging more direct marketing to shorten the chain between producer and consumer.

Within Cumberland County, the economic value of the agricultural industry is widely recognized. The 2001 Cumberland County Economic Development Strategy for Action plan identified the agricultural heritage and food processing facilities as two of the county's major strengths. This report also highlighted agribusiness and aquaculture as sectors of interest that would benefit from additional training and educational opportunities in the county.

### **6.2 EXISTING PROGRAMS**

This section describes existing farm support and economic development initiatives that are undertaken by a multitude of organizations and agencies, including the NJDA, USDA, non-profit and industry groups, and companies.

#### **6.2.1 Farmer Support**

##### ***New Farmers and Farmer Education***

Cumberland Regional High School, which serves northwest Cumberland County, offers a number of classes in agricultural education and also has an active chapter of Future Farmers of America. Cumberland County College offers Associate degrees and certificates in agriculture, horticulture, and aquaculture.



The Rutgers New Jersey Agricultural Experimental Station (NJAES) Cooperative Extension also offers education and training for beginning or experienced farmers. The Cooperative Extension's Department of Agricultural and Resource Management provides assistance, information and consultation on issues related to agriculture, the environment, and natural resource management, as well as educational programs on increasing farm productivity. The New Jersey Farm Productivity Enhancement Classes operate through a grant from the New Jersey Department of Labor. These classes address topics such as improving profitability and cost management, English as a second language (ESL), business communications, farm equipment and worker safety, computer skills, and estate planning.

New farmers looking for an internship or apprenticeship on a farm can search online databases of available opportunities. The National Sustainable Agriculture Information Service (ATTRA) has an online directory of internships and apprenticeships on farms that practice sustainable and organic agriculture in the United States and Canada. The New England Small Farm Institute has a service called Northeast Workers on Organic Farms that offers a list of farms in the Northeast that are seeking apprentices. Both programs include a number of opportunities in New Jersey.

### ***Financing Services and Loan Programs***

Farmers need assistance in securing financing to invest in their businesses, buy equipment, expand land holdings, erect farm buildings, and supply housing. NJDA provides a list of grants and other financial assistance opportunities in the areas of agriculture, conservation, and rural development. These include Soil and Water Conservation Grants, Farmers Market Promotion Grants, New Jersey Junior Breeder Loans, and Value-Added Producer Grants. There are also a number of programs providing financial assistance for green energy initiatives, skills training, and environmental management. In addition, the Cumberland County Loan Assistance Corporation operates a revolving loan fund designed to support women-owned, minority-owned, and small businesses to develop or expand. This program offers financing opportunities to small businesses that otherwise may have difficulty obtaining loans.

Additionally, local governments can increase the amount of quality affordable housing for those employed in agriculture by leveraging federal and state funding. For example, the USDA Rural Development Housing Program and the United States Department of Housing and Urban Development (HUD) offer a number of loan and grant programs for individuals and families in rural areas. One of these is the USDA's Farm Labor Housing Program which provides low-interest loans and grants for the development or improvement of housing for those employed in agriculture.

The private sector has also recognized the importance of helping farmers find financing. For example, Whole Foods Market has created the privately funded Local Producer Loan Program of which \$10 million in low interest loans will be awarded to farmers producing food near Whole Foods stores throughout the country. There are five Whole Foods Markets within 50 miles from Cumberland County, so interested farmers may be able to participate in this program.

The First Pioneer Farm Credit is a cooperative that offers loans, insurance, business consulting, and other financial services to people in the agricultural industry in six states in the Northeast. There are two branch offices in New Jersey, including one in Bridgeton. In addition, the First Pioneer Farm Credit lobbies for legislative and regulatory issues related to agriculture.

### ***USDA-Farm Service Agency***

The USDA'S Farm Service Agency (FSA) works to stabilize commodity prices in the agricultural industry for both farmers and consumers by financially helping farmers adjust to demand. The FSA has offices on the federal, state, and county levels that administer farm and conservation programs, support loans and payments, and provide disaster relief. The FSA has a state office in Bordentown and a county office in Vineland.

### ***Agricultural Marketing Resource Center***

Funded in part by USDA Rural Development, the Agricultural Marketing Resource Center (AgMRC) provides the latest information on value-added agricultural development. The center has expertise in more than 150 different commodities and products. It also provides information on market trends in the food, fiber, pharmaceutical, energy, and tourism industries. Additionally, the website includes information on business creation and operation, current research, and other resources for value-added agriculture.

### ***Farm Link Program***

The Farm Link Program is run by the New Jersey State Agricultural Development Committee and provides services and support to farmers at all stages. One of the program's objectives is to match farmers seeking access to land with landowners looking to lease or sell their farmland. Those looking for access to land are typically young or first-time farmers or are experienced farmers seeking to expand or relocate their operations. The program also helps to arrange partnerships, apprenticeships, and other work arrangements. Another service offered by the Farm Link Program is assistance in estate or farm transfer planning. The transference of a family farm or agricultural business can be a difficult task due to legal, tax, and other issues. The Farm Link Program provides a number of resources for estate and farm transfer planning and has developed a publication designed for farmers preparing to transfer farm ownership to the next generation, "Transferring the Family Farm: What Worked, What Didn't for 10 New Jersey Families."

### ***Northeast Organic Farmers Association of New Jersey (NOFA-NJ)***

The Northeast Organic Farmers Association of New Jersey (NOFA-NJ) is a nonprofit organization that promotes organic farming in the state. NOFA-NJ has certified agricultural products in the state since the 1990s, and received accreditation to certify to USDA standards in 2002. In addition to third-party organic certification, NOFA-NJ promotes sustainable agriculture through outreach, research and advocacy, and education and development programs. Some of the organization's outreach programs include promotional exhibits at agricultural and environmental events, the publication of the *Organic News* quarterly newsletter, media outreach, public tours of organic farms, a *Garden to Table* conference for gardeners and the general public, and their informational website available at [www.nofanj.org](http://www.nofanj.org). NOFA-NJ's education and development activities include peer-to-peer educational meetings, an annual conference, and a small grant program for farmer-led educational initiatives, a

program for people aspiring to start a small farm, information and referrals on sustainable agricultural practices, and scholarships and sponsorships of leadership development programs in agriculture. NOFA-NJ also conducts research and advocacy work in collaboration with foundations, institutes, universities, and other organizations.

### ***The New Farm***

The New Farm is a project of the Rodale Institute, an organization that encourages “regenerative agriculture” through research, outreach, and training. The New Farm website located at [www.newfarm.org](http://www.newfarm.org) is an online magazine and resource inventory designed to provide organic and sustainable farmers with information on production, marketing, research, certification, weed and pest management, technology, and other resources. The website includes a number of content areas, such as a frequently updated organic price report; discussion forums; a directory of websites, publications, and agencies; a directory of farms, stores, buyers, and food businesses; classifieds; a directory of organic certifiers; a guide to research publications from the Rodale Institute; and online training programs.

## **6.2.2 Agricultural Promotion, Markets and Sales**

### ***Jersey Fresh***

The Jersey Fresh marketing campaign has existed for over twenty years, and recently acquired a new slogan, “Jersey Fresh – as Fresh as Fresh Gets.” The Jersey Fresh brand has been locally promoted in a number of ways, including a “Proud to Offer Jersey Fresh” signage program at participating restaurants. The program has been extended to include Jersey Grown, Jersey Bred, and Jersey Seafood brands. Point-of-sale promotional materials are available through the NJDA. The Jersey Fresh program continues to be promoted on the local, state, and regional levels.

### ***Community Farmers Markets***

Direct marketing through community farmers markets can be profitable and rewarding for farmers while providing consumers with fresh, locally-grown produce and other agricultural products. NJDA provides assistance for setting up farmers markets and maintains an online guide of their locations. Although New Jersey has very high rates of direct marketing compared with other states, these opportunities can be further expanded. Direct marketing allows proceeds to go directly to the farmer instead of to a chain of middlemen. It can also be very rewarding to the farmer to have immediate contact with the consumer. The creation of more farmers markets or the development of a central market place could expand the potential of direct marketing.

There are two community farmers markets in Cumberland County, as listed below in **Table 22: Farmers Markets in South Jersey**. See **Appendix D-4: Farmers Markets** for a list of community farmers markets in Cumberland County and the four surrounding counties of Atlantic, Cape May, Gloucester, and Salem.

**Table 22: Farmers Markets in Cumberland County**

Market	Location	County	Open
Bridgeton Riverfront Farmers' Market	Between Bridge & Commerce Streets, Bridgeton	Cumberland	June 8 - September 21, Fridays, 11 AM - 6 PM
Vineland Farmers Market	The 700 Block of Landis Avenue, Vineland	Cumberland	July 7 - September 29, Saturdays, 9 AM - 12 PM

Source: NJDA, 2008

***Agritourism, Roadside Markets, and Farm Stores***

Agritourism involves establishing farms as tourist destinations with educational, recreational, and commercial potential. Agritourism can take on many forms from bed and breakfasts, pick-your-own produce, cider mills, summer camps, corn mazes, hay rides, petting zoos, horseback riding, farm tours, wine tasting, and festivals. Agritourism benefits farmers by supplying an opportunity for additional income, particularly during slower periods between harvests. Agritourism also serves to reinforce the agricultural identity and rural character of a place. Through agritourism, both children and adults can learn about the process of food production and the importance of protecting their local food resources. Current agritourism activities in the county include the Cumberland County Fair, the oldest county fair in New Jersey, and Woodland Produce, a hydroponic farm in Fairton that offers tours to local schools.

The *Cumberland County Ecotourism Plan* (1996) identified ten ecotourism themes and places in the county, of which “The Heart of Farming in the Garden State” was one. The plan suggested the creation of a large-scale farmers market featuring the various ethnic and cultural traditions of the region. The location of such a market in downtown Bridgeton, Millville, or Vineland could be a major tourist attraction that could help revitalize Cumberland County’s cities. The *Ecotourism Plan* also recommended establishing tourist opportunities on farms that would offer visitors a unique experience of the agricultural lifestyle.

Roadside markets are another way that consumers can purchase produce directly from the farmers. These direct markets are an important source of agritourism and attract customers from the entire region who are interested in purchasing fresh, locally grown fruits, vegetables, flowers, and other agricultural products. Cumberland County has 28 roadside markets, many of which offer



Photo Courtesy of Cumberland County Department of Planning and Development

*A roadside market that is moveable*

customers the opportunity to pick their own produce such as apples or pumpkins, and may also include non-agricultural products such as cookbooks or baked goods. See **Table D-3: Roadside Markets in Cumberland County, New Jersey** in **Appendix D: Agricultural Markets and Sales in the Cumberland County Region**. See also **Map 13: Agritourism**, which includes roadside market locations along with greenhouses, Christmas tree farms, and horse farms. This map is based on one developed by the Cumberland County Economic Development Department.

A large barrier to providing local commodities to mainstream supermarkets is that farms must be willing to deliver products themselves and be able to provide quantities large enough to meet the needs of the supermarket. Brokers and distributors have traditionally filled this need, although a lack of “buy local” promotion has prevented higher profits from being passed on to the producers.

**Direct to Restaurant Sales**

The South Jersey Independent Restaurant Association, known as SJ Hot Chefs, promotes restaurants working with local farmers. This organization showcases local farmers working with restaurants to create unique dishes in the annual “Farm to Fork” event. Although there are no restaurants in Cumberland County that participate in the Farm to Fork event, there are 20 participating farms in the county, listed in **Table 23** below.

**Table 23: Cumberland County Farms Participating in “Farm to Fork”**

<b>Farm</b>	<b>Location</b>
ARC Greenhouses Farmer Bruce Cobb	440 Oak Road Shiloh, NJ 08353
Bisconte Farm Nate Bisconte	360 Morton Ave Millville, NJ 08332
Catbird Naturally Organic Syvella DuBose	28 Ayars Ln Bridgeton, NJ 08302
Fiocchi Farms Donald Fiocchi	1142 Panther Road Vineland, NJ 08361
Flaim Farms Inc Kevin Flaim	1958 Panther Road Vineland, NJ 08361
Happy Valley Berry Farm Shirley Kline	157 Buckforn Rd Bridgeton, NJ 08302
Ingraldi Farms	Cedarville Rd & Rieck Ave Millville, NJ 08332
Laning Brothers Farms Inc Buddy Laning	175 Rockville Road Bridgeton, NJ 08302
Marlboro Farm Market	601 Route 49 Bridgeton, NJ 08302
Muzzarelli Farm Charles Muzzarelli	425 Route 47 North Vineland, NJ 08360
Nardelli Brothers Inc Bill Nardelli	54 N. Main Street Box 590 Cedarville, NJ 08311

<b>Farm</b>	<b>Location</b>
Paul Coia Sons Farms Inc Dave Coia	3670 East Oak Rd Vineland, NJ 08360
Ploch Farms Inc Ryan Ploch	1954 Pennsylvania Ave Vineland, NJ 08361
Rottkamp Farms Inc Thomas Rottkamp	780 Shiloh Pike Bridgeton, NJ 08302
Scapellato Farms Peter Scapellato	1928 Forest Grove Rd Vineland, NJ 08360
Sheppard Farms David Sheppard	340 Sayres Neck Rd Cedarville, NJ 08311
Sparacio Farm Butch	670 Landis Ave Bridgeton, NJ 08302
Sunny Slope Orchard Lisa Thomas	400 Greenwich Road Bridgeton, NJ 08302
Tolotti Farms Inc Lou Tolotti	2455 Cornucopia Ave Vineland, NJ 08361
Victoria Farms LLC Wayne Groetsch	1544 Sheridan Ave Vineland, NJ 08361

Source: South Jersey Independent Restaurant Association, 2008

In addition, Jersey Fresh operates a Hospitality Industry Program that links restaurants interested in serving locally grown food with New Jersey farmers (NJDA *Economic Development Strategies 2007*). Listed in the table below are a number of Cumberland County restaurants that regularly buy from local farms.

**Table 24: Cumberland County Restaurants That Directly Buy from Local Farms**

<b>Restaurant</b>	<b>Location</b>
Bridge Town Restaurant	36 Laurel Street, Bridgeton
Carmelo's Ristorante	31 E Broad Street, Bridgeton
Toad Fish Bar & Grill	222 Bridgeton-Fairton Road, Bridgeton
Pete's Pizza	20 W Park Ave, Vineland
Tony's Lunch & Catering	1088 N Main Street, Vineland

Source: NJDA, 2005

### ***Institutional Purchasing Programs***

Sales directly to institutions such as schools, hospitals, correctional facilities, restaurants, hotels, or other public or private institution can provide a long-term contract, predictable demands, and higher profits to a local farmer. NJDA coordinates state purchases with local producers. The State Department of Corrections and the School Lunch Program have purchased New Jersey produce every year between 2001 and 2007; and state purchases of produce grown in New Jersey totaled \$3 million in 2006. However, both NJDA and other state departments and programs can increase local purchasing by looking at other states' practices.

### **6.2.3 Agricultural Support Businesses**

Southern New Jersey is well-served by agricultural support businesses. Indeed, the number of businesses in Cumberland and adjacent counties that rely on agriculture or serve agricultural needs is quite astounding. These include input suppliers and services such as farm equipment stores, as well as product distributors and processors such as Pillsbury/Progresso and Seabrook Farms. Some of the economic value of these operations has been compiled by the federal and state Departments of Agriculture but most information pertains to employment figures. A more comprehensive assessment of the significance of the non-producer agricultural industry in southwest New Jersey would be beneficial to understanding the value of the farming and food industry more fully. An inventory of businesses serving the agricultural industry is included in **Appendix C: Agricultural Support and Service Businesses in the Cumberland County Region** and **Appendix D: Agricultural Markets and Sales in the Cumberland County Region**. See also **Section 2.3 Agricultural Support Services and Related Businesses**.

### **6.2.4 Research and Innovation**

#### ***Rutgers New Jersey Agricultural Experiment Station***

The New Jersey Agricultural Experiment Station (NJAES) is an institute of Rutgers University. NJAES works to enhance the agriculture, environment, food safety, public health, and community and youth development of the state. At its Agricultural Research and Extension Centers, such as the one in Upper Deerfield, researchers do trial plantings and other investigations on plant varieties, pest control, and many other agricultural management practices.

The Cooperative Extension Program of NJAES is the branch that serves as the educational resource for the agricultural industry and the public. The Rutgers Cooperative Extension program has offices in each of New Jersey's 21 counties that support the local agricultural industry through agricultural agents, along with staff that assist homeowners and the general public. The Cumberland County Cooperative Extension office is located in Bridgeton and provides a wide array of services to farmers. It has one agent who specializes in nursery stock and another agent whose specialty is vegetable and herb growing, but agents of other offices having differing expertise share services across the offices. The Cooperative staff runs the County's 4-H Program and the Family and Community Health Program which provides gardening and lawn care assistance to homeowners and others.

#### ***Food Innovation Center***

The Rutgers Food Innovation Center (formerly the Food Industry Research & Extension Center) was created in 2001 by the New Jersey Agricultural Experimental Station at Rutgers University. Its mission is "to stimulate and support sustainable economic growth and prosperity to the food and agricultural industries in the New Jersey region by providing businesses with innovative research, customized practical solutions, resources for business incubation, and a trusted source for information and guidance." In 2008, a new 23,000 square foot facility was opened in Bridgeton that includes state-of-the-art food processing, packaging

and laboratory space. In addition, the Food Innovation Center offers informational seminars and consulting services to a wide-range of food businesses.

### **6.3 POTENTIAL STRATEGIES AND ANTICIPATED TRENDS**

This section discusses new economic development strategies that Cumberland County could consider implementing or encouraging. Anticipated trends relevant to the future of agriculture in the county and state are also examined. A number of other farmland preservation plans and resources from departments of agriculture, including the NJDA *Economic Development Strategies 2007* were consulted for these strategies, which are intended to enhance the economic strength of the agriculture industry.



*The Rutgers Food Innovation Center facilities can be rented for use by the hour or day.*

#### **6.3.1 Farmer Support**

##### ***Agricultural Innovation Fund***

According to the NJDA *Agricultural Smart Growth Plan for New Jersey*, the Agricultural Development Initiative, implemented by the New Jersey Department of Agriculture, proposes the creation of an Agricultural Innovation Fund. This fund would provide “for the marketing and development of the food and agricultural industry to ensure that it survives and grows in the rapidly changing marketplace.” The fund could help farmers faced with rising production costs by providing equity investment to fund large-scale projects, offering a revolving low-interest loan fund, providing a loan guarantee program, and acting as leverage for federal cost-share programs.

##### ***Tax Incentives for New Farmers***

To make it easier for individuals to enter the agricultural industry, financial incentives and tax policies could be altered. For example, young farmers could be helped by tax incentives given to retiring farmers for the conveyance of land or farm equipment. Also, agricultural tax reform to address inflated land value and rental rates could help beginning farmers with limited financial means. Some states, such as Nebraska and Iowa, offer tax incentives to landowners who rent to beginning farmers or ranchers. Cumberland County and its individual municipalities could support such changes at the state and federal levels.



### ***Agricultural Training and Education***

Although some schools in Cumberland County have agricultural education programs, these and other agricultural training programs could be expanded or enhanced. The NJDA's Agriculture Development Initiative encourages the creation of labor resources and the training of those employed by agriculture. Agricultural education could be created or expanded at the secondary, county, college, and university levels. The development of a farm directory of those involved in agriculture could be useful as a tool for marketing and networking.

### ***Promote the Value of Agriculture***

Efforts could be made in schools and for the general public to inform residents of the value of agriculture for the local economy, environment, and quality of life. The creation of a farm festival to promote locally grown products could generate additional revenue, as well as instill pride in the area's agricultural heritage.

### ***Land Use Regulations***

The local agricultural industry could be enhanced and enlarged through simplifying the permitting, licensing, and land use planning and regulation processes to be sensitive to agricultural needs. Cumberland County can discourage municipalities from adopting ordinances that impede farmers, such as restrictions on fences or limitations on operating at night.

### ***Farmer Buying Cooperatives***

The formation of farmer cooperatives has been useful in many places to increase financial security for farmers. Farmer cooperatives help their members through processing and marketing commodities, furnishing farm supplies, and offering credit and other financial services. In addition to strengthening farmers' economic viability and reducing financial risk, participation in farmer cooperatives provides greater control over the production and distribution system and increases the bargaining power of farmers.

## **6.3.2 Direct Marketing**

### ***Marketplace Changes***

New and emerging trends in agricultural markets should be identified to respond to ever-changing opportunities. For example, evolving demographics in the state have created a marketplace for new ethnic crops such as bok choy and edamame, or tomatillos and jalapeno peppers. Grain alternatives to wheat, such as spelt or kamut, are also increasing in market demand. These innovations could be examined or expanded through coordination with the Rutgers Cooperative Extension.

### ***Value-added Products***

The development or expansion of value-added specialty goods such as cheeses, cultured or heirloom vegetables, wine, micro-brewed beer, soap, woven goods, or other niche products can be promoted to local markets in New Jersey and the adjacent metropolitan areas. The NJDA also recommends the evaluation of CO<sub>2</sub> flash freeze applications for vegetable and fruit products and their potential for institutional markets.

### ***Community Supported Agriculture***

Community Support Agriculture (CSA) allows a consumer to buy a share, or pre-pay, to receive a weekly or biweekly supply of produce. A CSA enables a farmer to operate within a known cash flow, predetermine a customer base, diversify crops, cut down on waste, reduce risk, and avoid going into debt at the beginning of a season. Customers can benefit not only from the interaction with a local farmer, but also with understanding how food is grown. Because CSA customers come to the farm to pick up weekly or biweekly shares of food, farmers can enjoy some of the benefits of participating in a farmers market, like interacting with customers and obtaining higher profits from direct marketing, without losing money to transportation and spoiled or bruised produce. Additionally, a small amount of land can yield many customer shares.

Although there are no CSAs in Cumberland County, there are two CSAs in Salem County (Philly Chile Company Farm in Monroeville and Adi Farms in Pittsgrove) and two in Gloucester County (Muth Family Farms in Monroe Township and Red Oak Ranch in Franklin Township). Muth Family Farms has about 250 members in its CSA program with another 150 people on a waiting list.

### **6.3.3 Identifying Emerging Trends**

#### ***Promote Agricultural Management Practices***

By encouraging agricultural management practices and assisting farmers with the development and implementation of conservation plans, Cumberland County and its municipalities can assist profitable farming operations while protecting valuable natural resources.

#### ***Incorporate Agricultural Land in Recycling of Organic Material***

Agricultural land can be used appropriately for the recycling of non-farm generated biodegradable and organic materials. Using these nutrient-rich materials on farmland prevents them from going to waste in a landfill.

#### ***Organic Farming***

Organic foods represent one of the fastest growing and most profitable segments of agriculture. For produce, organic means farming without the use of conventional pesticides, radiation, or additives and for livestock, organic signifies that the animals did not receive growth hormones or antibiotics. Organic farming can be encouraged both as a response to growing consumer demand as well as to promote more environmentally sustainable farming practices. The large consumer market in New Jersey and the surrounding metropolitan areas provides a huge opportunity for locally-grown organic products.

The NJDA recommends the branding of “Jersey Organic” to promote the higher value of locally-grown organic food. The USDA regulates the certification of organic products, and farms in New Jersey may receive USDA organic certification through NOFA-NJ, as previously described. There are federal funds available through the USDA to help farmers offset the cost of certification by up to 75 percent. For farmers in the process of switching to organic methods but who have not completed the three-year qualifying period for certification, the NJDA offers a state program that can label products “transitional sustainable” so farmers can begin

benefiting from the higher market value of organic foods. According to NOFA-NJ, two farms in Cumberland County had organic certification as of July 2008: Catbird Naturally Organic in Bridgeton and Sheppard Farms, Inc. in Cedarville.

### ***Alternative Energy***

The NJDA's Agriculture Development Initiative encourages the production of alternative fuel sources such as ethanol, bio-diesel, biogas, and biomass. To refine these fuels from agricultural products such as soybeans, corn and waste stream products, local facilities would need to be established. Currently there are efforts in the state to construct an ethanol plant and bio-diesel production



*Cultivated sod is a major crop in Cumberland County.*

facility, which would open major markets for corn and soybean production and increase the selling price for these commodities. The potential for wind or solar energy production on agricultural land could also be explored.

## **6.4 IMPLEMENTING ECONOMIC DEVELOPMENT INITIATIVES**

### ***Agriculture Advisory Committee***

A stronger connection and increased communication could be encouraged between the county's Agriculture Advisory Committees and the Cumberland County Board of Agriculture, as well as the SADC, to better represent the agricultural community.

### ***Economic Development Planning***

The agricultural industry could be better incorporated in the economic development plans of all municipalities, counties, and state agencies. Members of the agricultural industry can also be included in local and regional business organizations and economic development agencies. Traditional business support systems could also be enlarged to integrate agriculture.

### ***Legislative and Regulatory Initiatives***

The NJDA's Agriculture Development Initiative proposes that municipalities and local agencies attempt to influence legislative and regulatory initiatives that financially impact farmers and other producers in areas such as taxes, income averaging and other issues. This is particularly important in the regulatory arena where farming costs are affected.

## **7.0 NATURAL RESOURCE CONSERVATION**

### **7.1 NATURAL RESOURCE PROTECTION COORDINATION**

Several organizations exist, both public and private, that administer, fund, and provide technical guidance for farmers and communities in Cumberland County. These organizations are in place to assist with natural resource conservation issues and are assets for farmers to assist in the management of the land and water upon which their farms depend.

#### **7.1.1 Natural Resources Conservation Service**

The Natural Resources Conservation Service (NRCS), formerly known as the Soil Conservation Service (SCS), provides technical assistance to private land owners and managers to conserve their soil, water, and other natural resources. A relatively small government agency in the United States Department of Agriculture, the mission of the NRCS is to improve, protect, and conserve natural resources on private lands through voluntary cooperative partnerships with local and state agencies. The NRCS has broad technical expertise in animal husbandry, ecological sciences, engineering, resource economics, and social sciences. The agency also provides expertise in soil science and the leadership for soil surveys and the National Resources Inventory, which assesses natural resource conditions and trends in the United States.

NRCS's assistance is directed towards the natural resource needs of farmers. Staff members are available to work with farmers to help identify their conservation goals and then craft appropriate conservation plans to meet those goals. NRCS also provides cost-sharing and financial incentives for programs such as the Wildlife Habitat Incentive program (WHIP) and the Environmental Quality Incentive program (EQIP). The NRCS field office that serves Atlantic, Cape May, and Cumberland counties is located in Vineland.

#### **7.1.2 State Soil Conservation Committee**

The State Soil Conservation Committee (SSCC), a part of the New Jersey Department of Agriculture's Division of Agriculture and Natural Resources, is another organization related to natural resource conservation. It strives to increase voluntary conservation practices among farmers, ranchers, and other land users. Among other responsibilities, the SSCC administers natural resource conservation programs and provides technical information on best management practices for farmers, ranchers, and other agricultural producers. The programs are implemented by local Soil Conservation districts. These are special-purpose political subdivisions of the state charged with implementing natural resource conservation and assistance programs. The districts' jurisdictions follow county

boundaries and they are locally governed, although they are not county government agencies.

The role of the Cumberland-Salem Soil Conservation District is to oversee a range of soil conservation and water quality actions, prevent flooding, safeguard streams and reservoirs, foster wildlife habitat, and address natural resource impacts from urban growth. Detailed advice on planning and establishing agricultural best management practices (BMPs), such as terraces and grassed waterways to help control erosion and protect water quality, is at the core of their mission.

The organization regulates certain construction activities by reviewing and certifying plans for soil erosion control on residential and commercial construction sites and for grading and demolition and other projects that disturb more than 5,000 square feet of soil. Districts conduct inspections and have various regulatory and enforcement powers to ensure that these sites are maintained in compliance with the certified erosion control plan.



*Photo Courtesy of Ed Overdeest*

*Sign on an Upper Deerfield farm*

## **7.2 FEDERAL AND STATE CONSERVATION PROGRAMS FOR FARMERS**

Financial and economic incentive programs and technical assistance are available to help farmers plan for and use conservation practices on their farms. The NRCS has a Farm Service Agency office in Woodstown, Salem County, which also serves Cumberland County. NRCS staff members are available to work with farmers to help identify their conservation goals and then craft appropriate conservation plans to meet those goals.

Numerous programs provide financial incentives to help farmers voluntarily engage in these practices. These incentives can include rental payments to farmers for reserved land, easement payments, and cost-sharing – up to 100 percent for some programs – to develop and follow conservation plans.

The 2007 Farm Bill increased funding for conservation programs by \$7.9 billion. Among the many conservation initiatives is the extension of and increased funding for the Farm Protection Program (FPP), which was allocated \$773 million. The Environmental Quality Incentives Program (EQIP) received an additional \$3.4 billion in funding in the 2007 Farm Bill. EQIP is a voluntary program administered through the NRCS that offers

financial and technical assistance to farmers wishing to implement conservation practices in their management and operations. Some of the qualifying practices include integrated crop management, well sealing, erosion control systems, agrichemical handling facilities, and irrigation systems. The Conservation Security Program (CSP) was provided an additional \$1.1 billion in the 2007 Farm Bill. CSP offers annual payments and increasing financial incentives to farmers who are currently incorporating methods to protect soil, water, and other natural resources.

See **Appendix E: Conservation Programs for Farmers** for a description of the programs.

### **7.3 WATER RESOURCES**

The protection of water resources is a fundamental issue for agriculture and farmland preservation. Without a consistent, plentiful, and relatively clean water source, agriculture is simply not viable. Farms, due to their high surface area and limited impermeable surface cover, are also critical in maintaining aquifer recharge. Steps can be taken at the farm level to preserve water quality. These include:

- Minimizing the use of synthetic chemicals such as fertilizers, herbicides, pesticides, and fungicides so as to lessen impacts to groundwater. Farmers should also coordinate timing of chemical application to minimize its runoff into water bodies.
- Providing riparian buffers along bodies of surface water so as to protect surface water bodies from synthetic chemicals and organic byproducts, and from soil erosion. These buffers ideally take the form of a line of trees and shrubs, followed by a strip of native grass.
- Practicing water conservation techniques, such as drip irrigation and the reuse of water for certain farming types where it is viable, such as on smaller scale vegetable and fruit operations.

The Agricultural Smart Growth Plan published in 2003 by the State Agriculture Development Committee (SADC) outlines a number of ways that farmers can ensure a sustainable and high quality agricultural water supply. The plan encourages that farmers are well-represented on the Water Supply Advisory Council and that the water needs of farmers are reflected in New Jersey's Water Supply Master Plan. The plan also recommends the promotion of efficient water conservation technologies such as drip irrigation, farm ponds, and water reuse. Farmers are also encouraged to make use of GIS technology to track information on agricultural water use and to work with the NJDEP to streamline the water registration and certification process.

Farmers can obtain assistance with irrigations and water quality enhancement projects through the United States Department of Agriculture-National Resource Conservation

Service (USDA-NRCS). The NRCS prepares conservation plans for both preserved and non-preserved farm owners. These plans may identify water use needs and delivery systems as well as conservation practices. The NRCS and the Farm Service Agency can help landowners obtain cost-share grants to implement these plans.

## **7.4 WASTE MANAGEMENT AND ENERGY CONSERVATION**

### **7.4.1 Waste Management**

The management of livestock waste has serious implications for the quality of ground and surface waters. Unrestricted, these wastes can cause serious water-quality problems by spreading harmful microorganisms into water sources to the detriment of humans, farm animals, and the ecosystem as a whole.

Of particular concern are Animal Feeding Operations (AFOs) and Concentrated Animal Feeding Operations (CAFOs). AFOs include all facilities where animals are stabled or confined and fed or maintained for a total of 45 days per year. CAFOs are classified as any operations with more than 1,000 non-dairy cattle, 700 dairy cattle, 2,500 swine, 500 horses, or other animal populations. An AFO operation, even if it doesn't reach this size threshold, can also be considered a CAFO if it discharges waste into state waters or ecologically sensitive areas. CAFOs are more likely to cause water pollution than other types of operations due to their large size. In order for CAFOs to receive a general permit from the NJDEP, they must develop and implement a comprehensive waste management plan.

Mismanagement of animal waste has the potential to cause large amounts of soil and groundwater contamination through the introduction of bacteria such as fecal coliform, a known contaminant from animal farming operations. Some waterborne pathogens can lead to ear infections, dysentery, typhoid fever, gastroenteritis, and hepatitis A.

### **7.4.2 Recycling**

Recycling is an important part of resource conservation for virtually any industry, agriculture included. Recycling saves natural resources and farmers' money through reuse. The traditional model of the farm was one where animal waste and crop residue were reused to fertilize farm fields, making the farm a partly closed system. Reinstating some of that model might reduce waste disposal costs and the negative ecological effects that farms can have on the surrounding area.

Some recycling programs of benefit to farmers, specifically to nurseries and horticultural operations, are described below.

### ***Nursery Pot/Plug Trays/Flat Recycling***

A number of plastic recycling vendors enable large commercial nurseries and growers to recycle nursery pots, plastic flats, trays, and cell packs. The cost of disposing of HDPE #2 nursery pots can be up to \$580 per 20,000 pounds at a landfill. Plastic recyclers are looking for these materials and offering to pay for the plastic scrap. Material is shipped via truck to centers in Ohio and Delaware. The New Jersey Department of Agriculture Division of Marketing and Development has information and links to these recyclers of plastic nursery containers and materials.

### ***Nursery and Mulch Film***

The New Jersey Department of Agriculture administers a nursery and greenhouse film recycling program. Film is accepted at two regional collection sites, which each have their own tipping fees. Film is accepted year round at the Cumberland County Solid Waste Complex in Deerfield, and the Occupational Training Center in Mt. Holly, Burlington County.



*Photo Courtesy of Ed Overdeest*

*Many nursery products are produced in hoop-houses like this one in Hopewell Township*

### ***Other Agricultural Plastics – Drip Irrigation Tape***

New Jersey farmers may recycle drip irrigation tape year-round at the Cumberland County Solid Waste Complex. In 2005, the New Jersey Department of Agriculture and the Cumberland County Improvement Authority (CCIA), with a grant from the New Jersey Department of Environmental Protection, initiated a pilot program to collect and recycle other agricultural plastics generated by Garden State farmers. Only drip irrigation tape proved economically viable and was the only aspect of the program to be continued. Nevertheless, this represents about a 50 percent savings in landfill tipping fees.

### ***Pesticide Containers***

The New Jersey Department of Agriculture, in partnership with the Cumberland County Improvement Authority, offers free recycling of empty plastic pesticide containers on specific collection dates. The collection program is held at the Cumberland County Solid Waste Complex in the Township of Deerfield. This is a free program and can save pesticide license holders in excess of \$61/ton in landfill tipping fees.

Currently, non-refillable, high-density polyethylene # 2 (HDPE #2) containers used by agricultural, professional, and commercial pesticide applicators are accepted at the collection sites. Containers must be no larger than 55 gallons and be properly rinsed. The program is open to anyone who holds a New Jersey Department of Environmental Protection pesticide license and to state, county, and municipal government agencies. Participants must follow the processing guide or material will be rejected.



There are two wood and stump recycling facilities close to Cumberland County. They are Stellas Recycling in Upper Pittsgrove, Salem County, and Winzinger Recycling in Franklin Township, Gloucester County.

### **7.4.3 Energy Conservation**

Promoting increased energy conservation and renewable, local energy is one of the emerging priorities of New Jersey. Rising energy costs and continued improvements in technology have renewed interest in finding alternatives to supplement electric use on farms. As new energy technologies develop, incentive programs will become available to help make these alternatives more mainstream.

Among the technologies emerging for New Jersey farms is that of solar power, for which a variety of farm-related programs exist. The Environmental Quality Incentives Program (EQIP) includes cost-sharing for conservation practices including Solar Energy. Grants and technical assistance can also be found via the US Department of Energy's Solar Energy Technology Program and the New Jersey Board of Utilities' Solar Energy for New Jersey Agriculture Program. Although the SADC does not have an official policy, it has encouraged the use of solar and wind power generation on preserved farms as long as it is in support of the agricultural operation rather than used primarily to sell to the grid, and does not hinder the agricultural viability of the property.

The Biodiesel Rebate Program for Farmers is a statewide incentive program administered by the New Jersey Board of Public Utilities. This program will reimburse farmers for the incremental cost of using biodiesel fuel in their vehicles or for using a 5 percent blend of biodiesel instead of 100 percent petroleum heating oil.

***Biomass Research and Development Initiative Grants*** are provided by USDA Rural Development. These grants seek to foster research, development and demonstrations of bio-based products, bio-fuels, and bio-energy with the goal of making biomass a more competitive energy source.

The ***Renewable Energy Systems and Energy Efficiency Improvements Program*** provides competitive grants and loan guarantees to agricultural producers to aid with purchasing renewable energy systems and making energy efficiency improvements. The program defines renewable energy as energy that derives from a wind, solar, biomass, or geothermal source, or hydrogen derived from biomass or water using a wind, solar, or geothermal energy source. In 2008, the USDA announced that it would accept \$220.9 million in loan and grant applications for the program.

The ***New Jersey SmartStart Buildings Program*** is a statewide energy efficiency program approved by the New Jersey Board of Public Utilities (BPU) and administered in a joint effort by several of New Jersey's electric and gas utilities. It includes incentives, technical assistance, and other services. The incentives are available to qualified

agricultural and other customers in the state who are planning to construct, expand, renovate, or remodel a facility, or replace electric or gas equipment. Projects located on property where electricity is provided by a municipal utility are eligible for those portions of the program that address the energy efficiency of natural gas equipment. Customers planning to construct a building are eligible for services under this program if constructing within a designated smart growth area.

## **7.5 OUTREACH AND INCENTIVES**

Cumberland County can work on promoting to farmers the conservation enhancement programs that are available through the Natural Resource Conservation Service and the New Jersey Agriculture Department, including the Conservation Reserve Enhancement Program (CREP) and the Wildlife Habitat Incentives Program (WHIP). The latter could be highly beneficial on farmland in environmentally sensitive areas. It is important that Cumberland County farmers understand what benefits they can derive from these programs. Such programs will link Cumberland County's environmental protection goals to those of the farming community.



*Photo Courtesy of Cumberland County Department of Planning and Development*

*The Cramer Farm*



*Photo Courtesy of Linda Pisarski*

*Winter Landscape*

## **8.0 AGRICULTURAL INDUSTRY SUSTAINABILITY, RETENTION AND PROMOTION**

### **8.1 EXISTING AGRICULTURAL INDUSTRY SUPPORT**

#### **8.1.1 Right-to-Farm Ordinance**

In order for Cumberland County’s farming culture and industry to remain viable, sufficient policies must be in place to support agriculture as an appropriate and valuable land use. The Cumberland County Planning Board and the Cumberland County Agriculture Development Board support a number of policies and planning efforts that promote the county’s agricultural industry, including right-to-farm ordinances. Right-to-farm ordinances are designed to protect farmers from complaints of nearby residents regarding the noise, odor, dust, traffic, and other perceived disturbances from normal farming operations. These ordinances can also protect from unnecessary ordinances and regulations that may conflict with agricultural activities.

The Right-to-Farm Act protects those farm operators who meet the definition of a “commercial farm” and meet a number of other criteria defined in N.J.S.A. 4:1C-3. Any person aggrieved by the operation of a commercial farm is required by the Right-to-Farm Act to file a complaint with the applicable CADB, or directly to the SADC, prior to filing an action in court. Aggrieved municipalities seeking to enforce an ordinance are also required to file such a complaint rather than issue a summons against the farmer. Once a complaint is filed, the CADB or SADC holds a public hearing to determine whether the farmer is entitled to the protections of the Act. A finding by the CADB may be appealed to the SADC and, if necessary, to the New Jersey Superior Court, Appellate Division.

Seven out of 14 municipalities in Cumberland County currently have Right-to-Farm ordinances. They are Deerfield, Greenwich, Hopewell, Lawrence, Millville, Upper Deerfield, and Vineland. Upper Deerfield and Vineland also have a notification clause in their ordinance that requires new property owners to sign a statement acknowledging the existence of neighboring farms and farming operations. The codes of Lawrence and Upper Deerfield explicitly contain Right-to-Farm ordinances, while other municipalities’ codes contain similar language protecting the rights of farmers to practice normal agricultural operations.

One of the responsibilities of the CADB is to mediate between residents and farmers when right-to-farm conflicts arise. The SADC also offers an Agricultural Mediation Program to assist communities in resolving right-to-farm conflicts at no charge. Through this program, a trained and impartial mediator facilitates discussions between the two parties to arrive at a mutually agreed upon solution.

### **8.1.2 Farmland Assessment Act**

The New Jersey Farmland Assessment Act of 1964 allows eligible farmland to have a reduced tax assessment. To be eligible, the property must have a minimum of five acres that have been actively devoted to agriculture or horticulture for at least two years. There are additional requirements for the boarding, training, or rehabilitation of livestock and for forested land under a woodlands management program. The Farmland Assessment Act does not apply to buildings of any kind and land beneath or pertaining to the farmhouse is ineligible. Buildings and homes on farms are assessed like all other non-farm property. There are also requirements for the amount of gross sales accumulated from the property.

The Act does not preempt local land use restrictions, and farmland is not entitled to farmland assessment if located in a zone in which agriculture is forbidden by the municipality's zoning ordinance. In addition, if land qualified under the Act changes to a non-agricultural or non-horticultural use, it is subject to roll-back taxes for the year in which the change takes place, and for the two preceding tax years.

## **8.2 OTHER STRATEGIES**

### **8.2.1 Regulatory Constraints**

Municipal ordinances within Cumberland County should be reviewed in order to eliminate any barriers to farming and to add measures that support farm operations and preservation. This could include amending zoning and subdivision regulations, revising fees, and streamlining permits.

Zoning, subdivision, and site plan requirements should differentiate between the requirements for agricultural enterprises and those regulating residential, commercial or industrial development. Such efforts may reduce the regulatory obstacles, fees, and fines that farmers face when attempting to comply with regulations designed for development other than farms. Additionally, zoning that is amenable to agriculture helps maintain the profitability of agriculture by providing flexibility.

Agriculture-friendly ordinances permit housing for agricultural labor and ease height, bulk, and setback standards for agricultural facilities. Such ordinances may also have less restrictive regulations for farm markets and related parking and signage, and may also ease restrictions for home-based businesses and other accessory activities on farms that complement the operation and help supplement farm income.

### **8.2.2 Agricultural Vehicle Movement Routes**

To promote awareness among neighbors and out-of-town drivers and to protect slow-moving agricultural vehicles and drivers, Pennsylvania has established agricultural vehicle movement routes and identified these routes with highly noticeable road markers. This signage is also found in some parts of New Jersey. Most farm vehicles, like harvesters and tractors, do not travel faster than 40 miles per hour. Like wildlife crossings or school zones, vehicular movement route signs

can signify to drivers to drive slower or pass with care. Such signage also helps to alert drivers that they are traveling in an agricultural area.

### 8.3 AGRICULTURE EDUCATION AND PROMOTION

An essential part of enhancing and supporting the agricultural industry in Cumberland County is to provide education to residents about the importance of farming to the community. This would help to prevent potential conflicts and would lay the groundwork for possible marketing enhancements and economic supports. It would also be helpful for generating support by residents of any future proposed increase in the dedicated tax to fund an Open Space, Farmland, Recreation, and Historic Preservation Trust.

Education of the public could include development of literature about the role of farming and its importance in the history of Cumberland County. A pamphlet, aimed especially at new residents, could promote the idea that much of Cumberland County is made up of farming communities and could address some of the coexistence issues that are most difficult between farmers and neighboring residents. The pamphlet

could be distributed by local municipalities when home sales occur, along with the local Right-to-Farm ordinance. Also, promotion of harvest festivals might be considered, or a farming focus could be added to other community events in the county besides the annual County Fair. The NJAES's Food Innovation Center and Agricultural Experiment Station, both located in Cumberland County, are valuable resources in educating the public about the importance of their local agricultural industry. The Food Innovation Center offers assistance to clients on marketing food products and may be able to provide assistance on a low-cost, ongoing education/marketing campaign about farming in Cumberland.



*Slow-moving agricultural vehicles are common in Cumberland County.*

Cumberland County has strong 4-H programs and the Future Farmers of America program is quite active as part of the agricultural program offered by Cumberland Regional High School. Educational efforts in the county could involve encouragement of more farming-related programs within all the schools and promotion of greater interaction between residents and the Future Farmers of America program.



## 9.0 SOURCES OF INFORMATION

Agricultural Marketing Resource Center. [www.agmrc.org](http://www.agmrc.org). Accessed July 2008.

AllPages.com – Agriculture. [www.allpages.com/agriculture/](http://www.allpages.com/agriculture/). Accessed October 2007.

American Farmland Trust. *Saving American Farmland: What Works*. Washington, DC: American Farmland Trust, 1997.

Amy S. Greene Environmental Consultants, Inc. Upper Deerfield Township Environmental Commission. *Environmental Resource Inventory for Upper Deerfield Township, Cumberland County New Jersey*. 2006.

Baehr, Judy. “From the Start, Farming Drove Area Economy.” *Daily Journal*, July 1, 1998.

Bennett, Eileen. “Juicy Story Puts Vineland on the Map.” *The Press of Atlantic City*, June 28, 1998.

Birdsall, Sarah. *Cumberland County Cross-Acceptance Report for the New Jersey State Development and Redevelopment Plan*. February 2005.

Brill, Tim, New Jersey Department of Agriculture, State Agricultural Development Committee. Conversations during 2005 - 2008.

Cumberland County Agriculture Development Board. *Cumberland County Farmland Preservation Plan*. 2005.

Cumberland County Department of Planning and Development. *Cumberland County Business & Industry Directory*. 2007.

Cumberland County Department of Planning and Development. *Cumberland County Ecotourism Plan*. 1996.

Cumberland County Department of Planning and Development. *Development Review Annual Report: Cumberland County 2007*. 2008.

Cumberland County Planning Commission [Pennsylvania]. *Land Partnerships: A Countywide Strategy for Open Space Preservation and Smart Growth*. 2006.

Delaware Valley Regional Planning Commission. “Analytical Data Report #14: Regional, County, and Municipal Population and Employment Forecasts, 2005-2035.” 2007.

Delaware Valley Regional Planning Commission. *Connections [2035]*. 2009.

Delaware Estuary Program. *Comprehensive Conservation and Management Plan for the Delaware Estuary*. 1996.



- First Pioneer Farm Credit. [www.firstpioneer.com](http://www.firstpioneer.com). Accessed July 2008.
- Geauga County [Ohio] Planning Commission and Farmland Task Force. *Geauga County, Ohio Farmland Preservation Plan*. 1999.
- Gloucester County Office of Land Preservation. Understanding Farmland Preservation. [www.co.gloucester.nj.us/Pdf/LandPres/CountyGuide.pdf](http://www.co.gloucester.nj.us/Pdf/LandPres/CountyGuide.pdf). Accessed July 2008.
- Grzyboski, Lisa. "Farmers Adapting to Changing Times." *Courier-Post*, June 29, 2007.
- Herpetological Associates. *Cumberland County Delaware Estuary Study*. October 1992.
- Hopewell Township [Mercer County, NJ] Planning Board and Hopewell Township Agricultural Advisory Committee with the assistance of Banisch Associates, Inc. *Farmland Preservation Plan Element*. 2003.
- Hopewell Township [Cumberland County, NJ] Planning Board. *Master Plan Statement, Land Use Plan Element, Development Transfer Plan Element Draft*. 2007.
- Idaho State Department of Agriculture - Marketing. [www.agri.state.id.us/Categories/Marketing/indexMarketing.php](http://www.agri.state.id.us/Categories/Marketing/indexMarketing.php). Accessed October 2007.
- Jarrett, Albert. "Agricultural Water Needs and Sources Water Supply." Penn State College of Agricultural Sciences Cooperative Extension. 2002.
- Kansas Department of Agriculture - Governor's Rural Life Task Force. [www.ksda.gov/kansas\\_agriculture/cid/441](http://www.ksda.gov/kansas_agriculture/cid/441). Accessed October, 2007.
- Lancaster County [Pennsylvania] Planning Commission. *Heritage: The Cultural Heritage Element: A Strategy for Preserving Our Sense of Place*. April 2006.
- Lehigh Valley [Pennsylvania] Planning Commission. *Comprehensive Plan: The Lehigh Valley... 2030*. April 2005.
- Licking County [Pennsylvania] Farmland Task Force. *Agriculture for Tomorrow: The Licking County Farmland Preservation Plan*. May 2002.
- Mercer County [New Jersey] Agriculture Development Board and Mercer County Department of Planning. *County of Mercer Comprehensive Farmland Preservation Plan*. 2007.
- Monmouth County [New Jersey] Planning Board. *Monmouth County Farmland Preservation Plan: The Comprehensive Plan*. August 2000.
- Morris Land Conservancy. *County of Somerset Comprehensive Farmland Preservation Plan Update - Draft*. August 2007.

Nation Council of Farmer Cooperatives (NCFC). [www.ncfc.org](http://www.ncfc.org). Accessed October 2007.

National Sustainable Agriculture Information Service (ATTRA). <http://attra.ncat.org>. Accessed July 2008.

Natural Lands Trust. [www.natlands.org](http://www.natlands.org). Accessed June 2008.

New England Small Farm Institute – Northeast Workers on Organic Farms. [www.smallfarm.org/newoof/](http://www.smallfarm.org/newoof/). Accessed July 2008.

New Farm, The. [www.newfarm.org](http://www.newfarm.org). Accessed October 2007.

New Jersey Department of Agriculture (NJDA) - Agricultural Development Initiative. [www.state.nj.us/agriculture/conventions/2006/agdevinitres.html](http://www.state.nj.us/agriculture/conventions/2006/agdevinitres.html). Accessed October 2007.

New Jersey Department of Agriculture (NJDA). *Agricultural Smart Growth Plan for New Jersey*. April 2006.

New Jersey Department of Agriculture (NJDA) - Agricultural Smart Growth Planners Toolkit. [www.state.nj.us/agriculture/toolkit.htm](http://www.state.nj.us/agriculture/toolkit.htm). Accessed October 2007.

New Jersey Department of Agriculture (NJDA). *Economic Development Strategies*. 2007.

New Jersey Department of Agriculture (NJDA). Farmland Assessment County Summary. 1983, 1990, 2000, 2004, and 2005.

New Jersey Department of Agriculture (NJDA). - Grants, Financial Assistance, and Services. [www.state.nj.us/agriculture/financialassistance.htm](http://www.state.nj.us/agriculture/financialassistance.htm). Accessed October 2007.

New Jersey Department of Agriculture (NJDA). - Jersey Fresh. [www.state.nj.us/jerseyfresh/index.html](http://www.state.nj.us/jerseyfresh/index.html). Accessed October 2007.

New Jersey Department of Agriculture (NJDA). Marketing and Development, Recycling Programs. [www.nj.gov/agriculture/divisions/md/prog/recycling.html](http://www.nj.gov/agriculture/divisions/md/prog/recycling.html). Accessed August 2008.

New Jersey Department of Environmental Protection (NJDEP) – Bureau of Geographic Information System. [www.state.nj.us/dep/gis](http://www.state.nj.us/dep/gis). Accessed July 2008.

New Jersey Department of Environmental Protection (NJDEP) - Division of Fish & Wildlife. *New Jersey's Landscape Project: Critical area mapping for community land-use planning and imperiled species protection*. May 2008.

New Jersey Department of Environmental Protection (NJDEP) - Division of Land Use Regulation, Coastal Permitting [CAFRA]. [www.state.nj.us/dep/landuse/coast.html](http://www.state.nj.us/dep/landuse/coast.html). Accessed June 2008.

- New Jersey Department of Environmental Protection (NJDEP) – Division of Water Supply Management. [www.state.nj.us/dep/watersupply/index.html](http://www.state.nj.us/dep/watersupply/index.html). Accessed July 2008.
- New Jersey Department of Environmental Protection (NJDEP) – Office of Environmental Planning. *The Vital Resource. New Jersey Statewide Water Supply Plan*. August 1996.
- New Jersey Farmland Preservation Summit. “Planning for Agriculture in the Garden State: Retaining Our Farms and Farmers.” Presentation at the New Jersey Farmland Preservation Summit, Cook College Campus Center, New Brunswick. March 3, 2006.
- New Jersey Pinelands Commission. [www.state.nj.us/pinelands](http://www.state.nj.us/pinelands). Accessed June 2008.
- New Jersey SmartStart Buildings Program. [www.njsmartstartbuildings.com](http://www.njsmartstartbuildings.com). Accessed June 2008.
- New Jersey State Agriculture Development Committee (SADC) - New Jersey Farm Link Program. [www.state.nj.us/agriculture/sadc/farmlink/](http://www.state.nj.us/agriculture/sadc/farmlink/). Accessed June 2008.
- New Jersey State Agriculture Development Committee (SADC). *Transferring the Family Farm: What Worked, What Didn't for 10 New Jersey Families*. December 2004.
- New Jersey State Planning Commission. *New Jersey State Development and Redevelopment Plan*. March 2001, Updated 2008.
- New Jersey's Clean Energy Program. [www.njcleanenergy.com](http://www.njcleanenergy.com). Accessed August 2008.
- Newman, Andy. “The Last of the Jewish Farmgirls.” *New York Times*, June 22, 2005.
- Northeast Organic Farming Association of New Jersey (NOFA-NJ). [www.nofanj.org](http://www.nofanj.org). Accessed October 2007.
- Office of the New Jersey State Climatologist (ONJSC) at Rutgers University. <http://climate.rutgers.edu/stateclim>. Accessed June 2008.
- Orth-Rodgers & Associates, Inc. *Planning for the Future: A Summary of Cumberland County Planning Initiatives*. 2002.
- Orth-Rodgers & Associates, Inc. *Western/Southern Cumberland Region Strategic Plan*. 2005.
- Pilesgrove Township [Salem County, NJ]. *Farmland Preservation Plan Element*. March 2004.
- Pisarski, Matthew. Cumberland County Farmland Preservation Program. Conversations during 2006-2008.
- Rutgers University New Jersey Agricultural Experiment Station (NJAES) - Cooperative Extension. <http://njaes.rutgers.edu/extension>. Accessed October 2007.

Rutgers University New Jersey Agricultural Experiment Station (NJAES) - Cooperative Extension of Salem County. "Green Pages." <http://salem.rutgers.edu/greenpages/>. Accessed June 2008.

Rutgers University New Jersey Agricultural Experiment Station (NJAES) – Food Innovation Center. [www.foodinnovation.rutgers.edu](http://www.foodinnovation.rutgers.edu). Accessed July 2008.

"Rutgers Shaping Future of Food Industry from 'Secret' Facility in Bridgeton." *SNJ Business People*. May 29, 2008.

Salem County Agriculture Development Board. *Salem County Farmland Preservation Plan*. November 2007.

Schilling, Brian J., Lucas J. Marxen, Helen H. Heinrich, and Fran J. A. Brooks. *The Opportunity for Agritourism Development in New Jersey*. October 2006.

South Jersey Land and Water Trust. [www.sjlandwater.org](http://www.sjlandwater.org). Accessed June 2008.

T&M Associates. *City of Vineland Master Plan*. April 2008.

United States Census Bureau. 2002 Economic Census. [www.census.gov/econ/census02/index.html](http://www.census.gov/econ/census02/index.html). Accessed August 2008.

United States Census Bureau. 2007 Population Estimates. [www.census.gov](http://www.census.gov). Accessed June 2008.

United States Census Bureau - Manufacturing, Mining, and Construction Statistics. Building permits data. 2007.

United States Department of Agriculture (USDA) - Farm Service Agency (FSA) [www.fsa.usda.gov](http://www.fsa.usda.gov). Accessed July 2008.

United States Department of Agriculture (USDA) - National Agricultural Statistics Service (NASS). *The Census of Agriculture, 1987, 1992, 1997, and 2002*.

United States Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS). Programs. [www.nrcs.usda.gov/programs](http://www.nrcs.usda.gov/programs). Accessed June 2008.

United States Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS). National Cooperative Soil Survey. 2007.

United States Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS). *Soil Survey of Cumberland County, New Jersey*. 2008.

United States Department of Agriculture (USDA). Rural Development. [www.rurdev.usda.gov/](http://www.rurdev.usda.gov/). Accessed August 2008.

United States Department of Energy. Energy Efficiency and Renewable Energy.  
[www.eere.energy.gov](http://www.eere.energy.gov). Accessed August 2008.

United States Geological Survey (USGS). "Aquifer and Well Characteristic in New Jersey."  
[http://nj.usgs.gov/gw/table\\_1.html](http://nj.usgs.gov/gw/table_1.html). Accessed November 2007.

United States Geological Survey (USGS). *A Hydrologic Primer for New Jersey Watershed Management: Water Resources Investigations Report 00-4140*. 2000.

Upper Deerfield Township Planning Board. *The Master Plan of the Township of Upper Deerfield*. 1988.

Welch's. About Us: History. [www.welchs.com/about-welchs/history.aspx](http://www.welchs.com/about-welchs/history.aspx). Accessed June 2008.

West Jersey and South Jersey Heritage. "Founding of Vineland and Its Growth as an Agricultural Center." [www.westjersey.org/vland.htm](http://www.westjersey.org/vland.htm).

Whole Foods Market - Local Producer Loan Program.

[www.wholefoodsmarket.com/products/locallygrown/lplp/index.html](http://www.wholefoodsmarket.com/products/locallygrown/lplp/index.html). Accessed October 2007.

YellowPages.com – Agriculture. [www.yellowpages.com/categories/NJ/agriculture](http://www.yellowpages.com/categories/NJ/agriculture). Accessed October 2007.



*Photo Courtesy of Linda Pisarski*

*The Roork Farm in Greenwich Township*





## **APPENDICES**

- A. Agricultural Water Certifications and Registrations in Cumberland County
- B. Preserved Farms in Cumberland County, August 2008
- C. Agricultural Support and Service Businesses in the Cumberland County Region
  - C-1: Farm Suppliers and Service Businesses
  - C-2: Cold Storage Warehouses
- D. Agricultural Markets and Sales in the Cumberland County Region
  - D-1: Fruit and Vegetable Wholesale Brokers and Distributors
  - D-2: Food Processing Businesses
  - D-3: Roadside Markets in Cumberland County, New Jersey
  - D-4: Farmers Markets
- E. Conservation Programs for Farmers
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- G. CADB Application
- H. Resolutions of Adoption and Approval





**APPENDIX A: AGRICULTURAL WATER CERTIFICATIONS AND REGISTRATIONS IN CUMBERLAND COUNTY**

<b>Program Interest ID</b>	<b>Program Interest Name</b>	<b>Activity Number</b>	<b>Certification or Registration Type</b>	<b>Effective Start Date</b>	<b>Expiration Date</b>
CU0304	Ackleys Deerview Nursery	AGC040001	Modification	11/1/2004	10/31/2009
CU0179	Adamucci Farms Inc	AGC050001	Modification	3/1/2006	2/28/2011
CU0330	Ag Mart Produce Inc	AGC070001	New	1/1/2008	12/31/2012
CU0306	Ag-Mart Produce Inc	AGC070001	Modification	4/1/2008	3/31/2013
CU0322	Alderman Farm	AGC040001	New	2/8/2006	1/31/2011
CU0173	Ales Nursery	AGC050001	Modification	7/1/2005	6/30/2010
CU0279	Alex R Tonetta Farms	AGC070001	Modification	8/1/2007	7/31/2012
CU0310	Ansink Farms	AGC020001	New	6/9/2004	6/30/2009
CU208R	Anthony E Kula Farm	AGR970001	Modification	4/30/1997	N/A
CU0288	A Pagnini Farms	AGC060001	Renewal	8/1/2006	7/31/2011
CU0089	April Farm	AGC070001	Renewal	7/1/2007	6/30/2012
CU0007	Aura Orchards II	AGC050001	Renewal	8/1/2005	7/31/2010
CU0085	Badaracco Farms Inc	AGC050001	Renewal	3/1/2006	2/28/2011
CU0039	Barsuglia Farms	AGC040001	Renewal	9/1/2005	8/31/2010
CU0221	Barsuglia Farms LLC	AGC070001	Renewal	12/1/2007	11/30/2012
CU0212	Bergamo Brothers Farms	AGC030001	Modification	11/1/2004	10/31/2009
CU0017	Bisconte Farm	AGC050001	Renewal	10/1/2005	9/30/2010
CU0093	BJ Farms	AGC050001	Renewal	4/1/2006	3/31/2011
CU0166	Blew Valley Farm	AGC040001	Modification	9/1/2005	8/31/2010
CU0275	Blue Sterling Nursery	AGC040001	Modification	7/1/2005	6/30/2010
CU0150	Bonham Brothers Farm	AGC070001	Renewal	3/1/2008	2/28/2012
CU0315	Bourgeois Farms	AGC050001	New	3/24/2006	2/28/2011
CU0021	Bowman Farms	AGC050001	Renewal	3/1/2006	2/28/2011
CU0213	Buono Farms Inc	AGC040001	Renewal	2/1/2005	1/31/2010
CU299R	Carls Nursery	AGR010001	New	5/31/2001	N/A
CU0051	Carl Tarabbio Farm	AGC040001	Renewal	4/1/2005	3/31/2010
CU0266	Casper Nurseries LLC	AGC020001	Modification	1/1/2004	12/31/2008
CU245R	Castellini Brothers	AGR990001	New	6/30/1999	N/A
CU0170	Castellini Farms	AGC050001	Renewal	9/1/2005	8/31/2010
CU0235	Cedarville Coop Marketing Inc	AGC040001	Renewal	3/1/2005	2/28/2010
CU0291	Cedrus Nursery	AGC040001	Renewal	1/10/2006	12/31/2010
CU0027	Centerton Nursery Inc	AGC040001	Modification	10/1/2005	9/30/2010
CU0283	Century Farm & Nursery	AGC020001	New	3/1/2005	2/28/2010
CU0162	Chestnut Run Farm Inc	AGC040001	Renewal	11/1/2004	10/31/2009
CU0303	Cohansey Nursery	AGC030001	New	2/28/2003	2/29/2008
CU0023	Coombs Farm	AGC050001	Renewal	8/1/2006	7/31/2011
CU0015	Cooper Farm	AGC050001	Renewal	4/1/2006	3/31/2011
CU0094	County Line Nurseries	AGC050001	Modification	3/1/2006	2/28/2011
CU0287	County Line Nurseries	AGC060001	Renewal	1/1/2007	12/31/2011
CU0054	C & P Bertoldi Inc	AGC040001	Renewal	8/1/2005	7/31/2010
CU0250	Cruzandale Farms	AGC050001	Renewal	4/1/2006	3/31/2011
CU0031	Cruzan Farm	AGC050001	Renewal	4/1/2006	3/31/2011
CU0018	Cumberland Nurseries	AGC040001	Renewal	9/1/2005	8/31/2010
CU0148	Dan Deola Farm	AGC020001	Renewal	6/1/2005	5/31/2010

<b>Program Interest ID</b>	<b>Program Interest Name</b>	<b>Activity Number</b>	<b>Certification or Registration Type</b>	<b>Effective Start Date</b>	<b>Expiration Date</b>
CU0199	Daniel Ferrari Farms	AGC070001	Renewal	5/1/2008	4/30/2013
CU0098	David Franceschini & Sons	AGC070001	Modification	12/1/2007	11/30/2012
CU0138	David Monteleone Farm	AGC060001	Renewal	1/1/2007	12/31/2011
CU0033	Davis Allen Farm	AGC040001	Renewal	2/1/2005	1/31/2010
CU0103	Decou Hilltop Orchards Inc	AGC060001	New	4/1/2007	3/31/2012
CU0293	DeJohns Nursery	AGC050001	Renewal	4/1/2006	3/31/2011
CU0284	DJ McCracken Nursery	AGC040001	New	9/9/2006	8/31/2011
CU0167	Donald Fiocchi Farm	AGC050001	Renewal	4/1/2006	3/31/2011
CU0178	Earl Casper Farm	AGC030001	Renewal	1/31/2003	1/31/2008
CU0140	East Coast Sod	AGC050001	Renewal	10/1/2006	9/30/2011
CU0296	Edgar Joyce Nursery	AGC050001	Modification	6/1/2006	5/31/2011
CU135R	Ed Graiff & Sons Farm	AGR050001	New	3/1/2006	N/A
CU273R	Eugene Castellini Farms	AGR950001	New	8/31/1995	N/A
CU0146	Ferrari Farms	AGC050001	Modification	8/1/2005	7/31/2010
CU0101	F Farnetti Farms	AGC070001	Renewal	1/1/2008	12/31/2012
CU0095	Flaim Farms Inc	AGC070001	Modification	12/1/2007	11/30/2012
CU0079	Fogg Family Partnership	AGC050001	Renewal	1/19/2006	12/31/2010
CU0233	Fox Brothers Farm	AGC040001	Renewal	11/1/2004	10/31/2009
CU0019	Franceschini Farm	AGC040001	Renewal	11/1/2004	10/31/2009
CU0316	Franceschini Farm	AGC050001	Minor Modification	8/1/2006	5/31/2010
CU0092	Frank Coles Farm	AGC040001	Modification	11/1/2004	10/31/2009
CU0064	Fred Nurge Farms	AGC070001	Renewal	9/1/2007	8/31/2012
CU0321	Frightened Turtle LLC	AGC040001	New	2/1/2006	1/31/2011
CU0056	F Warren Harris Sr & Son	AGC050001	Renewal	1/1/2006	12/31/2010
CU0294	Gala Farms	AGC060001	Renewal	10/1/2007	9/30/2012
CU0169	Galetto Farms Inc	AGC040001	Renewal	11/1/2004	10/31/2009
CU0013	Garrison Farm	AGC050001	Renewal	5/1/2006	4/30/2011
CU0063	Genoa Farms Inc	AGC060001	Administrative Modification	6/1/2006	1/31/2010
CU0243	George Woodruff Estate	AGC040001	Renewal	2/1/2005	1/31/2010
CU0224	Gerald Rottkamp Farms	AGC050001	Renewal	4/1/2006	3/31/2011
CU0134	Graiff Farms	AGC040001	Renewal	6/1/2005	5/31/2010
CU314R	Gwazdacz Nursery & Greenhouses	AGR020001	New	8/3/2004	N/A
CU0143	Halka Nurseries	AGC050001	Renewal	10/1/2006	9/30/2011
CU0264	Halka Nurseries	AGC050001	Renewal	4/1/2006	3/31/2011
CU0217	Happy Hill Farms	AGC040001	Renewal	9/1/2004	8/31/2009
CU0152	Harmony Valley Nursery	AGC050001	Modification	8/1/2005	7/31/2010
CU280R	Henry Mazzoni Farms Ltd	AGR980001	New	6/18/1998	N/A
CU324R	Homestead Nursery	AGR060001	New	11/1/2006	N/A
CU0110	Hopewell Nursery	AGC030001	Modification	6/1/2005	5/31/2010

<b>Program Interest ID</b>	<b>Program Interest Name</b>	<b>Activity Number</b>	<b>Certification or Registration Type</b>	<b>Effective Start Date</b>	<b>Expiration Date</b>
CU0159	H & S Dubois	AGC070001	Renewal	6/1/2008	5/31/2013
CU0160	H & S Dubois	AGC050001	Renewal	3/1/2006	2/28/2011
CU0161	H & S Dubois	AGC050001	Renewal	3/1/2006	2/28/2011
CU0300	H & S Dubois	AGC050001	Renewal	4/1/2006	3/31/2011
CU0301	H & S Dubois	AGC050001	Renewal	3/1/2006	2/28/2011
CU0305	H & S Dubois	AGC070001	Renewal	2/1/2008	1/31/2013
CU0307	H & S Dubois	AGC070001	Renewal	6/1/2008	5/31/2013
CU0277	H & S Dubois	AGC020001	New	8/1/2004	7/31/2009
CU0176	Ian K Baitinger Farms	AGC050001	Modification	8/1/2006	7/31/2011
CU272R	Ignazio Provenzano Farms	AGR950001	New	5/1/1995	N/A
CU0204	Indian Mills Nursery Inc	AGC050001	Modification	7/1/2005	6/30/2010
CU0251	Industrial Airpark Farms LLC	AGC070001	Renewal	5/1/2008	4/30/2013
CU0320	Ingraldi Farms	AGC040001	New	6/1/2005	5/31/2010
CU0127	J Cresci Farms	AGC050001	Modification	6/1/2005	5/31/2010
CU0312	J & E Petronglo & Sons Farm	AGC050001	Modification	3/1/2006	2/28/2011
CU0182	Jerry Kristovich Farm	AGC050001	Renewal	4/1/2006	3/31/2011
CU0026	J G Akerboom Nurseries Inc	AGC050001	Modification	1/1/2007	12/31/2011
CU0053	Jim Simoni Farm	AGC060001	Renewal	6/1/2006	5/31/2011
CU0076	J & L Farms	AGC040001	Renewal	6/1/2005	5/31/2010
CU0195	John A Joseph Farms	AGC050001	Renewal	10/1/2006	9/30/2011
CU0156	John E Ploch Farm	AGC070001	Renewal	4/1/2007	3/31/2012
CU0139	John J Braid Farm	AGC020001	Modification	1/1/2004	12/31/2008
CU0258	John & Mary Visconti Farms	AGC040001	Renewal	11/1/2004	10/31/2009
CU0082	John Reimels Farm	AGC070001	Renewal	9/1/2007	8/31/2012
CU0078	Johnson Farms Ent	AGC040001	Modification	11/1/2004	10/31/2009
CU0041	Judith Tamagni Farm	AGC050001	Renewal	1/19/2006	12/31/2010
CU0065	Ken Harris Farms	AGC060001	Modification	8/1/2007	7/31/2012
CU0232	Landis Sewerage Authority Agricultural Facility	AGC070001	Renewal	1/1/2008	12/31/2012
CU0067	Laning Bros Farms Inc	AGC050001	Minor Modification	6/1/2005	2/28/2010
CU0184	Lawrence Ferrari Farms	AGC040001	Renewal	1/1/2005	12/31/2009
CU0193	Level Acres Farm	AGC050001	Renewal	3/1/2006	2/28/2011
CU0292	LG Hoffman Nurseries	AGC020001	New	9/14/2004	8/30/2009
CU0239	Loews Nursery LLC	AGC070001	Renewal	6/1/2008	5/31/2013
CU0171	Long Lane Nursery	AGC040001	Modification	10/1/2006	9/30/2011
CU0309	Long Lane Nursery	AGC070001	Renewal	5/1/2008	4/30/2013
CU0147	Louis Ferrari Farms	AGC020001	Modification	6/1/2004	5/31/2009
CU0327	Lynn Mooneyham Farm	AGC060001	New	4/26/2007	3/31/2012
CU0111	Magolda Farms	AGC040001	Modification	4/1/2006	3/31/2011
CU0052	Malench Farms	AGC060001	Modification	9/1/2007	8/31/2012
CU0005	Manetas Farms	AGC060001	Administrative Modification	1/1/2007	8/31/2011

<b>Program Interest ID</b>	<b>Program Interest Name</b>	<b>Activity Number</b>	<b>Certification or Registration Type</b>	<b>Effective Start Date</b>	<b>Expiration Date</b>
CU326R	Maple Valley Nursery	AGR070001	Modification	1/1/2008	N/A
CU0286	Marie Macdonald Farms	AGC050001	Renewal	5/1/2005	4/30/2010
CU042R	Mario A Nani	AGR950001	New	12/31/1995	N/A
CU0040	Martino Farms	AGC050001	Renewal	7/1/2005	6/30/2010
CU0109	Maurice Castellini & Sons Farms	AGC050001	Renewal	9/1/2005	8/31/2010
CU0130	Meadow Bend Farms	AGC030001	Renewal	6/1/2005	5/31/2010
CU0278	Michael Smith Farms	AGC020001	Modification	8/1/2005	7/31/2010
CU0155	Mooneyham Nursery	AGC060001	Minor Modification	10/1/2006	3/31/2010
CU0285	Mortorano Hickman Farms	AGC050001	Renewal	1/19/2006	12/31/2010
CU0022	M.R. Dickinson & Son Farm	AGC040001	Renewal	9/1/2004	8/31/2009
CU0003	Myers Farms	AGC060001	Renewal	9/1/2006	8/31/2011
CU0308	Nardelli Brothers	AGC030001	New	1/31/2003	1/31/2008
CU0001	Newkirk Farm	AGC040001	Renewal	11/1/2004	10/31/2009
CU0125	NJ Hitchner Farms	AGC050001	Renewal	3/1/2006	2/28/2011
CU0024	Overdevest Nurseries	AGC050001	Modification	6/1/2006	5/31/2011
CU0025	Overdevest Nurseries	AGC050001	Renewal	4/1/2006	3/31/2011
CU0117	Paladino Farms	AGC050001	Renewal	9/1/2006	8/31/2011
CU0252	Parsonage Run Nursery	AGC050001	Modification	3/1/2006	2/28/2011
CU0108	Paul Earnest Farm	AGC050001	Modification	9/1/2006	8/31/2011
CU0263	Paul Porreca Farm	AGC040001	Renewal	10/1/2004	9/30/2009
CU0137	Paul V Lloyd Jr Farm	AGC040001	Renewal	7/1/2005	6/30/2010
CU0126	Pleasant Acres Farm	AGC050001	Renewal	6/1/2005	5/31/2010
CU0319	Porter Bruce	AGC030001	New	6/16/2005	5/31/2010
CU0102	Rabbit Hill Farm	AGC050001	Modification	1/1/2007	12/31/2011
CU0168	Richard Ferrari Farm	AGC060001	Administrative Modification	1/1/2007	8/31/2011
CU0016	Riggins Nursery	AGC060001	Modification	6/1/2007	5/31/2012
CU0247	Rivendell Nursery	AGC050001	Modification	6/1/2006	5/31/2011
CU153R	RJ Mehaffey Nursery	AGR000001	New	3/23/2000	N/A
CU0088	Robert E Hluchy Farms	AGC040001	Renewal	9/1/2004	8/31/2009
CU0253	Robert Fralinger Jr Farm	AGC070001	Modification	1/1/2008	12/31/2012
CU0123	Robert Mayhew Farm	AGC050001	Renewal	1/14/2006	12/31/2010
CU0157	Rochetti Brothers Farm	AGC040001	Renewal	8/1/2004	7/31/2009
CU0164	Ron Dottavio Farm	AGC040001	Renewal	8/1/2005	7/31/2010
CU0228	Rottkamp Farms Inc	AGC030001	Modification	11/1/2004	10/31/2009
CU0131	Russo Farms Inc	AGC070001	Renewal	2/1/2008	1/31/2013
CU0265	Russo Farms Inc	AGC040002	Modification	2/1/2005	1/31/2010
CU0180	Rutgers Agricultural Research & Extension Ctr	AGC050001	Renewal	6/1/2006	5/31/2011
CU311R	Saunders Hurff Nursery	AGR070001	Modification	7/1/2007	N/A
CU329R	Schuler Farm	AGR060001	Administrative Modification	1/1/2007	N/A
CU0200	Scrivani Farms	AGC020001	Modification	4/1/2004	3/31/2009

<b>Program Interest ID</b>	<b>Program Interest Name</b>	<b>Activity Number</b>	<b>Certification or Registration Type</b>	<b>Effective Start Date</b>	<b>Expiration Date</b>
CU0302	Seeley Pond Nursery	AGC020001	New	5/4/2004	4/30/2009
CU0276	Sepers Countryside Nursery	AGC060001	Renewal	1/1/2007	12/31/2011
CU0029	Sepers Nursery	AGC070001	Modification	11/1/2007	10/31/2012
CU0046	Sheppard Farms Inc	AGC040001	Modification	1/1/2007	12/31/2011
CU0240	Sheppard Farms Inc	AGC070001	Renewal	10/1/2007	9/30/2012
CU0328	Shimp Farm	AGC060001	New	5/1/2007	4/30/2012
CU332R	Sikking Farms Inc	AGR070001	New	11/1/2007	N/A
CU0141	Simione Farms	AGC040001	Renewal	11/1/2004	10/31/2009
CU0158	Smaniotto Brothers Farm	AGC060001	Modification	1/1/2007	12/31/2011
CU0122	Sorantino Farms	AGC070001	Renewal	10/1/2007	9/30/2012
CU0020	Spadoni Farms	AGC050001	Renewal	5/1/2005	4/30/2010
CU0257	Sparacio Farm	AGC050001	Renewal	6/1/2005	5/31/2010
CU0061	Sparacio Farms	AGC060001	Modification	12/1/2006	11/30/2011
CU0059	Steven Ayars Farm	AGC060001	Modification	5/1/2007	4/30/2012
CU0230	Sunny Side Farms	AGC060001	Modification	8/1/2006	7/31/2011
CU0097	Sunny Slope Farms Of NJ	AGC070001	Modification	5/1/2008	4/30/2013
CU0274	Sunrise Farms	AGC060001	Renewal	7/1/2006	6/30/2011
CU0077	Thomas Pontano Farms	AGC070001	Minor Modification	10/1/2007	5/31/2011
CU0244	Thompson Nursery	AGC050001	Renewal	6/1/2005	5/31/2010
CU0201	Tice Farms	AGC040001	Renewal	1/1/2005	12/31/2009
CU0174	Tolotti Farms	AGC050001	Renewal	7/1/2005	6/30/2010
CU0198	T Scrivani Farms	AGC060001	Modification	8/1/2006	7/31/2011
CU0297	Tuckahoe Nurseries	AGC040001	Modification	1/1/2007	12/31/2011
CU0298	Tuckahoe Nurseries	AGC060001	Renewal	2/1/2008	1/31/2013
CU105R	Turf Construction Co Inc	AGR980001	New	5/6/1998	N/A
CU0189	Van Breemen Farms LH	AGC040001	Renewal	7/1/2005	6/30/2010
CU0313	Van Dyke Bros	AGC040002	New	4/1/2005	3/31/2010
CU0009	Van Meter Farms	AGC050001	Renewal	4/1/2006	3/31/2011
CU0268	Wayne Beal Farms	AGC050001	Renewal	7/1/2005	6/30/2010
CU0163	Wayne Groetsch Farm	AGC020001	Modification	11/30/2002	11/30/2007
CU0237	Wide Sky Turf Farms Inc	AGC050001	Modification	7/1/2005	6/30/2010
CU0242	Wide Sky Turf Farms Inc	AGC040001	Renewal	1/1/2005	12/31/2009
CU0227	Woodruff Nursery	AGC030001	Modification	1/1/2005	12/31/2009
CU0295	Woodside Nursery	AGC060001	Renewal	8/1/2006	7/31/2011
CU0317	Zirkle Farm	AGC030001	New	7/7/2005	6/30/2010

N/A = Not Available

Source: NJDEP Bureau of Water Allocation, 2008



**APPENDIX B: PRESERVED FARMS IN CUMBERLAND COUNTY,  
AUGUST 2008**

<b>Municipality</b>	<b>Owner Name</b>	<b>Block</b>	<b>Lot</b>	<b>Acres</b>	<b>Farmland Preservation Type</b>
Deerfield	Hopewell Nursery Inc	4	33	211.02	Easement Purchase - County
Deerfield	Riley, Joseph P & Lorre Allen	79	86	84.07	SADC Direct Easement Purchase
Deerfield	Sparacio, Ignazio & Mary	11	44	49.22	Easement Purchase - County
Downe	Bauer, Michael C/O Ron Bauer	11	25	18.65	Easement Purchase – Nonprofit
Downe	Bauer, Ronald & Kathleen	11	17	115.70	Easement Purchase – Nonprofit
Downe	Bauer, Ronald & Kathleen	11	25.0	34.64	Easement Purchase – Nonprofit
Downe	Bauer, Ronald & Kathleen	11	26	15.85	Easement Purchase – Nonprofit
Fairfield	Fisher, Glendon M	11	12	23.36	Easement Purchase - County
Fairfield	Halka Nurseries Inc	46	5	0.49	Easement Purchase - County
Fairfield	Halka Nurseries Inc	46	8	4.27	Easement Purchase - County
Fairfield	Halka Nurseries Inc	48	11	4.46	Easement Purchase - County
Fairfield	Halka Nurseries Inc	48	17	9.98	Easement Purchase - County
Fairfield	Halka Nurseries Inc	48	22	33.66	Easement Purchase - County
Fairfield	Halka Nurseries Inc	48	22.0	52.42	Easement Purchase - County
Fairfield	Halka Nurseries Inc	51	28	6.43	Easement Purchase - County
Fairfield	Halka Nurseries Inc	51	28.0	1.48	Easement Purchase - County
Fairfield	Halka Nurseries Inc	51	29	38.00	Easement Purchase - County
Fairfield	Halka Nurseries Inc	51	30	29.52	Easement Purchase - County
Fairfield	Halka Nurseries Inc	52	63	288.09	Easement Purchase - County
Fairfield	Halka Nurseries Inc	52	66	2.60	Easement Purchase - County
Fairfield	Halka Nurseries Inc	52	73	0.38	Easement Purchase - County
Fairfield	Halka Nurseries Inc	52	75	121.90	Easement Purchase - County
Fairfield	Halka Nurseries Inc	52	76	8.50	Easement Purchase - County
Fairfield	Halpern, Michael & Robin	29	4	15.52	Easement Purchase - County
Fairfield	Hildreth, Kennard C Jr	46	4	16.46	Easement Purchase - County
Fairfield	Hildreth, Kennard C Jr	47	4	46.93	Easement Purchase - County
Fairfield	Hildreth, Kennard Jr	46	7	40.96	Easement Purchase - County
Fairfield	Hildreth, Kennard Jr	47	7	85.65	Easement Purchase - County
Fairfield	Lloyd, Paul U Jr & Karen J	46	3	29.70	Easement Purchase - County
Fairfield	Lloyd, Paul V Jr & Karen June	48	8	39.42	Easement Purchase - County
Fairfield	Manetas, James P Ii	51	34	20.84	Easement Purchase - County
Fairfield	Manetas, James P Ii	52	67	100.44	Easement Purchase - County
Fairfield	Manetas, James P Ii	52	67.0	46.00	Easement Purchase - County
Fairfield	Manetas, James P Ii	52	68	3.28	Easement Purchase - County
Fairfield	Schwamberger, John & Karen	51	33	0.60	Easement Purchase - County
Fairfield	Sorantino, John Jr	43	32	185.45	Easement Purchase - County
Fairfield	Stubee, Margie & Albert T/C	51	35	0.95	Easement Purchase - County
Fairfield	Zenchuk, Barbara & Fisher, Harry T	45	4	27.62	Easement Purchase - County
Fairfield	Zenchuk, Barbara & Fisher, Harry T	46	2	62.47	Easement Purchase - County



Municipality	Owner Name	Block	Lot	Acres	Farmland Preservation Type
Greenwich	Bacon Richard P & Deborah A	15	11	1.71	Easement Purchase - County
Greenwich	Bell Kenneth	5	4.01	13.99	Easement Purchase - County
Greenwich	Bell Kenneth L & Patricia R	5	3	10.03	Easement Purchase - County
Greenwich	Daniel S Hancock Sr Family Trust	21	1	75.83	Easement Purchase - County
Greenwich	Fithian J.H. & K.	1	3	0.05	Easement Purchase - County
Greenwich	Fithian, J.H. & K.	1	2	18.31	Easement Purchase - County
Greenwich	Hancock Daniel Family Trust	17	3	47.70	Easement Purchase - County
Greenwich	Hancock Daniel Family Trust	18	2	33.70	Easement Purchase - County
Greenwich	Hancock Steven & Elaine & Travis	21	2	111.13	Easement Purchase - County
Greenwich	Hancock Steven & Elaine & Travis	21	3.01	126.72	Easement Purchase - County
Greenwich	Hancock, Joseph G Jr	17	9	88.60	Easement Purchase - County
Greenwich	Judith's Fancy Inc - Hoffman	15	9	65.15	Easement Purchase - County
Greenwich	Kiefer Theodore J & Sharon	13	7	129.22	Easement Purchase - County
Greenwich	Kiefer Theodore J & Sharon	15	1	8.76	Easement Purchase - County
Greenwich	Kiefer Theodore J & Sharon	16	16	56.32	Easement Purchase - County
Greenwich	Kiefer Theodore J & Sharon	18	3.02	154.21	Easement Purchase - County
Greenwich	McCutcheon Elizabeth G	9	11	60.86	Easement Purchase - County
Greenwich	Naples Samuel F & Irene	21	8	26.81	Easement Purchase - County
Greenwich	Naples Samuel F & Irene	21	9	26.51	Easement Purchase - County
Greenwich	Orr James	16	9	11.30	Easement Purchase - County
Greenwich	Orr James	16	13	11.05	Easement Purchase - County
Greenwich	Orr James	16	19	10.16	Easement Purchase - County
Greenwich	Orr James	16	20	47.61	Easement Purchase - County
Greenwich	Orr James Sr & Cathy	16	21	1.71	Easement Purchase - County
Greenwich	Orr James Sr & Cathy	16	22	17.44	Easement Purchase - County
Greenwich	Powers Paul	4	6	18.02	Easement Purchase - County
Greenwich	Powers, Paul H Jr & Madelyn R	3	4.01	7.01	Easement Purchase - County
Greenwich	PSEG _ Attn Tax Dept T - 6b	17	10	4.01	Easement Purchase - County
Greenwich	R H Vassallo Inc	9	8	97.22	SADC Direct Easement Purchase
Greenwich	Renne, Karl G Jr & Lenora W	17	7	32.55	Easement Purchase - County
Greenwich	Riggins Robert & Donna	4	22	30.81	Easement Purchase - County
Greenwich	Riggins Robert & Donna	5	1	7.99	Easement Purchase - County
Greenwich	Riggins Robert & Donna	7	2	13.77	Easement Purchase - County
Greenwich	Riggins Robert & Donna	8	9	65.30	Easement Purchase - County
Greenwich	Riggins, Robert J & Donna L	7	3	0.74	Easement Purchase - County
Greenwich	Roork Dean A	18	6	79.00	Easement Purchase - County
Greenwich	Sheppard Anne	18	1	73.92	Easement Purchase - County
Greenwich	Slade, Ricardo	16	23	46.65	Easement Purchase - County
Greenwich	Thibodeau Rae Mary	18	34	52.17	Easement Purchase - County
Hopewell	Adamucci, Carmen	80	4	69.32	Easement Purchase - County
Hopewell	Ale Rodney & Florence	4	7	73.30	Easement Purchase - County
Hopewell	Ayars, Harold A & Dale G	22	6	31.23	SADC Direct Easement Purchase
Hopewell	Beal, Horace & Mildred	7	3	49.01	Easement Purchase - County
Hopewell	Bell Paul S & Carol S	78	20	19.80	Easement Purchase - County

Municipality	Owner Name	Block	Lot	Acres	Farmland Preservation Type
Hopewell	Buckley, Martin J & Elizabeth F	80	6	73.27	Easement Purchase - County
Hopewell	Cramer, Geoffrey S & Lorette E	16	7	72.38	Easement Purchase - County
Hopewell	Cramer, Geoffrey S & Lorette E	17	2	109.23	Easement Purchase - County
Hopewell	Cumberland County Historical Society	84	2.01	1.35	Easement Purchase - County
Hopewell	Decou, Eugenie	64	2	29.38	Easement Purchase - County
Hopewell	Decou Eugenie S	70	3.01	42.41	Easement Purchase - County
Hopewell	Decou Hill Top Orchards Inc	63	42	54.64	Easement Purchase - County
Hopewell	Decou Hilltop Orchards Inc	63	41	67.81	Easement Purchase - County
Hopewell	Decou Hilltop Orchards Inc	64	1	132.45	Easement Purchase - County
Hopewell	Decou Hilltop Orchards Inc	64	2.01	16.45	Easement Purchase - County
Hopewell	Decou Hilltop Orchards Inc	70	4	26.29	Easement Purchase - County
Hopewell	Doremus, Burton T Jr & Jeanne	89	14	105.84	Easement Purchase - County
Hopewell	Fralinger Robert E Jr & Maryanne	80	17	47.95	Easement Purchase - County
Hopewell	Fralinger, Robert & Mary Anne	89	4	1.42	Easement Purchase - County
Hopewell	Fralinger, Robert & Mary Anne	89	5	62.52	Easement Purchase - County
Hopewell	Fralinger, Robert & Maryanne	78	3.01	12.10	Easement Purchase - County
Hopewell	Fralinger, Robert & Maryanne	89	6	18.46	Easement Purchase - County
Hopewell	Fralinger, Robert E Jr & Maryanne E	79	6	50.86	Easement Purchase - County
Hopewell	Frightened Turtle LLC	78	4	26.60	Fee-simple – SADC
Hopewell	Frightened Turtle LLC	79	5	146.53	Fee-simple – SADC
Hopewell	Hubschmidt John F & Martha	7	8	22.68	Easement Purchase - County
Hopewell	Hubschmidt, John & Martha	7	7	99.88	Easement Purchase - County
Hopewell	Hubschmidt, John & Martha E	7	9.01	34.44	Easement Purchase - County
Hopewell	Loatman Henry Jr	83	1	86.36	Easement Purchase - County
Hopewell	Loatman Henry Jr	84	2	29.06	Easement Purchase - County
Hopewell	Loatman Henry Jr	89	33	9.66	Easement Purchase - County
Hopewell	Loatman Henry Jr	89	37	12.18	Easement Purchase - County
Hopewell	Loew Frank E & Linda S	9	3.01	32.21	Easement Purchase - County
Hopewell	Loew, Charles H & Dorothy	80	7	75.08	Easement Purchase - County
Hopewell	Loew, Frank E & Linda S	9	1.01	44.95	Easement Purchase - County
Hopewell	Mcallister, Benjamin W & Stephanie	22	5	17.55	SADC Direct Easement Purchase
Hopewell	Mixner Lee & Dawn	15	2	34.59	SADC Direct Easement Purchase
Hopewell	Mixner Lee & Dawn	16	3	89.18	SADC Direct Easement Purchase
Hopewell	Mixner Lee & Dawn	16	8	32.83	SADC Direct Easement Purchase
Hopewell	Mixner Lee & Dawn	18	1	23.46	SADC Direct Easement Purchase
Hopewell	Mixner Lee & Dawn	18	3	52.21	SADC Direct Easement Purchase
Hopewell	Mixner Lee & Dawn	18	3.01	7.83	SADC Direct Easement Purchase
Hopewell	Mpouroudis , Themistoklis	70	8	61.84	Easement Purchase - County
Hopewell	Newkirk, Raymond B & Carolyn B	65	11	149.74	SADC Direct Easement Purchase

Municipality	Owner Name	Block	Lot	Acres	Farmland Preservation Type
Hopewell	Perry, Ray L & Helen	89	15	3.47	Easement Purchase - County
Hopewell	Riggins Robert J & Donna L	71	18	39.84	Easement Purchase - County
Hopewell	Riggins Robert J & Donna L	71	19	0.16	Easement Purchase - County
Hopewell	Riggins Robert J & Donna L	71	43	13.94	Easement Purchase - County
Hopewell	Riggins Robt J & Donna L	71	20	0.67	Easement Purchase - County
Hopewell	Sheppard, Ralph E & Eleanor W	81	13	17.81	Easement Purchase - County
Hopewell	Shields Gary W & Edith G	7	11	48.78	Easement Purchase - County
Hopewell	Shoemaker, Joseph C Jr & Betty P	17	5.02	1.35	Easement Purchase - County
Hopewell	Shoemaker, Joseph Clark Jr & Betty H	17	5.01	3.48	Easement Purchase - County
Hopewell	Springer, Kevin & Patricia	80	18.0 2	2.82	Easement Purchase - County
Hopewell	Tacreiter Helga Et al	71	17.0 1	1.11	Easement Purchase - County
Hopewell	Tacreiter, Helga	71	17	74.03	Easement Purchase - County
Hopewell	Tes Real Estate LLC	79	16	0.37	Easement Purchase - County
Hopewell	Trull Gary & Ann	64	2.04	5.49	Easement Purchase - County
Hopewell	Watson Peter	89	16	77.52	Easement Purchase - County
Hopewell	Watson Peter F	89	7	130.95	Easement Purchase - County
Hopewell	Wheaton, Everett R	82	11	73.81	Easement Purchase - County
Hopewell	Wheaton, Everett R	89	12	20.33	Easement Purchase - County
Hopewell	Wheaton, Everett R	89	40	9.89	Easement Purchase - County
Hopewell	Willis Howard J	82	9	141.32	Easement Purchase - County
Hopewell	Willis, Howard J	80	18	78.93	Easement Purchase - County
Hopewell	Willis, Howard Jr & Sherry	80	18.0 1	2.02	Easement Purchase - County
Hopewell	Winrow Odell	79	17	0.41	Easement Purchase - County
Lawrence	Ag-Mart Produce Inc	249	1	194.46	Fee-simple - SADC
Lawrence	Baker, Edwin & Doris	3	10	19.80	Easement Purchase - County
Lawrence	Nature Conservancy	155	11	172.07	Fee-simple - Nonprofit
Lawrence	Sorantino, Dennis	251	8	74.39	SADC Direct Easement Purchase
Lawrence	Sorantino, Dennis	251	9	32.08	SADC Direct Easement Purchase
Lawrence	Sorantino, Dennis	251	10	239.07	SADC Direct Easement Purchase
Lawrence	Sorantino, Dennis Jr	251	1	0.35	SADC Direct Easement Purchase
Lawrence	Sorantino, Dennis Jr	251	2	131.90	SADC Direct Easement Purchase
Maurice River	NJ Dept Of Corrections	291	34	1,069.48	Easement Donation - SADC
Maurice River	NJ Dept Of Corrections	311	79	34.75	Easement Donation - SADC
Maurice River	Riegel, Charles Lewis & Rebecca H	311	80	1.34	Easement Donation - SADC
Maurice River	State Of New Jersey	291	35	36.27	Easement Donation - SADC
Maurice River	State Of New Jersey	291	36	28.75	Easement Donation - SADC
Shiloh	Goodwin, Walter M	3	25	10.98	Easement Purchase - County
Shiloh	Mcallister, Benjamin W & Stephanie	12	1	27.69	SADC Direct Easement Purchase
Stow Creek	Dilks, Laura M	16	1	83.90	Easement Purchase - County
Stow Creek	Dilks, Laura M	28	6	45.63	Easement Purchase - County
Stow Creek	Fithian, Herbert	13	28	52.82	Easement Purchase - County

Municipality	Owner Name	Block	Lot	Acres	Farmland Preservation Type
Stow Creek	Goodwin, Walter M	8	13	26.11	Easement Purchase - County
Stow Creek	Hampton, Robert G & Nancy A	20	13	17.74	Easement Purchase - County
Stow Creek	Hampton, Robert G & Nancy A	19	3	107.39	Easement Purchase - County
Stow Creek	Kernan, Morris E Jr	11	6	8.67	Easement Purchase - County
Stow Creek	Kernan, Morris E Jr	15	7	57.59	Easement Purchase - County
Stow Creek	Long, Margaret G	8	1	0.22	Easement Purchase - County
Stow Creek	M R Dickinson & Son Inc	7	5.01	57.26	Easement Purchase - County
Stow Creek	M R Dickinson & Son	19	11	36.19	Easement Purchase - County
Stow Creek	Powers, Charles J & Carol H	14	1	1.94	Easement Purchase - County
Stow Creek	Powers, Paul	13	30	24.72	Easement Purchase - County
Stow Creek	Powers, Paul H Jr	14	14	88.72	Easement Purchase - County
Stow Creek	Stanger, George H Jr & Judith F	28	6.02	42.65	Easement Purchase - County
Stow Creek	Stow Creek Twp Dump - Bruce Porter	19	5	8.87	Easement Purchase - County
Stow Creek	Timberman, Gary E & Joyce H	25	9	35.80	Easement Purchase - County
Stow Creek	Williams, James & Ada	19	2	0.85	Easement Purchase - County
Upper Deerfield	Ansink, Carroll J	102	4	58.74	Easement Purchase - County
Upper Deerfield	Apel, Susan E & Wdzieczkowski, Stan	2401	47	38.32	SADC Direct Easement Purchase
Upper Deerfield	Brock, Ed Jr - Brock Farms Inc	501	6	62.43	Easement Purchase - County
Upper Deerfield	Brock, Edward & Angelina	501	9	116.27	Easement Purchase - County
Upper Deerfield	Brock, Edward & Angelina	501	9.04	9.91	Easement Purchase - County
Upper Deerfield	Brock, Edward & Angelina	502	1.01	47.38	Easement Purchase - County
Upper Deerfield	Brock, Edward & Angelina	502	1.02	49.22	Easement Purchase - County
Upper Deerfield	Brock, Edward & Angelina	502	11	41.12	Easement Purchase - County
Upper Deerfield	Chiari, Donald	604	1	29.60	Easement Purchase - County
Upper Deerfield	Chiari, Mamie L	604	39	23.59	Easement Purchase - County
Upper Deerfield	Coles, Frank S & Hannah M	1001	2	85.04	Easement Purchase - County
Upper Deerfield	Creamer, Alice	2101	1	5.78	SADC Direct Easement Purchase
Upper Deerfield	Creamer, Alice	2101	2.01	26.76	SADC Direct Easement Purchase
Upper Deerfield	Denelsbeck, Carl W	202	5.01	1.09	Easement Purchase - County
Upper Deerfield	Dickinson, Beverly Et Al	202	6	9.16	Easement Purchase - County
Upper Deerfield	Dubois, Henry & Steve	103	5	1.37	SADC Direct Easement Purchase
Upper Deerfield	Dubois, Henry & Steven	502	19	101.46	Easement Purchase - County
Upper Deerfield	Dubois, Henry & Steven	801	10	55.00	Easement Purchase - County
Upper Deerfield	Dubois, Henry D & Steven J	201	6	1.55	SADC Direct Easement Purchase
Upper Deerfield	Dubois, Henry D & Steven J	801	11	67.36	Easement Purchase - County
Upper Deerfield	Dubois, Steven J & Henry D Jr.	801	12	5.68	Easement Purchase - County
Upper Deerfield	Dubois, Steven Jr	822	6	56.29	SADC Direct Easement Purchase
Upper Deerfield	Dubois, Steven Jr	822	6.14	49.15	SADC Direct Easement Purchase
Upper Deerfield	E Brock LP	2701	19	33.26	Fee-simple - SADC

Municipality	Owner Name	Block	Lot	Acres	Farmland Preservation Type
Upper Deerfield	E Brock LP	2701	21	28.72	Fee-simple - SADC
Upper Deerfield	Eachus, T Glenn & Ella Mae	301	10	86.78	Easement Purchase - County
Upper Deerfield	Garrison, Donald C & Louise E	201	5	27.42	Easement Purchase - County
Upper Deerfield	Garrison, Donald C & Louise E	202	5	22.80	Easement Purchase - County
Upper Deerfield	Griscom, John Thomas	402	3.01	0.59	Easement Purchase - County
Upper Deerfield	Griscom, John Thomas Est.	401	2	120.16	Easement Purchase - County
Upper Deerfield	Harrison, Kenneth & Donna	901	15	1.95	Easement Purchase - County
Upper Deerfield	Henry, Harriet Et Al	708	5.03	151.31	Easement Purchase - County
Upper Deerfield	Hluchy, Robert E	901	1.03	65.68	Easement Purchase - County
Upper Deerfield	Hluchy, Robert E	901	8	1.87	Easement Purchase - County
Upper Deerfield	Hluchy, Robert E	901	10	109.28	Easement Purchase - County
Upper Deerfield	Hluchy, Robert F & Joyce L	901	1	68.99	Easement Purchase - County
Upper Deerfield	Hollyview Development Corp I	901	1.04	38.37	Easement Purchase - County
Upper Deerfield	Hopewell Nursery	701	10	206.91	Easement Purchase - County
Upper Deerfield	Hopewell Nursery	708	9	80.22	Easement Purchase - County
Upper Deerfield	Hunt, Russell & Dorothea	901	9	1.77	Easement Purchase - County
Upper Deerfield	Indian Mills Nursery Inc	301	22	98.36	Easement Purchase - County
Upper Deerfield	Johnson Farm Enterprises	201	1	173.53	Easement Purchase - County
Upper Deerfield	Johnson Farm Enterprises	301	3	81.06	Easement Purchase - County
Upper Deerfield	Johnson Farm Enterprises	301	4	56.66	Easement Purchase - County
Upper Deerfield	Joyce, E & Son Inc A NJ Corp	102	2	27.12	Easement Purchase - County
Upper Deerfield	Joyce, E & Son Inc A NJ Corp	302	2	56.54	Easement Purchase - County
Upper Deerfield	Mccracken, Donald J & Harriet G	301	11	21.26	Easement Purchase - County
Upper Deerfield	Mehaffey, Carl	302	1	28.26	Easement Purchase - County
Upper Deerfield	Mehaffey, Coolidge	301	19	79.84	Easement Purchase - County
Upper Deerfield	Mehaffey, Douglas G	404	36	1.00	Easement Purchase - County
Upper Deerfield	Mehaffey, G Douglas & Linda	404	35	117.75	Easement Purchase - County
Upper Deerfield	Mehaffey, Gilmer C	301	20	0.73	Easement Purchase - County
Upper Deerfield	Mehaffey, Gilmer C Sr & Jr & Addison	301	18	26.65	Easement Purchase - County
Upper Deerfield	Mitchell, Joseph & Albertine	607	4	48.01	SADC Direct Easement Purchase
Upper Deerfield	Myers, Harrison M & Elizabeth C	103	2	137.27	Easement Purchase - County
Upper Deerfield	Nichols, David G Jr	301	5	0.60	Easement Purchase - County
Upper Deerfield	Orzechowski, Dorothy	607	14	29.97	Easement Purchase - County
Upper Deerfield	Palischak, Michael P	607	13	47.36	Easement Purchase - County
Upper Deerfield	Scheese, Donald & Joan	301	8	49.60	Easement Purchase - County
Upper Deerfield	Seabrook Investment Partners LP	502	16	132.69	Easement Purchase - County
Upper Deerfield	Sloat, Robert K & Frances C	102	7	12.98	Easement Purchase - County
Upper Deerfield	Sloat, Robert K & Frances C	301	21	42.67	Easement Purchase - County
Upper Deerfield	Tice, Leon M & Arlene G & Milton C	102	3	90.80	Easement Purchase - County
Upper Deerfield	Vest, James E	901	3	2.03	Easement Purchase - County

<b>Municipality</b>	<b>Owner Name</b>	<b>Block</b>	<b>Lot</b>	<b>Acres</b>	<b>Farmland Preservation Type</b>
Upper Deerfield	Wenger, James N & Barbara J	802	1	159.77	Easement Purchase - County
Upper Deerfield	Wulderk, Diane	102	2.01	0.82	Easement Purchase - County
Upper Deerfield	Unknown	103	3	131.67	Easement Purchase - County
Upper Deerfield	Unknown	201	4	61.18	Easement Purchase - County
Upper Deerfield	Unknown	202	2	58.35	Easement Purchase - County
Upper Deerfield	Unknown	202	3	68.60	Easement Purchase - County
Upper Deerfield	Unknown	502	16.0 1	14.63	Easement Purchase - County
Vineland	Bergamo, Edwin C Jr & Saralyn	4602	10	14.23	Easement Purchase - County
Vineland	Bergamo, Edwin C Jr & Saralyn	4602	10	0.04	Easement Purchase - County
Vineland	Bergamo, Edwin Jr & Saralyn	4603	3	13.32	Easement Purchase - County
Vineland	Braidi, Andrew & Louise Amelia	6503	43	14.62	Easement Purchase - County
Vineland	Braidi, Andrew & Louise Amelia	6503	43	0.04	Easement Purchase - County
Vineland	Braidi, Andrew P & Louise	7302	2	16.49	Easement Purchase - County
Vineland	Campregher, Julia C	6502	6	30.13	Easement Purchase - County
Vineland	Campregher, Julia C	6502	6	0.04	Easement Purchase - County
Vineland	Ferrari, Robert J Jr	6604	5	57.96	Fee-simple - SADC
Vineland	Smaniotto Estate, Viola & Lois	4505	24	15.95	Easement Purchase - County
Vineland	Smaniotto, Beverly	6605	6	5.36	Easement Purchase - County
Vineland	Smaniotto, Beverly	6605	6	0.04	Easement Purchase - County
Vineland	Smaniotto, David B & Paula	6605	16	8.41	Easement Purchase - County
Vineland	Smaniotto, David B & Paula	6605	16	0.04	Easement Purchase - County
Vineland	Smaniotto, Robert & Joan	6605	17	27.20	Easement Purchase - County
Vineland	Smaniotto, Robert & Joan	6605	20	15.56	Easement Purchase - County
Vineland	Smaniotto, Vincent & Robert	5305	12	9.11	Easement Purchase - County
Vineland	Smaniotto, Viola & Lois Cassisi	4505	24	0.04	Easement Purchase - County
Vineland	Smaniotto, Viola M & Lois Cassisi	4505	26	11.43	Easement Purchase - County
Vineland	Spadoni, Angelo & Rita	7401	15	0.04	SADC Direct Easement Purchase
Vineland	Spadoni, Angelo & Rita	7401	15	31.94	SADC Direct Easement Purchase
Vineland	Venturi, Robert J & Johanne	6605	7	32.29	Easement Purchase - County
Vineland	Venturi, Robert J & Johanne	6605	7	0.04	Easement Purchase - County
Vineland	Venturi, Robert J & Johanne	6605	10	14.62	Easement Purchase - County
Vineland	Venturi, Robert J & Johanne	6605	10	0.04	Easement Purchase - County
	<b>Total</b>			<b>13,501</b>	

Sources: SADC and Cumberland County Department of Planning and Development, August 2008



**APPENDIX C: AGRICULTURAL SUPPORT AND SERVICE BUSINESSES IN  
THE CUMBERLAND COUNTY REGION**

**C-1: Farm Suppliers and Service Businesses**

Supplier	Address	Town	County	Phone	Description
Adamo Feed Company Inc	19 S. East Ave.	Vineland, NJ 08360	Cumberland	(856) 691-0223	Feeds
All Feeds	223 Pennsville-Auburn Rd.	Pedricktown, NJ 08067	Salem	(856) 299-6373	Feeds
Allen G. Williams Custom Combining	377 Commissioners Pike	Pilesgrove, NJ 08098	Salem	(856) 769-4513	Hay & straw
Alloway Village Hardware and Feed	43 N Greenwich St	Alloway, NJ 08001	Salem	(856) 935-6888	Feeds
Barbara's Fuel Supply	280 Alloway Aldine Road	Woodstown, NJ 08098-2048	Salem	(856) 769-1965	Feeds; Fuel
Bishop Farms	105 Newkirk Road	Elmer, NJ 08318	Salem	(856) 358-3250	Fertilizers; lime; chemicals; supplies
Borrie's Outdoor Power Equipment	659 Swedesboro Rd.	Gibbstown, NJ 08027	Gloucester	(856) 423-6499	Equipment & supplies
Bos Tack & Trailer Sales	331 Morton Ave	Millville, NJ 08332	Cumberland	(856) 451-2830	Equipment & supplies
Carter Aviation & Aero Service	Tuckahoe Road	Williamstown, NJ 08094	Gloucester	(856) 629-6699	Aerial applicators
Catalano Equipment	122 Marlton Rd	Woodstown, NJ 08098	Salem	(856) 769-0787	Equipment & supplies
Cedar Lane Feed	21 Cedar Lane	Elmer, NJ 08318-2646	Salem	(856) 358-5400	Feeds
Central Irrigation Supply Corporation	1738 Glassboro Rd	Sewell, NJ 08080	Gloucester	(856) 881-4446	Irrigation
Charles Hitchner	26 Daretown-Alloway Road	Elmer, NJ 08318	Salem	(856) 358-8332	Hay & straw
Charles Wible	358 Maskells Mill Road	Salem, NJ 08079	Salem	(856) 935-4025	Hay & straw
Circle T Farm & Garden Supply	2823 Vine Rd	Vineland, NJ 08360 Rd	Cumberland	(856) 696-1699	Greenhouse & nursery supplies; Equipment & supplies
Coleman Glendon Feeds & Limes	89 Aldine Shirley Road	Elmer, NJ 08318-2824	Salem	(856) 358-8386	Feeds; Fertilizers; lime; chemicals; supplies
Coleman Irrigation Sales & Service	129 Canhouse Road	Elmer, NJ 08318-2806	Salem	(856) 358-4740	Irrigation
Cowtown Livestock Auction	780 Route 40	Pilesgrove, NJ 08098	Salem	(856) 769-3000	Livestock hauling
Creamy Acres	448 Lincoln Mill Rd	Mullica Hill, NJ 08062	Gloucester		Greenhouse & nursery supplies
Cresci Farm Supply	4703 E Landis Ave	Vineland, NJ 08361	Cumberland	(856) 691-3881	Equipment & supplies
Croitor Feed	201 School House Lane	Cape May Court House, NJ 08210	Cape May	(609) 465-7365	Feeds



Supplier	Address	Town	County	Phone	Description
Crossroads Trailers Sales	1230 Harding Hwy	Newfield, NJ 08344	Gloucester	(800) 545-4497	Equipment & supplies
Daminger's Country Store	641 Main Street	Sewell, NJ 08080-4423	Gloucester	(856) 468-0822	Feeds
Dare's Feed & Pet Supply	591 Shiloh Pike	Bridgeton, NJ 08302	Cumberland	(856) 451-2114	Feeds
DelVal Industrial Tires, Inc	948 S. Broadway	Pennsville, NJ 08070	Salem	(856) 935-6593	Equipment & supplies
Diorio Aero Service	14 Briarwood LN	Bridgeton, NJ 08302	Cumberland	(856) 455-3990	Aerial applicators
Donald Scheese	369 Cohansey-Friesburg Rd.	Elmer, NJ 08318	Salem	(856) 455-3462	Equipment & supplies
Donian Farm	397 Newkirk Station Road	Elmer, NJ 08318	Salem	(856) 358-8709	Hay & straw
Downstown Aero Crop Service	339 Harding Highway	Vineland, NJ 08360	Cumberland	(856) 697-3300	Aerial applicators
DuBois Feed	735 S. Delsea Drive	Clayton, NJ 08312	Gloucester	(609) 881-7544	Feeds
Eastern Drilling Company, Inc	781 Main Street	Barnsboro, NJ 08080	Gloucester	(856) 464 8700	Irrigation
Equine Essentials Inc	240 Franklinville Rd	Swedesboro, NJ 08085	Gloucester	(856) 241-8088	Feeds
Espoma Company Fertilizers	6 Espoma Rd	Millville, NJ 08332	Cumberland	(856) 825-0542	Fertilizers; lime; chemicals; supplies
Falciani Farmers Package Supply Inc	2676 Harding Hwy	Newfield, NJ 08344	Gloucester	(856) 694-3579	Packaging supplies
Farm-Rite Inc	122 Old Cohansey Road	Shiloh, NJ 08353	Cumberland	(856) 451-1368	Irrigation; Equipment & supplies; Starter plant sources
Ferrucci Louis Company Incorporated Produce	518 N Harding Hwy	Vineland, NJ 08360	Cumberland	(856) 697-0209	Fertilizers; lime; chemicals; supplies
Fiocchi D L	1142 Panther Rd	Vineland, NJ 08361	Cumberland	(856) 691-7907	Equipment & supplies
Fred Harz & Son	US Highway 40 North	Elmer, NJ 08318	Salem	(856) 358-8128	Equipment & supplies
Garoppo Stone & Garden Center	40 State St	Elmer, NJ 08318	Salem	(856) 697-4444	Greenhouse & nursery supplies
Geiger	1240 Highway 77	Bridgeton, NJ	Cumberland	(856) 451-5170	Greenhouse & nursery supplies
George W. Hitchner	180 Diament Road	Bridgeton, NJ 08302	Cumberland	(856) 455-5639	Fertilizers, lime, chemicals, supplies
Glendon Coleman Feeds & Limes	89 Aldine-Shirley Road	Elmer, NJ 08318	Salem	(856) 358-8386	Feeds; Fertilizers, lime, chemicals, supplies
Graham's Trailer Sales	North Gulfwood Avenue	Penns Grove, NJ 08069	Salem	(856) 299-3670	Equipment & supplies
Grieves Aerial Ag Service	Salem Quinton Rd	Salem, NJ 08079	Salem	(856) 935-3272	Aerial applicators
Growmark FS, Inc	658 Keyon Ave	Bridgeton, NJ 08302	Cumberland	(856) 455-7688	Fertilizers, lime, chemicals, supplies

Supplier	Address	Town	County	Phone	Description
Growmark FS, Inc	880 Bridgeton Pike	Sewell, NJ 08080	Gloucester	(856) 467- 2867	Fertilizers, lime, chemicals, supplies
H&S DuBois Farms	872 Burlington Rd	Elmer, NJ 08318	Salem	(856) 358- 3792	Hay & straw
Helena Chemical	440 N Main St	Woodstown, NJ 08098	Salem	(856) 769- 5591	Fertilizers, lime, chemicals, supplies
Helena Chemical	510 Heron Dr	Swedesboro, NJ 08085	Gloucester	(856) 467- 0088	Fertilizers, lime, chemicals, supplies
Helena Chemical Co. & Central Distribution	Woodstown-Mullica Hill Road	Woodstown, NJ 08098	Salem	(856) 769- 0147	Fertilizers, lime, chemicals, supplies
Hinchman Farms	P.O. Box 184	Hancocks Bridge, NJ 08038	Salem	(856) 935- 4179	Hay & straw
Hughes Farm	524 Willow Grove Road	Pittsgrove, NJ 08318	Salem	(856) 358- 6013	Hay & straw
Ivan Garrison	Centerton Road	Elmer, NJ 08318	Salem	(856) 358- 8731	Fertilizers, lime, chemicals, supplies
James J Shriver	80 A Harrisonville Lake Rd	Pilesgrove, NJ 08098	Salem	(856) 769- 4744	Hay & straw
J & S Agway	Shiloh Pike	Bridgeton, NJ 08302	Cumberland	(856) 455- 8010	Feeds
Jersey Asparagus Farms, Inc	Porchtown Rd	Elmer, NJ 08318	Salem	(800) 499- 0013	Seed
John Deere Dealership	670 Route 40	Elmer, NJ 08318	Salem	(856) 358- 2880	Equipment & supplies
Kernan Greenhouses	25 Burlington Rd	Monroeville, NJ 08343	Salem	(856) 358- 8169	Starter plant sources
Kevin DiPatri	P.O. Box 268	Alloway, NJ 08001	Salem	(856) 769- 9649	Hay & straw
Lakeside Service & Supply	325 South Main Street	Elmer, NJ 08318-2251	Salem	(856) 358- 2444	Equipment & supplies
Land Resource Recycling Management, Inc	P.O. Box 399	Norma, NJ 08347	Salem	(856) 794- 2673	Fertilizers, lime, chemicals, supplies
Ledden's Garden Center and Nursery	195 Center St	Sewell, NJ 08080	Gloucester	(856) 468- 1000	Greenhouse & nursery supplies
Lee Rain Inc	2079 East Wheat Road	Vineland, NJ 08361-2552	Cumberland	(856) 691- 4030	Irrigation
Lee Rain Inc	1 Deerfield Road	Elmer, NJ 08318	Salem	(877) 533- 7878	Irrigation
Lee Tractor Company	1 Old Deerfield Pike	Bridgeton, NJ08302	Cumberland	(856) 451- 8376	Equipment & supplies
Leslie G Fogg Inc	563 Stow Creek Road	Bridgeton, NJ 08302-6561	Cumberland	(856) 451- 2727	Equipment & supplies
Mayerfield Supply	P.O. Box 249	Norma, NJ08347	Salem	(856) 692- 1313	Greenhouse & nursery supplies
Nelson Horse and Cattle Co	80 Woolman Rd., P.O. Box 407	Elmer, NJ 08318	Salem	(856) 358- 1036	Feeds
Nicholsons Farm Supplies	Glassboro Aura Rd	Monroeville, NJ 08343	Salem	(856) 881- 8719	Equipment & supplies
Nu Rain Irrigation	4251 Genoa Avenue	Vineland, NJ 08361-7918	Cumberland	(856) 794- 3054	Irrigation

Supplier	Address	Town	County	Phone	Description
Oakland Farms Crop Service	223 Minches Corner Rd	Bridgeton, NJ 08302	Cumberland	(856) 451-8224	Aerial applicators; Fertilizers, lime, chemicals, supplies
Owen Supply	109 East Ave	Woodstown, NJ 08098	Salem	(856) 769-0308	Equipment & supplies
Packaging Corps of America	217 West Peach Street	Vineland, NJ 08360-3650	Cumberland	(609) 561-2410	Packaging supplies
Peach Country Ford Tractor Inc	749 Mullica Hill Rd. (Route 322)	Richwood, NJ 08074	Gloucester	(856) 589-3953	Equipment & supplies
Pipe Engineering Corp	Atlantic Ave	Clayton, NJ 08312	Gloucester	(856) 881-5880	Greenhouse & nursery supplies
Pole Tavern Equipment Sales Corp	1880 North Delsea Drive	Vineland, NJ 08360-1980	Cumberland	(856) 696-9398	Equipment & supplies
Pole Tavern Equipment Sales Corp	670 Route 40	Elmer, NJ 08318	Salem	(800) 924-0381	Equipment & supplies
Quartermill Farm & Supply	2325 W Main St	Millville, NJ 08332	Cumberland	(856) 825-5244	Equipment & supplies
Queen Bee Ranch	462 Friendship Road	Salem, NJ 08079	Salem	(856) 935-4675	Hay & straw
Rainman Custom Sprinklers	539 Watsons Mill Rd	Woodstown, NJ 08098	Salem	(856) 769-3989	Irrigation
Reuben JJ	Grant Avenue & Main	Vineland, NJ 08360	Cumberland	(856) 692-4308	Equipment & supplies
Richview Farms	206 Bridgeton Road	Elmer, NJ 08318	Salem	(856) 358-0574	Hay & straw
Rick's Country Produce	187 Richwood Rd.	Monroeville, NJ 08343	Salem	(856) 358-7450	Starter plant sources
R.M.L. Livestock Hauling	?	?	Salem	(856) 304-1384	Livestock hauling
Robinson Farms	240 Acton Station Road	Salem, NJ 08079	Salem	(856) 935-3246	Hay & straw
Rode's Greenhouses	26 Paulsboro Rd	Swedesboro, NJ 08085	Gloucester	(856) 467-5865	Greenhouse & nursery supplies
Rook's Farm Supply Inc	163 Route 77	Elmer, NJ 08318-2662	Salem	(856) 358-3100	Equipment & supplies
Ross Fogg Fuel Oil Co.	245 N Virginia Ave	Carneys Point, NJ	Salem	(856) 935-7000	Fuel
Schalick Mills Inc	100 Front Street	Elmer, NJ 08318-2139	Salem	(856) 358-2323	Feeds
Schaper Bros and Farms Supplies	913 Landis Avenue	Elmer, NJ 08318-4048	Salem	(856) 455-1640	Equipment & supplies
Select Sire Power	Woodstown Daretown Rd	Elmer, NJ 08318	Salem	(856) 358-3933	Livestock artificial insemination
Shire Products	?	Vineland, NJ	Cumberland	(856) 692-3436	Starter plant sources
Smeltzer & Sons Feed & Pet Supplies	1139 S Route 9	Cape May Court House, NJ 08210-2731	Cape May	(609) 465-4500	Feeds
South Jersey Farmers Exchange	101 East Avenue	Woodstown, NJ 08098-1318	Salem	(856) 769-0062	Fertilizers, lime, chemicals, supplies; Seed

Supplier	Address	Town	County	Phone	Description
South Jersey Sprinkler Irrigation	338 Fish Pond Rd	Glassboro, NJ 08028	Gloucester	(856) 863-0680	Irrigation
Steve Miller	119 Whig Lane Road	Monroeville, NJ 08343	Salem	(609) 769-1610	Hay & straw
Tanger Chas Feed	1577 Hurffville Rd	Sewell, NJ 08080	Gloucester	(856) 227-0436	Feeds
Tice Farms	1714 State Hwy #77	Elmer, NJ 08318	Salem	(856) 358-2622	Hay & straw; Livestock hauling
Tractor Supply Company	3095 S Delsea Dr	Vineland, NJ 08360	Cumberland	(856) 691-3101	Equipment & supplies
Tri County Equipment	US Highway 40 & 557	Vineland, NJ 08360	Cumberland	(856) 697-1414	Equipment & supplies
United Agri Products	945 Delsea Dr	Malaga, NJ 08328	Gloucester	(856) 694-0120	Fertilizers, lime, chemicals, supplies; Seed
V Puzio Dairy Inc	480 US Highway 46	Fairfield, NJ 07004-1906	Cumberland	(973) 808-0400	Equipment & supplies
Waldac Farms	555 State Hwy #45	Salem, NJ 08079	Salem	(856) 935-5657	Hay & straw
Walt's Dixie Chopper/Lawns By Walt/Rainman	539 Watsons Mill Road	Woodstown, NJ 08098-2057	Salem	(856) 358-6741	Equipment & supplies
Ward Bishop Farms & Feeds	16 Pine Tavern Rd	Elmer, NJ 08318	Salem	(856) 358-3923	Hay & straw
Warren's Hardware and Heating Service / W & W Farm Supply Inc	110 Bridgeton Pike	Mullica Hill, NJ 08062-2670	Gloucester	(856) 478-2604	Equipment & supplies
Williams Dairy Farm	39 Davis Road	Woodstown, NJ 08098	Salem	(856) 769-0187	Hay & straw
Williamson J W Co	Aura-Hardingville Road	Monroeville, NJ 08343	Salem	(856) 881-3267	Feeds
Woodstown Farm Supply	110 East Grant Street	Woodstown, NJ 08098	Salem	(856) 769-1800	Equipment & supplies
Woodstown Ice & Coal Co	50 East Grant Street	Woodstown, NJ 08098-1416	Salem	(856) 769-0069	Feeds
Wuerkers New Acres Farm Inc	103 Lincoln Place	Rio Grande, NJ 08242	Cape May	(609) 886-1538	Aerial applicators

Sources: AllPages.com, YellowPages.com, Rutgers University NJAES – Cooperative Extension of Salem Count Green Pages, Salem County Agriculture Development Board, 2007

## C-2: Cold Storage Warehouses

Name	Location	County	Phone
C & C Storage	3665 N Mill Rd, Vineland, NJ	Cumberland	(856) 692-9550
CPS Distribution Service	430 N Main St, Woodstown, NJ	Salem	(856) 769-4141
Cumberland Cold Storage Compressor Room	85 Finley Rd, Bridgeton	Cumberland	(856) 455-1499
Cumberland Freezers	6 N Industrial Blvd, Bridgeton	Cumberland	(856) 451-8300
Davy Cold Storage	2055 Demarco Dr, Vineland	Cumberland	(856) 205-9490
Eastern Pro Pak	800 Ellis Mill Rd, Glassboro	Gloucester	(856) 881-3553
First Choice Freezer & Cold Storage	396 N Mill Rd, Vineland	Cumberland	(856) 696-8878
Four Seasons Cold Storage Incorporated	590 Almond Rd, Elmer	Salem	(856) 696-2288
Garden State Freezers Inc	554 Franklinville Rd, Mullica Hill	Gloucester	(856) 478-4224
Garden State Freezers Inc	540 Franklinville Rd, Mullica Hill	Gloucester	(856) 478-4250
Garden State Freezers Inc	217 Harrisonville Way, Mullica Hill	Gloucester	(856) 223-8689
KMT Brrr Inc	1042 W Parsonage Rd, Bridgeton	Cumberland	(856) 455-0031
Light Impact US	600 Columbia Ave Ste A, Millville	Cumberland	(856) 327-2555
Lucca Cold Freezer	2321 Industrial Way, Vineland	Cumberland	(856) 563-1246
Lucca's Freezer & Cold Storage	2321 Industrial Way, Vineland	Cumberland	(856) 692-3202
Manfredi Cold Storage	5100 Lake Rd, Wildwood, NJ	Cape May	(609) 729-4707
Mid Eastern Cold Storage Incorporated	97 N Mill Rd, Vineland	Cumberland	(856) 691-3700
Mullica Hill Cold Storage Incorporated	554 Franklinville Rd, Mullica Hill	Gloucester	(856) 478-4200
Patane Brothers Freezer Wrhses	108 Densten Rd, Sewell, NJ	Gloucester	(856) 589-7256
Perdue-South Jersey	73 Silver Lake Rd, Bridgeton, NJ	Cumberland	(856) 455-1166
RLS Cold Storage	1250 Dutch Mill Rd, Newfield	Gloucester	(856) 694-3216
Safeway Freezer Storage Incorporated	97 N Mill Rd, Vineland	Cumberland	(856) 691-9696
Schellenger Warehouse	312 W Schellenger Ave, Wildwood, NJ	Cape May	(609) 729-4681
South Jersey Cold Storage	546 Franklinville Rd, Mullica Hill,	Gloucester	(856) 223-1883
South Jersey Cold Storage	554 Franklinville Rd, Mullica Hill	Gloucester	(856) 223-1882
South Jersey Cold Storage	100 Dartmouth Dr, Swedesboro	Gloucester	(856) 241-2004
Stor-Rite Freezer Storage	215 N Mill Rd, Vineland	Cumberland	(856) 696-0055
T & T Freezers	2192 N West Blvd, Vineland, NJ	Cumberland	(856) 696-1770
Timberline Cold Storage Inc	55 Commerce Ave, Pitman	Gloucester	(856) 589-3130
Vineland Ice & Storage	544 E Pear St, Vineland	Cumberland	(856) 692-3990

Source: YellowPages.com, 2007

**APPENDIX D: AGRICULTURAL MARKETS AND SALES IN  
THE CUMBERLAND COUNTY REGION**

**D-1: Fruit and Vegetable Wholesale Brokers and Distributors**

<b>Name</b>	<b>Location</b>	<b>County</b>	<b>Phone</b>
Atlantic County Provision Buena Vista	789 Harding Hwy, Newfield	Gloucester	(856) 697-1840
B & B Produce Inc	1008 N Main Rd, Vineland	Cumberland	(856) 691-0721
Bacigalupo R Trucking	1850 E Oak Rd, Vineland	Cumberland	(856) 692-1440
Bassetti Joe	1088 N Main Rd, Vineland	Cumberland	(856) 691-7006
Bifulco Farms Inc	1145 N Main Rd, Vineland	Cumberland	(856) 696-9392
Buy It Fresh	105 W Broad St, Gibbstown	Gloucester	(856) 224-0005
Catalano Farms	11 Pointers Auburn Rd, Swedesboro	Gloucester	(856) 769-3249
Cherry Hot Shots Inc	215 N Mill Rd, Vineland	Cumberland	(856) 696-0940
Consalo Wm & Sons	1269 N Main Rd, Vineland	Cumberland	(856) 692-4414
D Spina & Sons	165 Haines Neck Rd, Salem	Salem	(856) 299-1940
Don A Lynn Prod Inc	114 S Main Rd, Vineland	Cumberland	(856) 691-3711
Donald Myers Produce Inc	1088 N Main Rd, Vineland	Cumberland	(856) 692-4084
Flaccos Market & Wholesale Produce	4300 Park Blvd Wildwood	Cape May	(609) 522-8561
Fresh Ware	1404 E Oak Rd, Vineland	Cumberland	(856) 794-1408
Fruitwood Orchards Honey	419 Elk Rd, Monroeville	Salem	(856) 881-7748
Garrison C & D	981 Burlington Rd, Elmer	Salem	(856) 358-3889
Gloucester County Packing Company	535 Glassboro Rd, Woodbury Heights	Gloucester	(856) 845-0195
Heritage Treefruit	124 Richwood Rd, Mullica Hill	Gloucester	(856) 589-6090
Krichmar Produce Co Inc	1850 E Oak Rd, Vineland	Cumberland	(856) 563-0040
Krichmar Produce Co Inc	1088 N Main Rd, Vineland	Cumberland	(856) 563-0059
Leone Alfred S Produce Inc	1145 N Main Rd, Vineland	Cumberland	(856) 794-2794
Maple Run Farms	55 Main St, Cedarville	Cumberland	(856) 447-5233
Metzler Systems Inc	535 Glassboro Rd, Woodbury Heights	Gloucester	(856) 845-8883
Millbridge Farms Incorporated	1831 Vine Rd, Vineland	Cumberland	(856) 794-3196
Missa Bay Citrus Company	3 Mallard Ct, Swedesboro	Gloucester	(856) 241-9161
Missa Bay Citrus Company	2333 Center Square Rd, Swedesboro	Gloucester	(856) 241-0900
Nardelli Bros	54 Main St, Cedarville	Cumberland	(856) 447-4621
Produce Services of America	2321 Industrial Way, Vineland	Cumberland	(856) 691-0935
Red Eagle Produce & Ice Cream	555 N Evergreen Ave, Woodbury	Gloucester	(856) 845-5885
Rigo Produce Inc	1088 N Main Rd, Vineland	Cumberland	(856) 696-5531
Santelli Trucking Inc	1404 E Oak Rd, Vineland	Cumberland	(856) 692-1040
Seaburst Farms	109 N Broad St, Woodbury	Gloucester	(856) 853-1101
South Jersey Produce Cooperative Association Inc	4470 Italia Ave, Vineland	Cumberland	(856) 692-6600
Vandenberg Jac Company	2321 Industrial Way, Vineland	Cumberland	(856) 691-0947
Verchios Produce Outlet	272 Hurffville-Crosskeys Rd, Sewell	Gloucester	(856) 262-0830
Zambito Produce Sales Inc	44 Cooper St, Woodbury	Gloucester	(856) 686-4810

Source: YellowPages.com, 2007

## D-2: Food Processing Businesses

Name	Location	County
ABC Enterprises	66 Bells Lake Dr, Turnersville, NJ 08012	Gloucester
Albert's Organic - East	200 Eagle Ct., Bridgeport, NJ 08014	Gloucester
B & B Poultry Co. Inc	P.O. Box 307, Norma, NJ 08347	Salem
Bahowie	2660 Main Rd, Franklinville, NJ	Gloucester
Buona Vita Inc	1 Industrial Blvd S, Bridgeton, NJ 08302	Cumberland
Cape May Foods Inc	Gorton Road, Millville	Cumberland
Casella Brothers & Sons Inc	Asbury Station Rd, Swedesboro	Gloucester
Chelten House Products Inc	607 Heron Drive, Bridgeport, NJ 08014	Gloucester
Clement Pappas & Co Inc	10 N Parsonage Rd, Seabrook, NJ	Cumberland
Cumberland Dairy	80 Edward Ave, Bridgeton	Cumberland
D L Matthews & Co	100 Dartmouth Drive, Swedesboro, NJ 08085	Gloucester
Del Monte Corporation	Lock Avenue, Swedesboro, NJ 08085	Gloucester
Del-Val Foods	104 Maple Leaf Ct, Glassboro NJ 08028	Gloucester
Demitri M	199 Dundee Dr, Williamstown NJ 08094	Gloucester
D'Orazio Foods Inc	State Highway 47 North, Deptford, NJ 08096	Gloucester
Eagle Distribution Inc	103 Sewell Rd, Sewell, NJ 08080	Gloucester
Eatem Foods Inc	1829 Gallagher Dr, Vineland, NJ 08360	Cumberland
F & S Produce	913 Bridgeton Ave, Rosenhayn, NJ 08352	Cumberland
Gino's Provision Inc	7 Hill Farm Way, Swedesboro, NJ 08085	Gloucester
Gloucester County Packing Co	535 Glassboro Rd, Woodbury	Gloucester
Grasso Foods Inc	Sharptown Road, Swedesboro	Gloucester
J J Foods Inc	218 Salina Road, Sewell, NJ 08080	Gloucester
J R Simplot Co	4 Arborwood Ct, Sewell, NJ 08080	Gloucester
M Zukerman & Co	270 N Delsea Dr, Vineland, NJ 08360	Cumberland
Mamacita Inc	2851 Industrial Way, Vineland, NJ 08360	Cumberland
Manischewitz Food Products Corp	214 N Delsea Dr, Vineland, NJ 08360	Cumberland
MV Foods	300 Heron Dr, Logan Township NJ 08085	Gloucester
Orrs Speciality Foods LLC	169 Wolfert Station Rd, Mullica Hill NJ 08062	Gloucester
Pace Target Brokerage	716 Clayton Rd, Williamstown NJ 08094	Gloucester
Pappas Clement & Co Inc	10 North Parsonage Road, Bridgeton	Cumberland
Pennant Foods	280 Jessup Rd, Thorofare, NJ 08086	Gloucester
Perdue Farms Inc	73 Silver Lake Rd, Bridgeton 08302	Cumberland
Pride Marketing Assoc Inc	Franklinville, NJ 08322	Gloucester
Progresso Quality Foods	500 E Elmer Rd, Vineland, NJ 08360	Cumberland
Relative Foods	496 E Weymouth Rd, Vineland, NJ 08360	Cumberland
Rich Products	1910 Gallagher Dr, Vineland, NJ	Cumberland
Seabrook Farms	85 Finley Road, Seabrook	Cumberland
Seashore Food Distributors	1 Satt Blvd, Rio Grande, NJ	Cape May
SK Wholesale Food Distributors	628 Whig Lane Road, Monroeville, NJ 08343	Salem
Snows/Doxsee	994 Ocean Dr, Cape May, NJ	Cape May
Stavola Foods	Frontage Rd & Route 47, Westville, NJ 08093	Gloucester
Surfside Products Inc	2838 High St, Port Norris, NJ	Cumberland
Utz Quality Foods Inc	1570 Grandview Ave, Paulsboro, NJ 08066	Gloucester
Venice Maid Foods	270 North Mill Road, Vineland	Cumberland
Vineland Kosher Poultry Inc	1050 S Mill Rd, Vineland, NJ 08360	Cumberland
Violet Packing	123 Railroad Avenue, Williamstown	Gloucester

Name	Location	County
Wagner Provisions Co	54 East Broad Street, Gibbstown, NJ 08027	Gloucester
Whitewave Foods	70 Rosenhayn Ave Bridgeton, NJ , 08302-1237	Cumberland

Source: YellowPages.com, AllPages.com, Rutgers University NJAES – Cooperative Extension of Salem County Green Pages, 2007

### D-3: Roadside Markets in Cumberland County, New Jersey

Market	Address	Phone	Open	Products
A Taste Of The Garden State	298 Columbia Hwy., Bridgeton	(856) 453- 5749	Monday - Saturday, 8 AM - 5 PM	Non-perishable food items from NJ businesses
Adamucci Farms, Inc	152 Trench Rd., Bridgeton	(856) 451- 4069	July 15 - Sept. 15, 8 AM - 6 PM	Peaches, Nectarines
Badaracco Farms, Inc	954 S Union Rd., Vineland	(856) 691- 5531	July - Sept., 8 AM- 6 PM , Oct. - Dec., 8 AM - 5 pm	Peaches, pears, apples, pumpkins, sweet potatoes, vegetables, greens
Brassie's Farm Market	1427 S Lincoln Ave., Vineland	(856) 692- 8707	March - October 31, Monday - Saturday 10 AM - 6 PM. Sunday 10 AM - 3 PM	Dandelion, broccoli raab, sweet potatoes, tomatoes, sweet corn, peaches, strawberries, blueberries, apples, all types of lettuce, parsley, basil, summer squash, pickles, cucumbers, many other fruits & vegetables
Camps Big Oak Farm Market	Delsea Dr. (Rt 47), Port Elizabeth	(856) 825- 7367	June - Oct., 9 AM - 6 PM	Fruits, Vegetables, Corn, Sweet/White Potato, Melons, Pumpkins
Cat-Tail Farm in the City	27 E. Commerce Street, Bridgeton		June - September, Saturdays, 8 AM - 4 PM	A wide selection of organically-grown vegetables including green beans, beets, tomatoes, hot & sweet peppers, some herbs, hard- shell gourds, lavender, blackberries
Cruzandale Farms Harvest Quarters	434 Rt. 540, Bridgeton	(856) 455- 8737	7 AM – dusk	Pumpkins, gourds, mums, corn stalks, straw
D'Ott's Farm Market	3308 E. Landis Ave, Vineland	(856) 691- 5565	May - Nov, Monday - Friday 9 AM - 6 PM, Saturday 9 AM - 5 PM, Sunday 9 AM - 3 PM	All Fresh Fruit & Vegetables, Fresh Jersey Cantaloupes, Greens, Corn; Melons & Tomatoes are our specialty
Du Bose Farm	28 Ayars Lane, Bridgeton	(856) 455- 5811	July - Dec., Monday - Saturday	Vegetables, Herbs, Fruits
Four Seasons Farm Market	601 Fordville Rd., Bridgeton	(856) 451- 8341	June - January, Mon. - Fri. 10 AM - 7 PM; Sat. 10 AM - 6 PM; Sun. 10 AM - 5 PM	Vegetables; onions; tomatoes; peppers; collard greens; peas; beans
Half-Century Farms	709 Ye Greate St., Greenwich	(856) 455- 5408	Daily, Sept. 15 - Oct. 31, 8 AM - 8 PM	Pumpkins, Gourds, Indian Corn



Market	Address	Phone	Open	Products
Horse Hay Acres	329 Old Mill Rd., Greenwich	(856) 455- 3640	Daily	Timothy Hay, Orchard Grass Hay
Ingraldi Farms	Cedarville Rd. & Rieck Ave., Millville	(856) 451- 1019	May - October 31., Daily, 10 AM - 6 PM	Corn, potatoes, strawberries, tomatoes, peas, beans, squash, apples, grapes, fruits, onions, peppers, asparagus
Jericho Gardens - MR Dickinson & Son	1256 Roadstown Rd., Bridgeton	(856) 451- 3978	May - October, Mon. - Sun. 8:30 AM - 5 PM	Vegetables; herbs; tomatoes; peppers (hot & sweet); green beans; lima beans; pumpkins; lettuce
Joe's Produce Market	481 East Elmer Rd., Vineland	(856) 794- 8210	March - Oct. & Dec. 1 - Christmas, 9 AM - 6 PM	Spring: Easter crosses; summer: fresh Jersey produce; corn; tomatoes; peppers; melons; eggplants; zucchini; pickles; fall: pumpkins; gourds; cornstalks; mums; hay stacks
Lake View Farms - Nardelli Bros. Inc.	54 N Main St., Cedarville	(856) 447- 4020	April - November, Monday - Saturday 8 AM - 6 PM	All fruits & vegetables
Lillian's Market	3834 Rt. 47, Port Elizabeth	(856) 293- 0099	May - November (until Christmas with greens), Daily, 8 AM - dark	Asparagus thru zucchini, all home-grown fruits, vegetables
Marlboro Farm Market & Garden Center	601Route 49, Bridgeton	(856) 451- 3138	Year round, 9 AM - 7 PM	Tree-ripened peaches; apples; pumpkins; sweet corn; strawberries; blueberries; full line of produce
Meadow View Farms Transport	92 Causeway Rd., Bridgeton	(856) 455- 1882		
Muzzarelli's Farm Market	3460 Oak Road, Vineland	(609) 691- 2497	Daily, 8 AM - 6 PM, Sunday 8 AM - 4 PM	Plum tomatoes; tomatoes; corn; all peppers; all eggplant; squash (acorn, butternut, spaghetti, green, yellow); okra; beets; basil; dill; parsley; garlic; beans (lima, string, flat); potatoes (white, red, sweet); pickles; cucumbers; peaches; plums; nectarines; pears; grapes; cabbage; lettuce; sugarbabies; seedless watermelon; yams; pumpkins
Nantuxent Farms	439 Baptist Rd., Newport	(856) 447- 3917	June - Nov., 6/7 AM - Sunset	Sweet Corn, Vegetables, Melons, Okra, Pumpkins, Lima Beans
Nate Bisconte Farm	Morton Ave. & Lebanon Rd., Rosenhayn	(856) 455- 3405	Sunrise - 2 PM	Pick Your Own

Market	Address	Phone	Open	Products
Raehaven Farms	109 Bacon's Neck Rd. (Rt. 642), Greenwich		Daily, Memorial Day - Halloween, Sunrise - Sunset	Vegetables, Small Fruits, Berries (strawberries, raspberries, blackberries, blueberries), Melons, Tomatoes, Hot Peppers (many varieties)
Rottkamp Farms Inc.	780 Shiloh Pike, Bridgeton	(856) 451-2359		Fruits & vegetables
Sparacio's Produce Market	675 Parvins Mill Rd., Bridgeton	(856) 451-4859	3 Months, 8 AM - 7 PM	Corn; strawberries; tomatoes; lima beans; peppers
Sunny Slope Farms of NJ	400 Greenwich Rd., Bridgeton	(856) 451-0022	Mid July - December, Daily, 8 AM - 6 PM	Apples, peaches (white, yellow), nectarines (white, yellow)
Willow Brook Farm	135 Seeley Rd, Bridgeton	(856) 451-7014	8 months	Pumpkins, Nursery Products
Woodbridge Farm	100 Back Rd., Newport	(856) 447-4724	May & June, Sunrise to Sunset	Strawberries

Source: NJDA, 2007

#### D-4: Farmers Markets

Market	Location	County	Open
Atlantic City Farmers' Market	Atlantic Ave., Atlantic City	Atlantic	July 10th - October 25th, Thursdays & Saturdays, 9 AM - 4 PM
Hammonton Farmers Market	Front Street, Hammonton	Atlantic	June 26 - September 11, Fridays, 4PM - 8PM
Jersey Fresh Farmers' Market at Smithville	Smithville on the Village Green, Smithville	Atlantic	June 25th - September 26th, Fridays, 11 AM - 3 PM
Margate Farmers' Market	9700 Amherst Avenue, Margate	Atlantic	June 25th - August 28th, Thursday 9AM - 1PM
Cape May County Park & Zoo Farmers Market	Crest Haven Rd. & Route 9, Cape May Court House	Cape May	June - August, Thursday, 10:00 AM-5:00 PM
Ocean City Farmers' & Crafters' Market	5th & 6th Streets, on Asbury Avenue, Ocean City	Cape May	June 25th - August 27th, Wednesdays, 8 AM - 1 PM
Stone Harbor Farmer's Market	Water Tower Lot, 95th and 2nd Ave., Stone Harbor	Cape May	Sundays June 28 - September 6, 2009
West Cape May Farmers' Market	732 Broadway, Borough Hall Back Yard Park, West Cape May	Cape May	July 1st - August 29th, Tuesdays, 3PM - 7:30PM
Woodbine Farmers Market	602 Washington Ave., Woodbine	Cape May	June-October, Saturday and Sunday, 8-5
Bridgeton Riverfront Farmers' Market	Between Bridge & Commerce Streets, Bridgeton	Cumberland	June 8 - September 21, Fridays, 11 AM - 6 PM

<b>Market</b>	<b>Location</b>	<b>County</b>	<b>Open</b>
Vineland Farmers Market	The 700 Block of Landis Avenue, Vineland	Cumberland	July 7 - September 29, Saturdays, 9AM - 12PM
Woodbury Farmers' Market	Between Cooper & E. Barber St., Woodbury	Gloucester	June 21 - October 25, Thursdays, 3PM - 7 PM
Cowtown	780 Rt. 40, Pilesgrove	Salem	Year round, Tuesdays & Saturdays, 8 AM - 4 PM
Salem Farmers' Market	West Broadway, Salem	Salem	June 7 - August 30, Thursdays, 10AM - 2PM
Woodstown Farmers Market	Rt. 40 & West Wilson, at the Railroad Crossing	Salem	May 8 - October 30, Fridays, 9AM - 2PM

Source: NJDA, 2007

## APPENDIX E: CONSERVATION PROGRAMS FOR FARMERS

### FEDERAL PROGRAMS

The **Conservation Reserve Program (CRP)** is offered by NRCS and administered by the Farm Service Agency. It provides technical and financial aid and gives farmers assistance in complying with federal, state, and tribal environmental laws. The program encourages farmers to convert highly erodible or environmentally sensitive cropland to vegetative cover, such as native grasses, filter strips, or riparian buffers. In exchange, farmers receive rental payments for enrolled land, as well as financial assistance for implementing and maintaining conservation practices. Website: [www.nrcs.usda.gov/programs/crp/](http://www.nrcs.usda.gov/programs/crp/).

The State of New Jersey partnered with the USDA to help farmers protect water quality by establishing a \$100 million **Conservation Reserve Enhancement Program (CREP)**, which is the New Jersey version of the federal program. Under a joint agreement between the USDA and State of New Jersey, \$100 million in funding has been provided for New Jersey farmers to install stream buffers in order to reduce the flow of nonpoint source pollution into the state's waterways. Types of buffers to be installed include trees, shrubs, vegetative filter strips, contour grass strips, and grass waterways. Under the program, a landowner installs and maintains approved practices through a 10- or 15-year rental contract agreement. A landowner entering the state Farmland Preservation Program or Green Acres Program also may opt for a permanent easement under the Conservation Reserve Enhancement Program. This would provide additional payment for permanent maintenance of approved conservation practices. The program will pay landowners annual rental and incentive payments for participating in the program, as well as 100 percent of the cost to establish approved practices. Additional information can be found at [www.fsa.usda.gov](http://www.fsa.usda.gov) or contact the local Farm Services Agency (FSA) Office or Soil and Water Conservation District Office.

Another program targeted for wetlands preservation is called the **Wetlands Reserve Program (WRP)**. WRP is a voluntary resource conservation program that provides landowners with the opportunity to receive financial incentive to restore, protect, and enhance wetlands in exchange for returning marginal land from agriculture. WRP is made possible by a reauthorization in the Food, Conservation, and Energy Act of 2008, known as the Farm Bill. The program has three enrollment options: permanent easement, 30-year easement, or restoration cost-share agreement, which has a minimum 10-year commitment. Applications are accepted on a continuous basis and may be obtained and filed at any time. Please see the website for more details: [www.nrcs.usda.gov/programs/wrp/](http://www.nrcs.usda.gov/programs/wrp/).

The **Grassland Reserve Program (GRP)** is another conservation program authorized by the 2008 Farm Bill. GRP is a voluntary program that protects grasslands, pasturelands, and rangelands without prohibiting grazing. Participants voluntarily put limitations on the future use of their land while retaining the ability and right to conduct grazing practices, produce hay, mow or harvest for seed production, conduct fire rehabilitation, and construct

## APPENDIX E: Conservation Programs for Farmers (cont'd.)

firebreaks and fences. There are four enrollment options: permanent easement; 30-year easement; rental agreement, which is available in 10-, 15-, 20-, or 30-year contracts; and restoration agreement. Participants are compensated in different ways according to the enrollment option. For more information and application procedures, visit the GRP website: [www.nrcs.usda.gov/programs/grp/](http://www.nrcs.usda.gov/programs/grp/).

The **Wildlife Habitat Incentives Program (WHIP)** is another USDA voluntary program, that targets landowners who want to preserve and protect fish and wildlife habitat on nonfederal lands. WHIP applicants develop a plan of operations outline conservation practices and implementation schedules. The NJ State Conservationist, in conjunction with the State Technical Committee, identifies and prioritizes plans that complement the goals and objectives of relevant fish and wildlife conservation initiative at the state, regional, and national levels. If selected, a plan forms the basis of a cost-share agreement, lasting between 1 to 10 years. NRCS will pay for up to 75 percent of costs of implementing conservation practices that protect fish and wildlife habitat. For beginning farmers, socially disadvantaged, or limited resource producers, NRCS will pay for up to 90 percent of costs. In New Jersey, a state plan has been developed that targets a number of priority habitat areas: pollinator habitat, grasslands habitat, disturbance-dependent habitat, bog turtle priority species habitat, wetland habitat and Delaware Bay priority habitat. For more information and application procedures, visit the NJ WHIP website: [www.nj.nrcs.usda.gov/programs/whip/](http://www.nj.nrcs.usda.gov/programs/whip/).

The **Environmental Quality Incentives Program (EQIP)** is also a part of the reauthorized Farm Bill of 2008. EQIP is a voluntary program that focuses on conservation that promotes both agricultural production and environmental quality. The program itself offers technical and financial assistance with installation and implementation of structural and management practices on agricultural land. EQIP features a minimum contract term compared to other programs, lasting a maximum of 10 years. Landowners are eligible for incentive and cost-share payments of up to 75 percent and sometimes up to 90 percent, while still engaging in livestock or agricultural production activities. For more information please visit the website: [www.nrcs.usda.gov/programs/eqip](http://www.nrcs.usda.gov/programs/eqip).

The **Conservation Stewardship Program (CSP)** is a voluntary program administered by the NRCS that replaces the Conservation Security Program. This program is intended to promote conservation and improvement of soil, water, air, energy, plant and animal life, etc. on tribal and private working lands. Working lands refer to a variety of land types, including cropland, grassland, prairie land, improved pasture, and range land. In some cases, forested lands would also be included in this category. CSP is available in 50 states, as well as the Caribbean and Pacific Basin areas, and provides equal access to funding. For more information please visit the website: [www.nrcs.usda.gov/programs/new\\_csp/csp.html](http://www.nrcs.usda.gov/programs/new_csp/csp.html).

## APPENDIX E: Conservation Programs for Farmers (cont'd.)

The **Farm and Ranch Lands Protection Program (FRPP)** is a voluntary land conservation program that assists farmers in keeping their lands for agricultural purposes. FRPP provides matching funds to those provided by state, tribal, local government, or nongovernment organizations, offering farm and ranch protection programs designed to purchase conservation easements. The FRPP is managed by the NRCS. Conservation easements are purchased by the state, tribal, or local entity. A participating landowner agrees not to convert their land to nonagricultural uses, and to develop a conservation plan for any highly erodible lands. Landowners do, however, maintain all of their rights to utilize their land for agricultural purposes. For more information about FRPP, please visit the website: [www.nrcs.usda.gov/programs/frpp/](http://www.nrcs.usda.gov/programs/frpp/).

The Federal Environmental Protection Agency (EPA) offers the **Strategic Agricultural Initiative**, an outreach program designed to demonstrate and facilitate the adoption of agricultural management practices that will enable growers to transition away from the use of high-risk pesticides. Funds are provided to projects that develop agricultural management practices that offer risk reductions to human health and the environment. For additional information visit [www.epa.gov/region02](http://www.epa.gov/region02).

The EPA also offers the **Source Reduction Assistance Program**, which prioritizes water conservation and the minimization of chemicals of concern, such as pesticides, endocrine disruptors, and fertilizers. For additional information visit [www.epa.gov/region02](http://www.epa.gov/region02).

The U.S. Fish and Wildlife offers technical and financial assistance to private landowners through the **Partners for Fish and Wildlife** Program. The owners restore wetlands, streams and river conditions, as well as other important fish and wildlife habitat, for federal trust species. More information is available at: <http://njfieldoffice.fws.gov/partners>.

### STATE PROGRAMS

The **Landowner Incentive Program (LIP)** is a preservation program for private landowners who wish to protect and conserve rare wildlife habitat and species. LIP is funded by the U.S. Fish and Wildlife Service and is administered by NJDEP's Division of Fish and Wildlife Endangered Nongame Species Program. Participating landowners receive both technical and financial assistance through this competitive grant program. Generally, a five-year minimum commitment is required and longer terms are preferred. A 25 percent cost-share is required of the landowner. While the LIP is seeking funding for additional habitat protection projects, it may be another year before grants are available. To learn more about the program in general visit the website: [www.state.nj.us/dep/fgw/ensp/lip\\_prog.htm](http://www.state.nj.us/dep/fgw/ensp/lip_prog.htm).

## APPENDIX E: Conservation Programs for Farmers (cont'd.)

The **State Agricultural Development Committee (SADC) in New Jersey** has made soil and water conservation grants available as part of the Farmland Preservation Program. The grants gives landowners up to 50 percent of the funds required for approved soil and water conservation projects. Farms are only eligible if they are already enrolled in a permanent or eight-year easement program. Soil projects can include measures to prevent or control erosion, control pollution on agricultural land, and improve water management for agricultural purposes. Projects must be completed within three years of SADC funding approval. However, under special circumstances, the grant may be renewed for an additional year. For more information, contact the local Soil Conservation District or the State Agricultural Development Committee at (609) 984-2504 or visit the website: [www.state.nj.us/agriculture/sadc/sadc.htm](http://www.state.nj.us/agriculture/sadc/sadc.htm) for additional details.

**NJDEP's 319(h) Non-point Source Pollution Control Pass-through Grant Program** provides financial assistance to reduce non-point source pollution through riparian buffers, manufactured treatment devices, and other methods. (Applicant must be a government entity or a non-profit organization, but can partner with farmers.)

# APPENDIX F: EASEMENT PURCHASE SCORING WORKSHEET

## CUMBERLAND COUNTY AGRICULTURE DEVELOPMENT BOARD

### EASEMENT PURCHASE PROGRAM

#### SCORING WORKSHEET

Application Number \_\_\_\_\_  
 Municipality \_\_\_\_\_ Block(s)/Lot(s) \_\_\_\_\_  
 Application Name \_\_\_\_\_

#### SUMMARY

1.	Soil Quality Score	<input style="width: 90%;" type="text"/>
2.	Boundaries and Buffers Score	<input style="width: 90%;" type="text"/>
3.	Local Commitment Score	<input style="width: 90%;" type="text"/>
4.	Size and Density Score	<input style="width: 90%;" type="text"/>
5.	Degree of Imminence of Change Score	<input style="width: 90%;" type="text"/>
6.	Special Considerations Score	<input style="width: 90%;" type="text"/>
<b>TOTAL SCORE</b>		<input style="width: 90%; background-color: #cccccc;" type="text"/>

Completed By \_\_\_\_\_ Date \_\_\_\_\_

<b>1.</b>	<b>SOIL QUALITY (Weight 25)</b>	<b>Points</b>
	a. _____ % Prime Soils X 0.25	_____
	b. _____ % Statewide Soils X 0.20	_____
	c. _____ % Local Soils X 0.10	_____
	d. _____ % Unique Soils X (0 or 0.20)	_____
<b>TOTAL SOILS SCORE</b>		<input style="width: 90%;" type="text"/>

<b>2.</b>	<b>BOUNDARIES AND BUFFERS (Weight 20)</b>	
	a. Percentage of farm perimeter adjacent to compatible natural or man-made buffers.	
	<input style="width: 100px;" type="text"/> %	
		80-100% 10 points
		60-79% 8 points
		40-59% 6 points
		20-39% 4 points
		0-19% 0 points
	b. Ratio of road frontage to total acreage of applicant's property.	
	<input style="width: 100px;" type="text"/>	
		40.1 > ft./ac. 10 points
		20.1-40 ft./ac. 8 points
		10.1-20 ft./ac. 6 points
		0.1-10 ft./ac. 4 points
		0 ft./ac. 0 points
<b>TOTAL BOUNDARIES AND BUFFERS SCORE</b>		<input style="width: 90%;" type="text"/>



<b>3. LOCAL COMMITMENT</b>	<b>(Weight 15)</b>	<b>Points</b>
a. Compatibility with Municipal Plan		5 points
b. Compatibility with State Development & Redevelopment Plan		4 points
c. % of municipal matching funds	1-25% 1 point    25>% 2 points	_____
d. Distance to Sanitary Sewer	.50 > mile 2 points	_____
e. Distance to Municipal Water	.25-.49 mile 1 point	_____
	0-.24 miles 0 points	
<b>TOTAL LOCAL COMMITMENT SCORE</b>		<input style="width: 80px; height: 20px;" type="text"/>

<b>4. SIZE AND DENSITY</b>	<b>(Weight 15)</b>	
a. Farmland Acreage	> 100 ac. 3 points	_____
	50-100 ac. 2 points	
<input style="width: 80px; height: 20px;" type="text"/>	20-49 ac. 1 point	
	< 20 ac. 0 points	
b. Percentage Tillable	80-100% 3 points	_____
	50-79% 2 points	
<input style="width: 80px; height: 20px;" type="text"/> %	25-49% 1 point	
	< 25% 0 points	
c. Relationship to average farm size in project area	> 125% 3 points	_____
	75-124% 2 points	
<input style="width: 80px; height: 20px;" type="text"/> %	50-74% 1 point	
	< 50% 0 points	
d. Percentage of area within 1 mile in agricultural use	80-100% 3 points	_____
	50-79% 2 points	
<input style="width: 80px; height: 20px;" type="text"/> %	25-49% 1 point	
	< 25% 0 points	
e. Distance to ADA	w/in ADA 3 points	_____
<input style="width: 80px; height: 20px;" type="text"/>	outside ADA 0 points	
<b>TOTAL SIZE AND DENSITY SCORE</b>		<input style="width: 80px; height: 20px;" type="text"/>

<b>5. DEGREE OF IMMINENCE OF CHANGE</b>	<b>(Weight 5)</b>	
a. High percentage of land developable		2 points
b. High threat of development within 5 years		3 points
<b>TOTAL DEGREE OF IMMINENCE OF CHANGE SCORE</b>		<input style="width: 80px; height: 20px;" type="text"/>

<b>6. SPECIAL CONSIDERATIONS</b>	<b>(Weight 20)</b>	
a. Full time farmer		5 points
b. Primary earned income source		5 points
c. Soil and water conservation practices in place		5 points
d. Historic considerations		1 point
e. Unique agricultural operation		1 point
f. Environmentally sensitive features		1 point
g. Other considerations		2 points
<b>TOTAL SPECIAL CONSIDERATIONS SCORE</b>		<input style="width: 80px; height: 20px;" type="text"/>

**APPENDIX G: CADB APPLICATION**  
**Cumberland County Agriculture Development Board**

**2008**

**Application To Sell a Development Easement**

**NOTE: Read and complete all portions of this application.**

This application to sell a development easement is made this \_\_\_\_ day of \_\_\_\_\_, 2008.

A "development easement" means an interest in land, less than fee simple absolute title thereto, which enables the owner to develop the land for any non-agricultural purpose as determined by and acquired under the provisions of N.J.S.A. 4:1C-11 et seq. P.L. 1983, c. 32, and any relevant rules or regulation promulgated thereto.

I/We, \_\_\_\_\_, landowner(s) of property located in the Municipality of \_\_\_\_\_, in the County of Cumberland, known and designated as Block(s) \_\_\_\_\_, Lot(s) \_\_\_\_\_ on the Municipal Tax map of \_\_\_\_\_, Cumberland County, New Jersey, (hereinafter "Premises"), apply to the Cumberland County Agriculture Development Board, to sell a development easement pursuant to the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32, and N.J.A.C. 2:76-6.

**OFFER TO SELL A DEVELOPMENT EASEMENT**

As landowner(s) of the premises described above, I/we are willing to make an offer to sell a development easement to the Board in the amount of \$ \_\_\_\_\_ per acre. The final total purchase price shall be based on the acreage of the premises determined by a survey authorized by the Board, as well as, fair market appraisals.

Pursuant to N.J.A.C. 2:76-6.3, it is required that the applicant(s) submit an offer to sell a development easement to the Board.

NOTE: Landowners hereby acknowledge that they have been fully informed of the provisions related to the sale of a development easement and that a **recommendation was made to obtain legal counsel.**

**I. LANDOWNER INFORMATION**

Write the name, mailing address, phone number, and fax number (if available) of all the landowners of the premises.

NAME	ADDRESS	PHONE/FAX
_____	_____	_____
_____	_____	_____
_____	_____	_____

Write the farm, corporate or business name, if any.  
\_\_\_\_\_

Indicate the ownership structure of the farm.

- Sole Proprietor     Corporation     Partnership     Contract Purchaser



Indicate the type and number of all non-residential buildings on the property (e.g. barns, stables, corn cribs, silos, garages, etc.).

---

---

Are any of the residential or non-residential buildings on the premises under a lease or rental agreement?

YES                       NO

If YES, please describe: \_\_\_\_\_

Are you requesting the option to build future residences pursuant to N.J.A.C. 2:76-6.17?

YES                       NO

If YES, please explain on an attached sheet.

NOTE: N.J.A.C. 2:76-6.17 refers to Residual Dwelling Site Opportunities (RDSO's), which require a minimum of 100 acres/residence. Additional housing units are subject to negotiation and approval by the CCADB and SADC.

Are there presently any non-agricultural uses or activities on the premises? (Examples: office for a non-farm Commercial business, studio, antique shop or other service business, rental of buildings for non-farm use, etc.)

**NON-AGRICULTURAL USES MUST BE IDENTIFIED AT TIME OF APPLICATION.**

YES                       NO

If YES, please identify: \_\_\_\_\_

Is there a pending or approved subdivision or site plan application for the Premises?

YES                       NO

If YES, please indicate the date of such approval and status: \_\_\_\_\_

Is the Premises served by public sewer?                       YES                       NO

Is the Premises served by public water?                       YES                       NO

### III. AGRICULTURAL USE AND PRODUCTION

List, in order of importance, the type of agricultural enterprises on the premises (e.g. dairy, field crops, orchard, etc.).

Identify the approximate acreage and/or percentage land use of the parcel to be considered for easement purchase.

Tillable cropland	_____ acres	_____ %	Pasture	_____ acres	_____ %
Orchard	_____ acres	_____ %	Nursery	_____ acres	_____ %
Woodland	_____ acres	_____ %	Farmstead	_____ acres	_____ %
Other	_____ acres	_____ %	<b>TOTAL</b>	_____ acres	_____ %

**Please provide a copy of your APPLICATION FOR FARMLAND ASSESSMENT (breakdown of land use).**

Does the farm have a current Farm Conservation Plan?  YES  NO

Is the farm currently enrolled in an 8-year Farmland Preservation Program?

YES  NO

Please describe all soil and water conservation practices: \_\_\_\_\_

**IV. SPECIAL CONSIDERATIONS**

Identify anything particularly special about the premises (historical significance, uniqueness of the agricultural operation, environmental significance, etc.): \_\_\_\_\_

Are you a full-time farmer?  YES  NO

Is farming your primary income source?  YES  NO

**V. LIENS/EASEMENTS/RIGHTS-OF-WAY**

List all liens, easements, or rights-of-way that exist on the Premises: \_\_\_\_\_

NOTE: The applicant shall receive preliminary approval from current lien, easement and right-of-way holders granting the applicant permission to proceed with negotiations involving the sale of a development easement. This preliminary commitment is NOT a final subordination of all rights. In accordance with N.J.A.C. 2:76-6.13, where the landowner has accepted an offer to sell a development easement, the landowner shall provide evidence that the current lien, easement, and right-of-way holders as required by the Committee and Board, subordinate their rights to the rights and privileges granted by the sale of the development easement to the Board and shall supply recordable evidence of their subordination at the time of the transfer of the easement.

Regarding public utility easements, the applicant shall note if any exist. The Board will determine if the easement holder should be notified or if a waiver should be granted.

**VI. ADDITIONAL INFORMATION: The Board may request additional information.**

There exists the possibility that Federal funding may be available to match State and County dollars to purchase development easements on farms in the application round. In submitting this application, the landowner agrees to accept minor amendments to the Deed of Easement to incorporate a Contingent Right in the United States of America.

The landowner hereby gives the Board permission to proceed with the review and evaluation of this application to determine the suitability of the land for development easement purchase pursuant to N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32 and N.J.A.C. 2:76-6.

**I/We hereby certify that all information contained in this application is complete and accurate.**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Landowner Signature(s)** (All persons listed on the deed must sign above.)

**Date**

**PLEASE RETURN THIS APPLICATION NO LATER THAN FRIDAY MARCH 28, 2008 TO:  
Cumberland County Agriculture Development Board**

**800 E. Commerce St.  
Bridgeton, NJ 08302**

**QUESTIONS: phone (856)453-2175, or  
email [mattpi@co.cumberland.nj.us](mailto:mattpi@co.cumberland.nj.us)**

## APPENDIX H: RESOLUTIONS OF ADOPTION AND APPROVAL

RESOLUTION OF THE CUMBERLAND COUNTY AGRICULTURE DEVELOPMENT BOARD  
#2009-09

For the Adoption of the  
Farmland Preservation Plan of Cumberland County

*WHEREAS* the County of Cumberland supports the promotion and preservation of the agricultural industry and the Farmland Preservation Program, and;

*WHEREAS* the Cumberland County agricultural community is, and always has been, an important part of the county's economy and a major contributor to the State of New Jersey's farming industry, and;

*WHEREAS* Cumberland County ranks first in the state in market value of agricultural products sold according to the 2007 U.S. Census of Agriculture; and

*WHEREAS* in an effort to more effectively preserve the county's remaining farmland, Cumberland County Department of Planning & Development staff in partnership with the Delaware Valley Regional Planning Commission has prepared the *Cumberland County Farmland Preservation Plan*; and

*WHEREAS* this document, finalized in November 2009, replaces the previous farmland plan entitled *Cumberland County Farmland Preservation Plan* which was adopted by the Cumberland County CADB in January of 2005;

*NOW THEREFORE BE IT RESOLVED* that the Cumberland County Agriculture Development Board hereby adopts the *Cumberland County Farmland Preservation Plan* dated November 2009.

*THEREFORE, BE IT FURTHER RESOLVED* that the *Cumberland County Farmland Preservation Plan* be forwarded to the Cumberland County Planning Board with the recommendation that it likewise approve said plan.

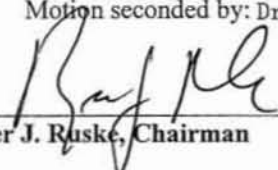
*THEREFORE, BE IT FURTHER RESOLVED* that the *Cumberland County Farmland Preservation Plan* be forwarded to the State Agriculture Development Committee for its review and approval.

Motion made by: Blake Maloney

Motion seconded by: Dr. Ernie Zirkle

November 17, 2009

DATE

  
\_\_\_\_\_  
Roger J. Ruske, Chairman

*This resolution was duly heard and approved at a publicly advertised meeting of the Cumberland County Agriculture Development Board held on November 17, 2009 at 7:00 PM*

**RESOLUTION OF THE CUMBERLAND COUNTY PLANNING BOARD  
APPROVING THE COUNTY FARMLAND PRESERVATION PLAN**

**WHEREAS**, the County of Cumberland supports the promotion and preservation of the agricultural industry and the Farmland Preservation Program within the County; and

**WHEREAS**, the Cumberland County agricultural community is an important part of the county's economy, culture and landscape as well as a major contributor to the State of New Jersey's farming industry; and

**WHEREAS**, Cumberland County ranks first among New Jersey counties in terms of market value of agricultural products sold according to the 2007 U.S. Census of Agriculture; and

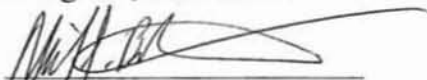
**WHEREAS**, in an effort to more effectively preserve the county's remaining farmland, the Cumberland County Department of Planning, in partnership with the Delaware Valley Regional Planning Commission, has prepared the Cumberland County Farmland Preservation Plan; and

**WHEREAS**, this Plan was adopted by the Cumberland County Agriculture Development Board on November 17, 2009, and forwarded to the Cumberland County Planning Board for review and approval;

**NOW THEREFORE BE IT RESOLVED**, that the Cumberland County Planning Board approves the Cumberland County Farmland Preservation Plan, dated 2009; as adopted by the Cumberland County Agriculture Development Board.

**BE IT FURTHER RESOLVED**, that a copy of this Resolution be forwarded to the Cumberland County Agriculture Development Board and the State Agriculture Development Committee.

**PASSED AND ADOPTED AT A REGULARLY SCHEDULED MEETING OF THE CUMBERLAND COUNTY PLANNING BOARD**, at 2:30 p.m. on Wednesday, December 2, 2009, at the County Administration Building, 790 East Commerce Street, Bridgeton, N.J. 08302.

  
Neil Bitchner, Chairman

  
Louis Fisher, Secretary

## MAPS

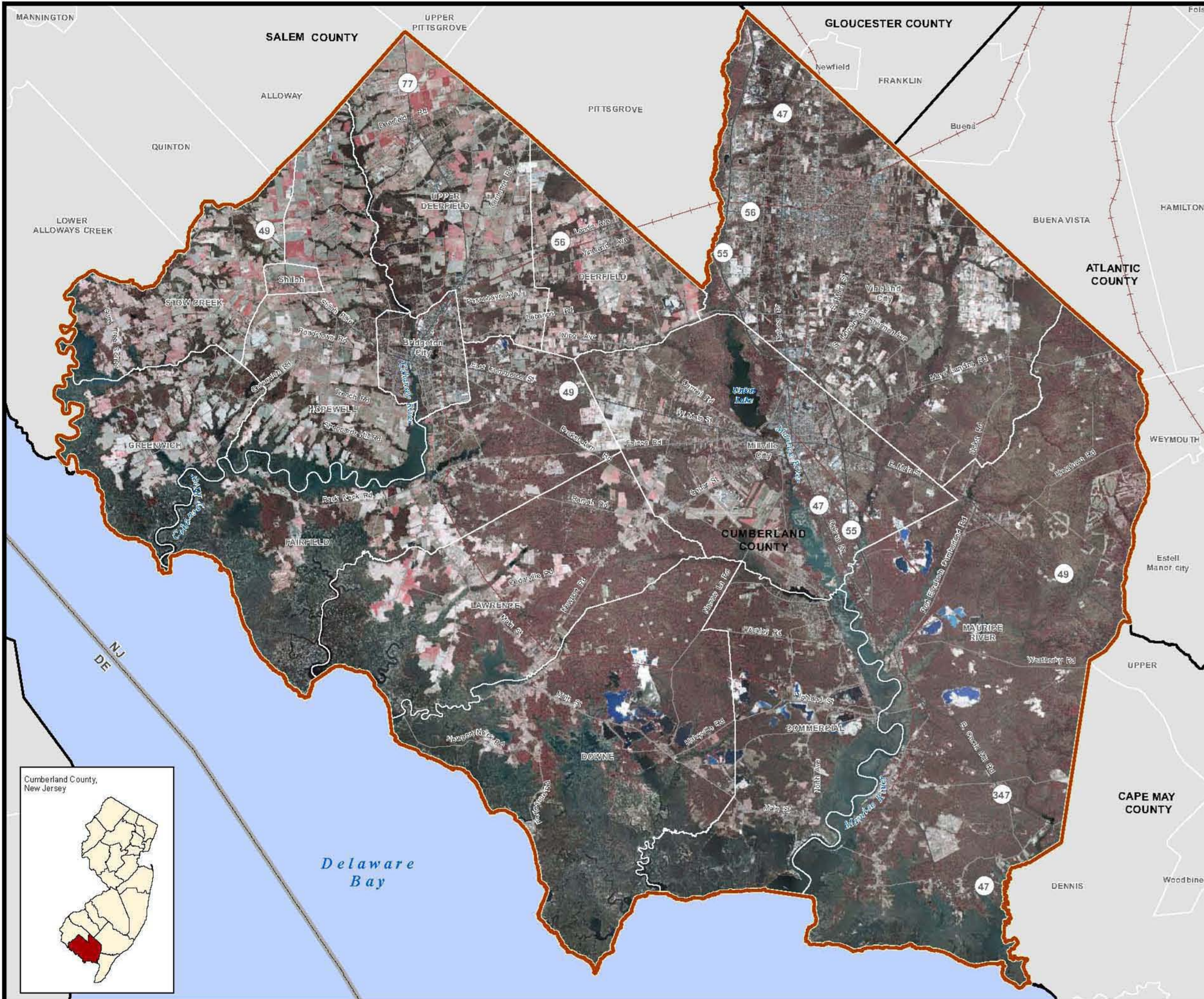
Map 1:	Aerial Photo (2002)
Map 2:	NJDEP Land Cover (2002)
Map 3:	NJDEP Agricultural Land Cover 2002
Map 4:	Soils 2004
Map 5:	Soil Agricultural Classifications
Map 6:	Preliminary Policy Map of State Development and Redevelopment Plan
Map 7:	Pinelands and CAFRA
Map 8:	Zoning – General
Map 9:	Agricultural Zoning
Map 10:	Water and Sewer Infrastructure
Map 11:	Landscape Project Priority Habitats (2007)
Map 12:	Groundwater Recharge
Map 13:	Agritourism
Map 14:	Agricultural Development Areas
Map 15:	Protected Open Space, Preserved Farms, and Eight-Year Farms
Map 16:	Project Areas, Farm Assessed, Target & Preserved Farms
Map 17A:	Stow Creek North and Shiloh – Hopewell North Project Areas
Map 17B:	Shiloh – Hopewell Central Project Area
Map 17C:	Hopewell South Project Area
Map 17D:	Stow Creek Project Area
Map 17E:	Greenwich Project Area
Map 17F:	Deerfield – Upper Deerfield North Project Area
Map 17G:	Deerfield – Upper Deerfield South Project Area
Map 17H:	Fairfield – Lawrence Project Area
Map 17I:	Fairfield East, Lawrence Central and Lawrence East Project Areas
Map 17J:	Lawrence West Project Area
Map 17K:	Vineland Project Area





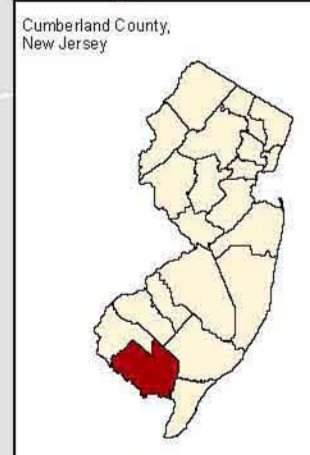
# CUMBERLAND COUNTY

## Map 1: Aerial Photo (2002)

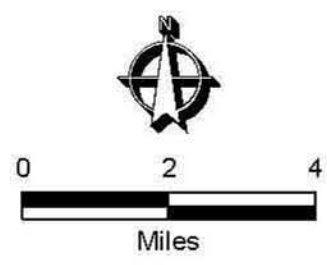


Legend:

- County Boundary
- Municipal Boundary
- Cumberland County Boundary

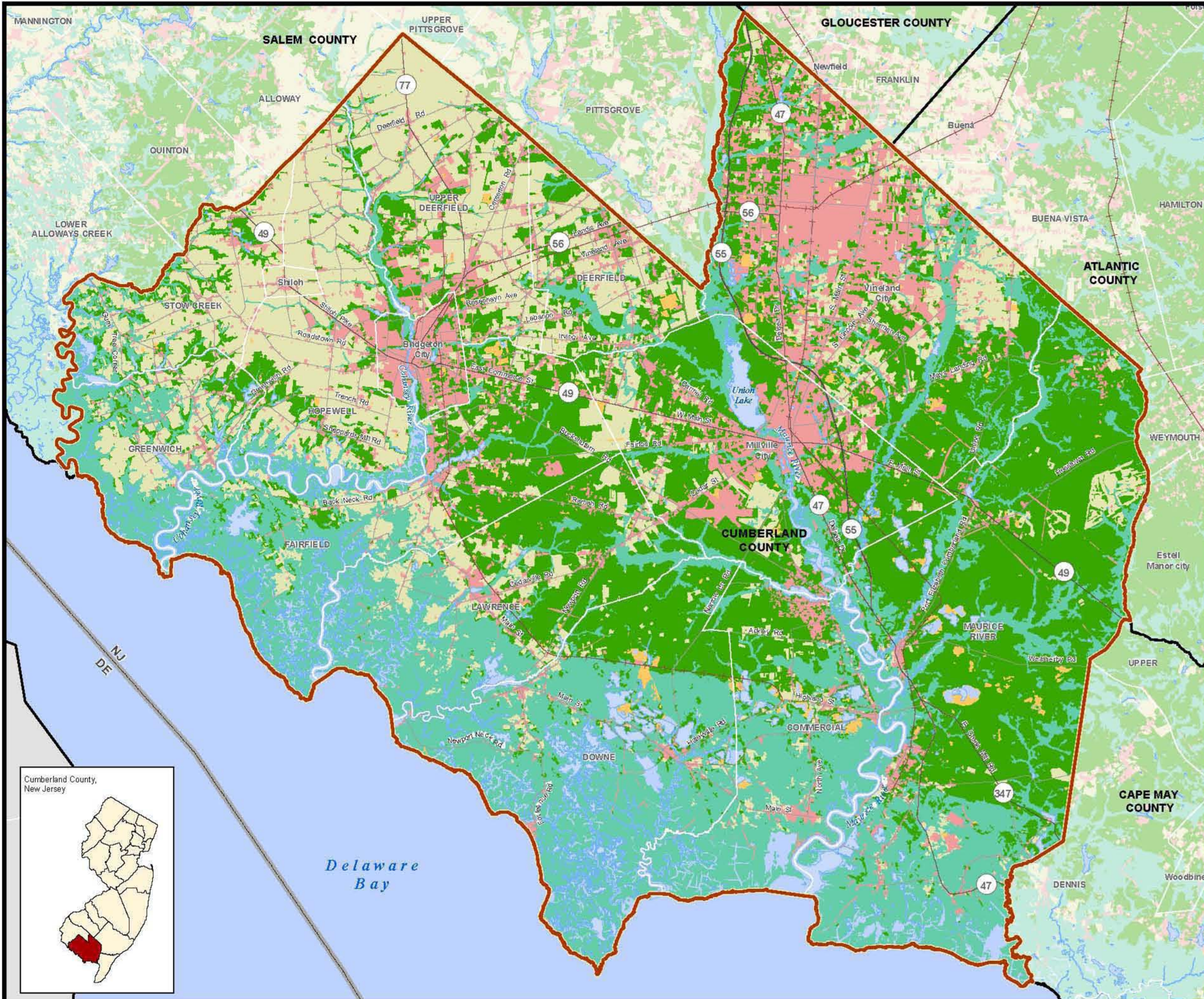


Sources: NJDEP, NJDOT, DVRPC  
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.



# CUMBERLAND COUNTY

## Map 2: NJDEP Land Cover (2002)

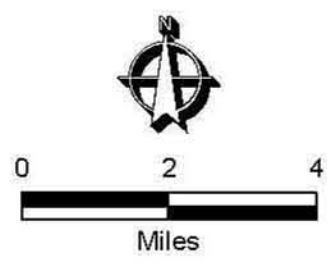


Legend for the map:

- Municipal Boundary (grey outline)
- Land Cover Categories:
  - Agriculture (light green)
  - Barren Land (orange)
  - Forest (dark green)
  - Developed (red)
  - Water (blue)
  - Wetlands (light blue)

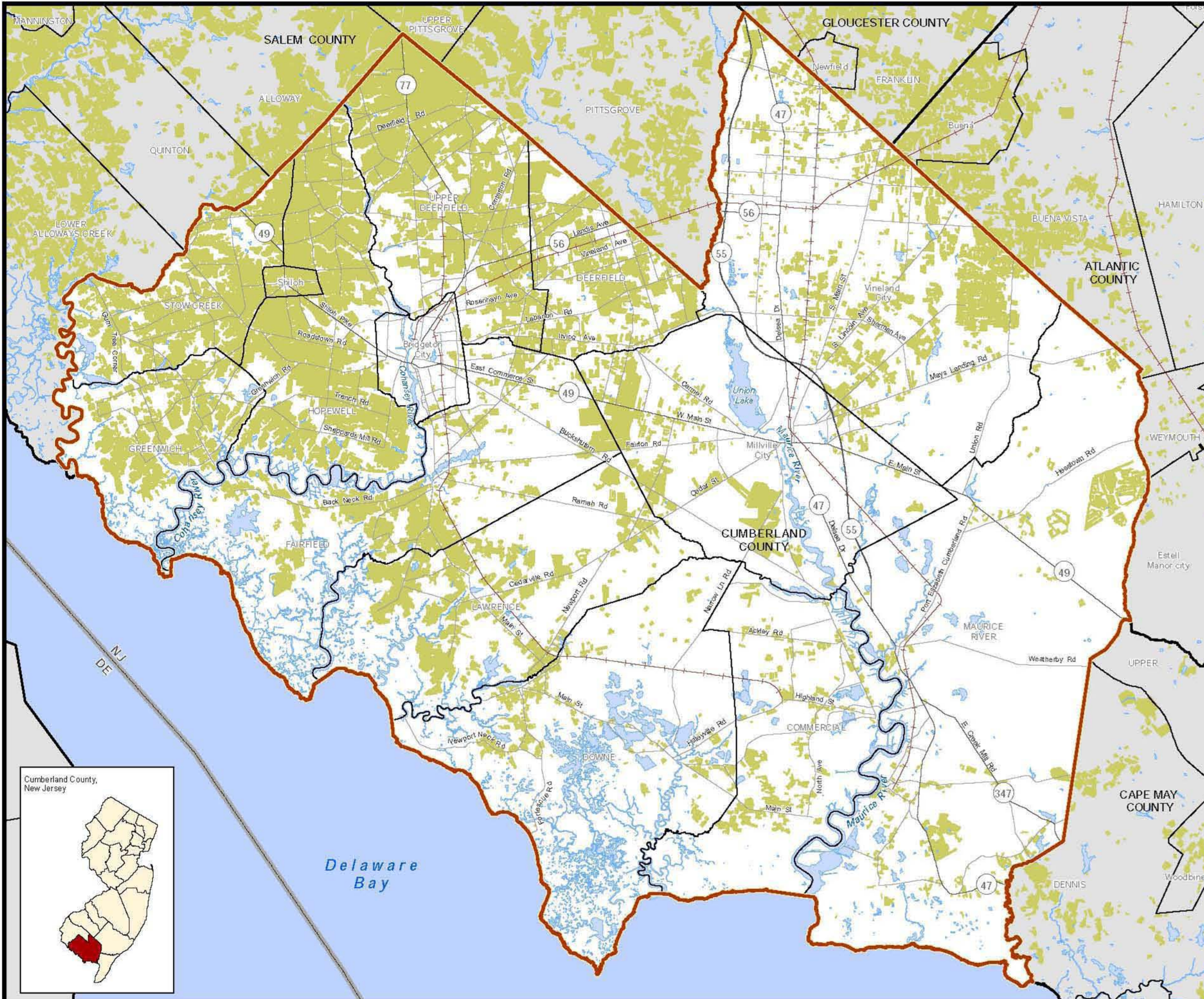


Sources: NJDEP, NJDOT, DVRPC  
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.



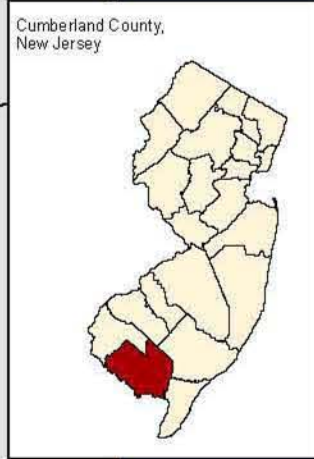
# CUMBERLAND COUNTY

## Map 3: NJDEP Agricultural Land Cover (2002)

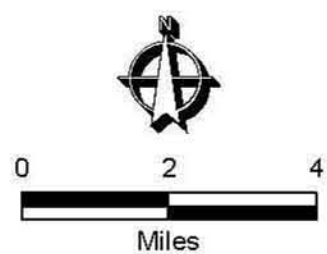


Legend:

- Municipal Boundary
- Agricultural Land

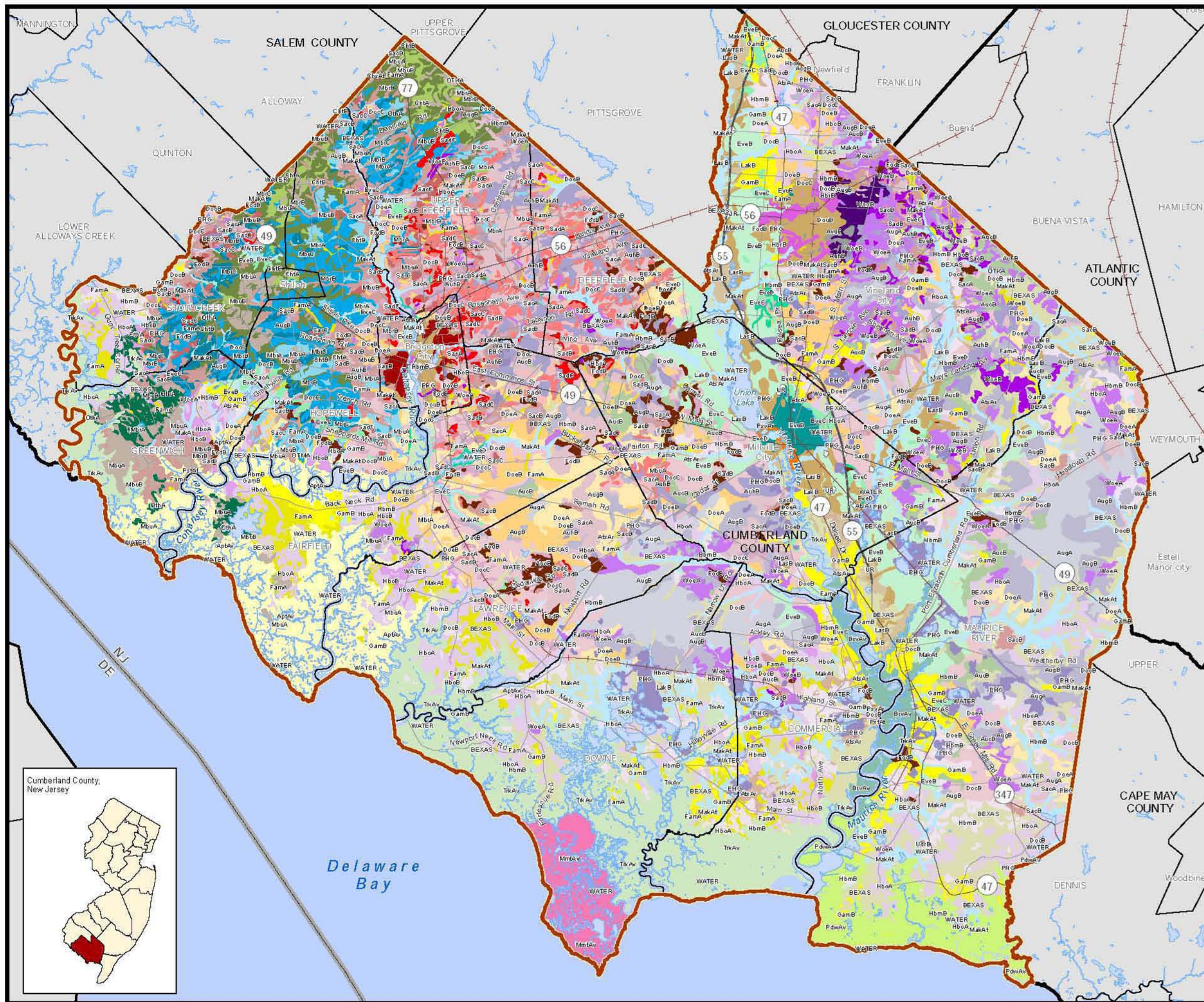


Sources: NJDEP, NJDOT, DVRPC  
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.



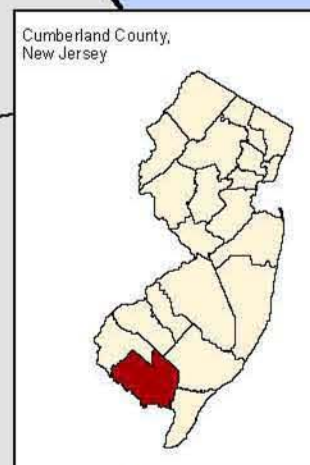
# CUMBERLAND COUNTY

## Map 4: Soils (2004)

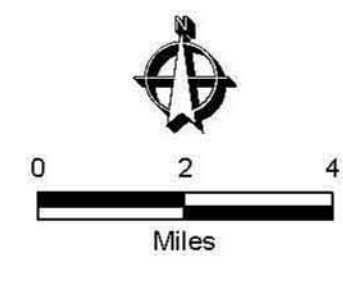


Soils			
AptAv	DoeB	MakAt	SacB
AtsAr	DouB	MbrA	SacC
AucB	EveB	MbrB	SadA
AugA	EveC	MbrC	SadB
AugB	EveD	MbuA	SadC
AuhB	EvuB	MbuB	SapB
AvuB	FamA	MmtAv	TrkAv
BEXAS	FodB	OTKA	UR
BrvAv	GamB	OTMA	UdrB
ChsAt	HbmB	OthA	WATER
ChtA	HboA	PHG	WoeA
ChtB	HboB	PdwAv	WoeB
DocB	HbrB	PstAt	WooB
DocC	LakB	PsvAr	
DoeA	LasB	SacA	

AptAv	Appoquinimik-Transquaking-Mispillion complex	LasB	Lakewood sand
AtsAr	Atsion sand	MakAt	Manahawick mud
AucB	Aura loamy sand	MbrA	Matapeake silt loam A
AugA	Aura sandy loam A	MbrB	Matapeake silt loam B
AugB	Aura gravelly sandy loam B	MbrC	Matapeake silt loam C
AuhB	Aura gravelly sandy loam	MbuA	Mattapee silt loam A
AvuB	Aura-Urban land complex	MbuB	Mattapee silt loam B
BEXAS	Berryland and Mullica soils	MmtAv	Mispillion-Transquaking-Appoquinimik complex
BrvAv	Brook silt loam	OTKA	Othello and Fallington soils
ChsAt	Chilom silt loam	OTMA	Othello, Fallington, and Truzsum soils
ChA	Chilom silt loam A	OthA	Othello silt loam
ChB	Chilom silt loam B	PHG	Pts. sand and gravel
DocB	Downer loamy sand B	PdwAv	Pawcatuck-Transquaking complex
DocC	Downer loamy sand C	PstAt	Psammont, sulfidic substratum
DoeA	Downer sandy loam A	PsvAr	Psammont, wet substratum
DoeB	Downer sandy loam B	SacA	Sassafras sandy loam A
DoeC	Downer-Urban land complex	SacB	Sassafras sandy loam B
EveB	Evesboro sand B	SacC	Sassafras sandy loam C
EveC	Evesboro sand C	SadA	Sassafras gravelly sandy loam A
EveD	Evesboro sand D	SadB	Sassafras gravelly sandy loam B
EvuB	Evesboro-Urban land complex	SadC	Sassafras gravelly sandy loam C
FamA	Fallington sandy loam	SapB	Sassafras-Urban land complex
FodB	Fort Mott loamy sand	TkAv	Transquaking mucky peat
GamB	Galloway loamy sand	UR	Urban land
HbmB	Hammonon loamy sand	UdrB	Udorhents, refuse substratum
HboA	Hammonon sandy loam A	WATER	Water
HboB	Hammonon sandy loam B	WoeA	Woodstown sandy loam A
HbrB	Hammonon-Urban land complex	WoeB	Woodstown sandy loam B
LakB	Lakewood sand	WooB	Woodstown-Urban land complex

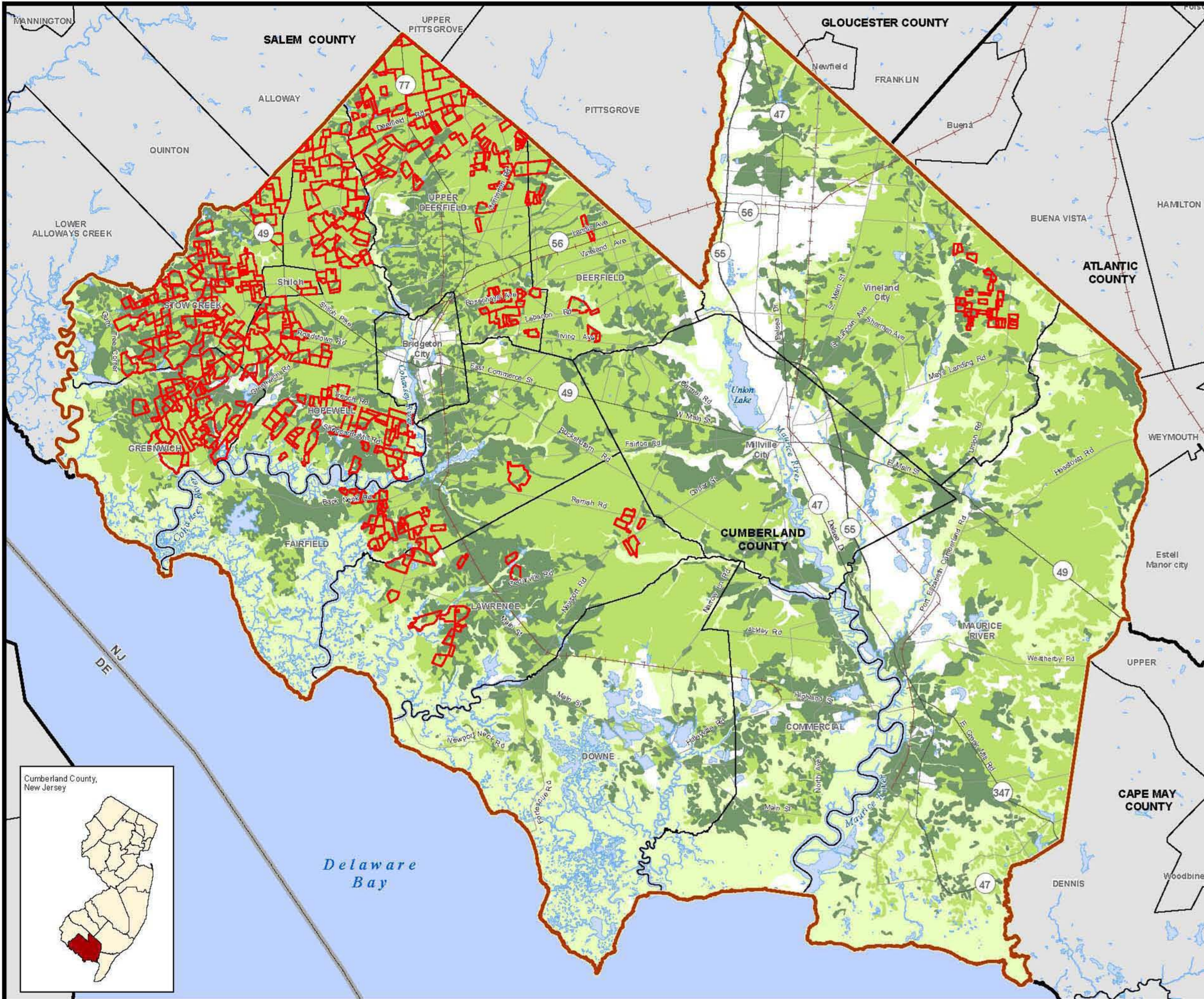


Sources: NJDEP, NJDOT, DVRPC, NRCS. This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.



# CUMBERLAND COUNTY

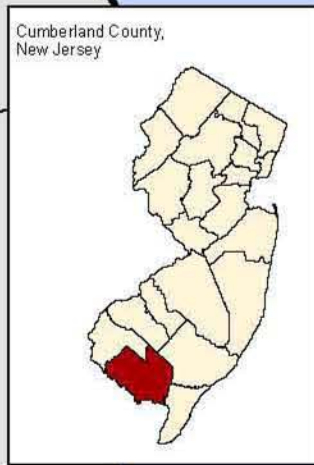
## Map 5: Soil Agricultural Classifications



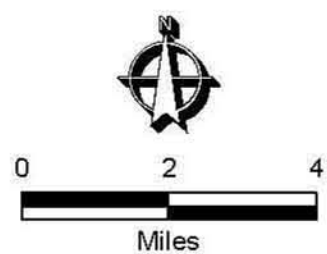
- Target Farm
- Municipal Boundary

**Soil Designation**

- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Not Rated for Agricultural Use

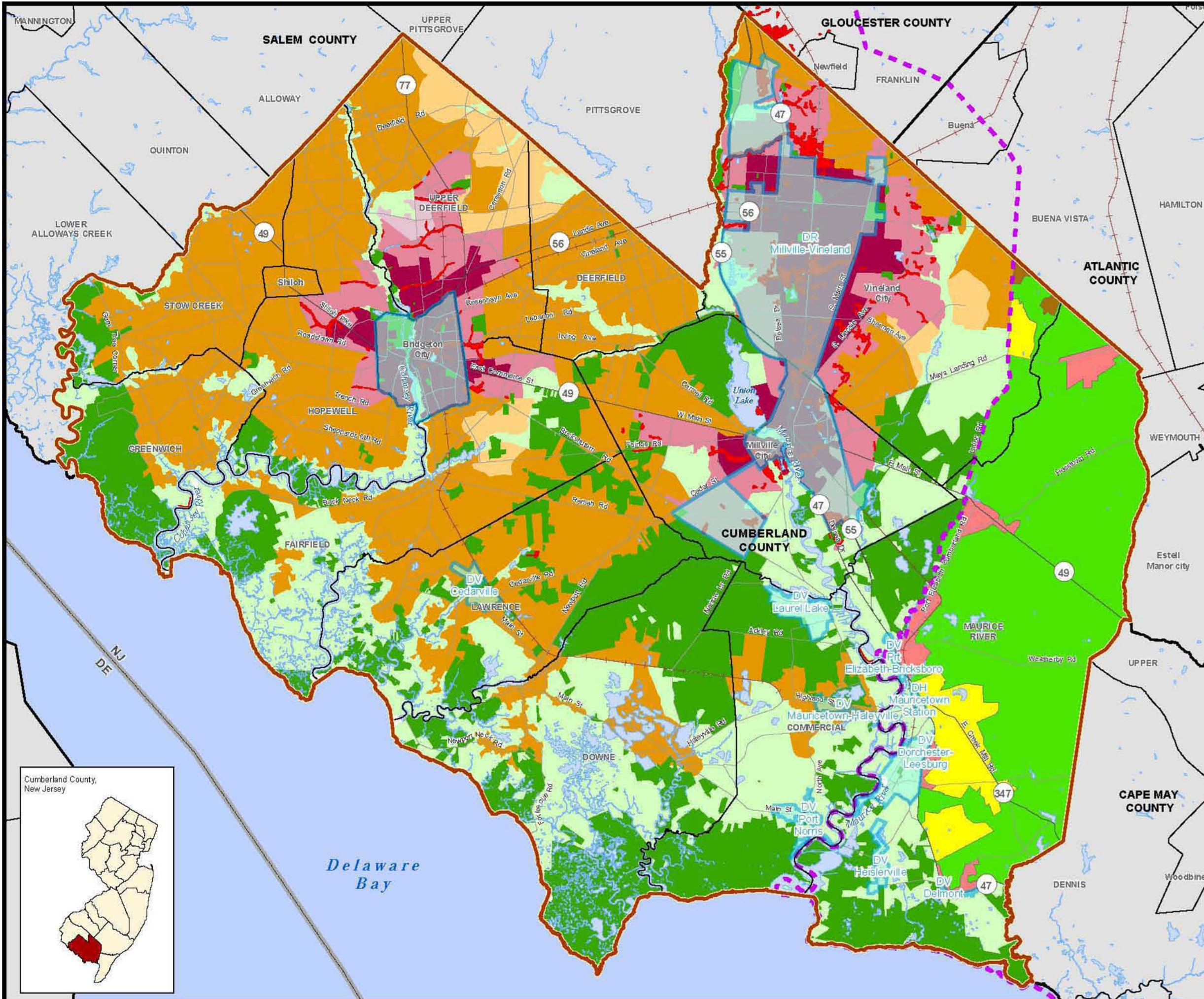


Sources: NJDEP, NJDOT, DVRPC, NRCS. This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.



# CUMBERLAND COUNTY

## Map 6: Preliminary Policy Map of State Development and Redevelopment Plan



**Boundaries**

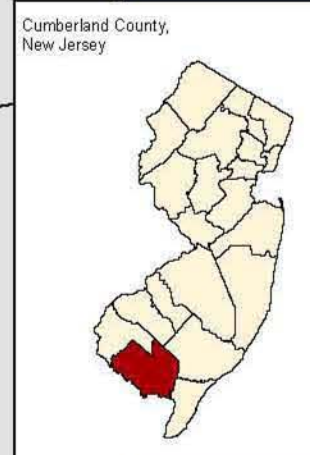
- Municipal Boundary
- Pinelands Boundary
- Center Boundary
- Critical Environmental Site

**Planning Areas**

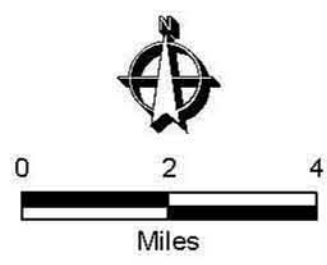
- Metropolitan (PA1)
- Suburban (PA2)
- Fringe (PA3)
- Park or Natural Area (Parks)
- Rural (PA4)
- Rural Environmentally Sensitive (PA4B)
- Environmentally Sensitive (PA5)
- Water

**Pinelands Management Areas**

- Agricultural Production Area
- Forest Area
- Pinelands Village
- Rural Development Area

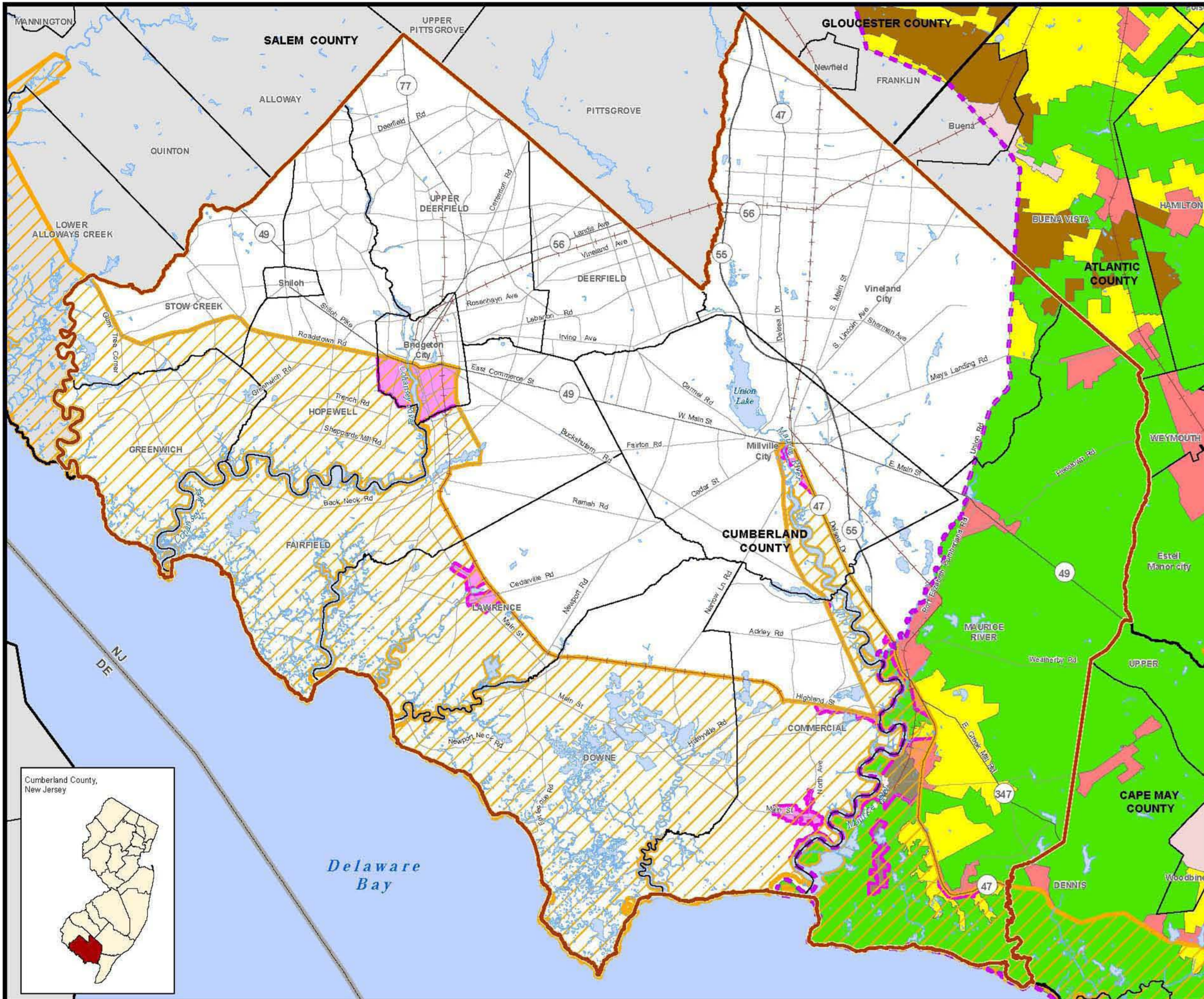






Sources: NJDEP, NJDOT, DVRPC, NJ Dept. of Community Affairs - Office of Smart Growth. This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.








# CUMBERLAND COUNTY

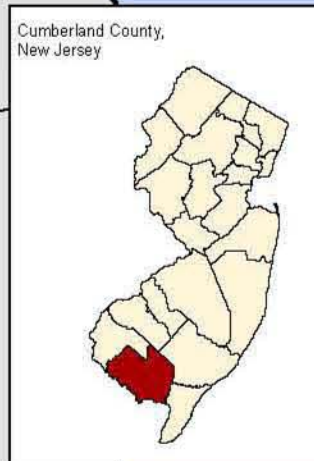
## Map 7: Pinelands and CAFRA



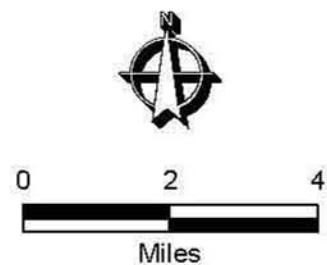
-  Municipal Boundary
-  Pinelands Boundary
-  CAFRA Boundary
-  CAFRA Center

**Pinelands Management Areas**

-  Agricultural Production Area
-  Forest Area
-  Pinelands Village
-  Pinelands Town
-  Rural Development Area



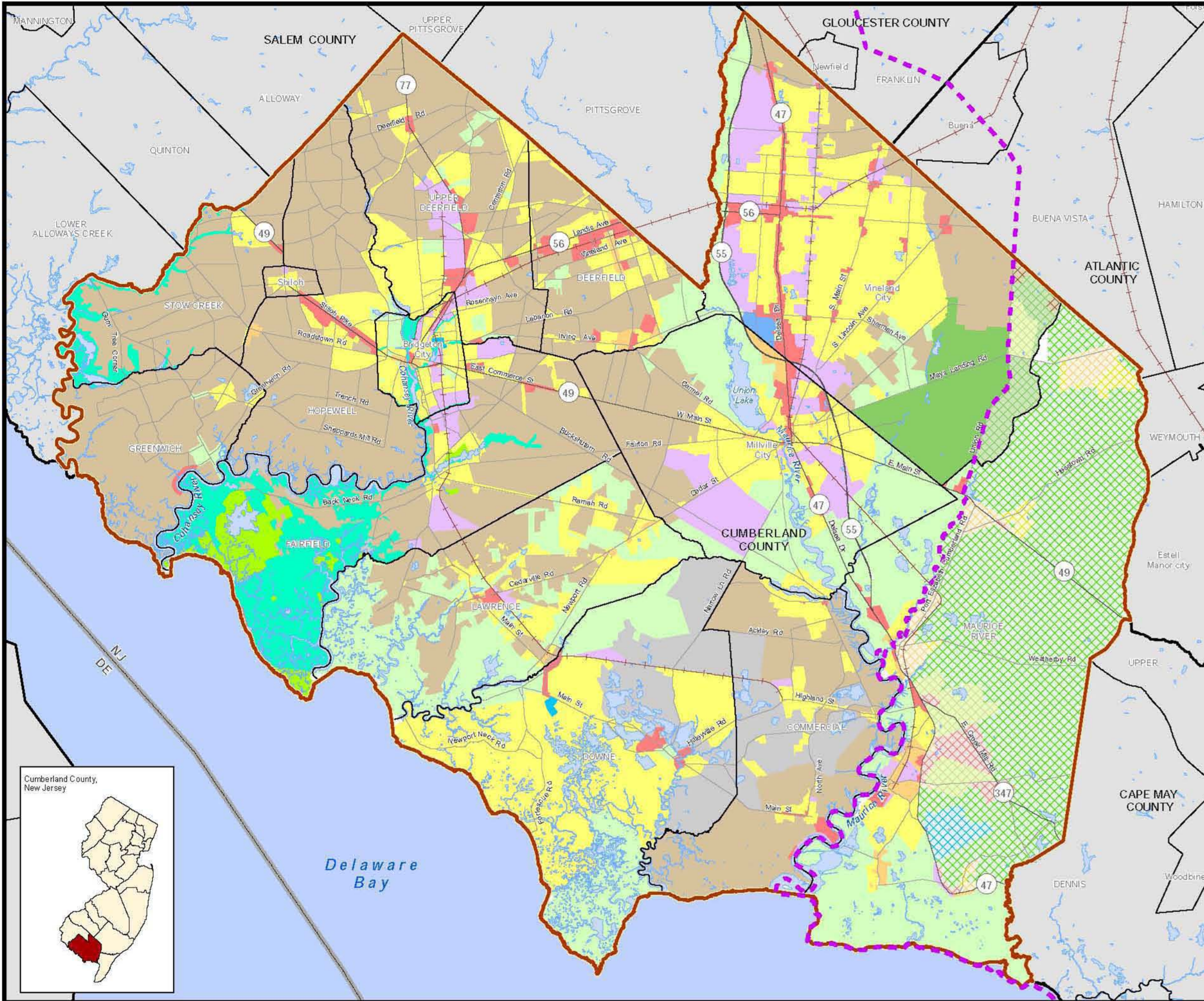
Sources: NJDEP, NJDOT, DVRPC, New Jersey Pinelands Commission  
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.





# CUMBERLAND COUNTY

## Map 8: Zoning - General



**Boundaries**

- Pinelands Boundary
- Municipal Boundary

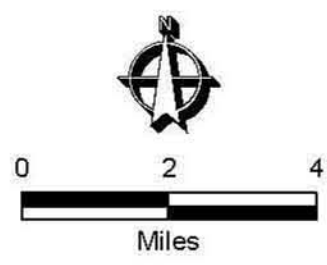
**General Zoning**

- Commercial
- Mixed Use
- Industrial
- Institutional
- Residential
- Floodplain
- Park or Openspace
- State
- Mining Extraction
- Agriculture
- Woodlands
- Lake

**Pinelands Zoning**

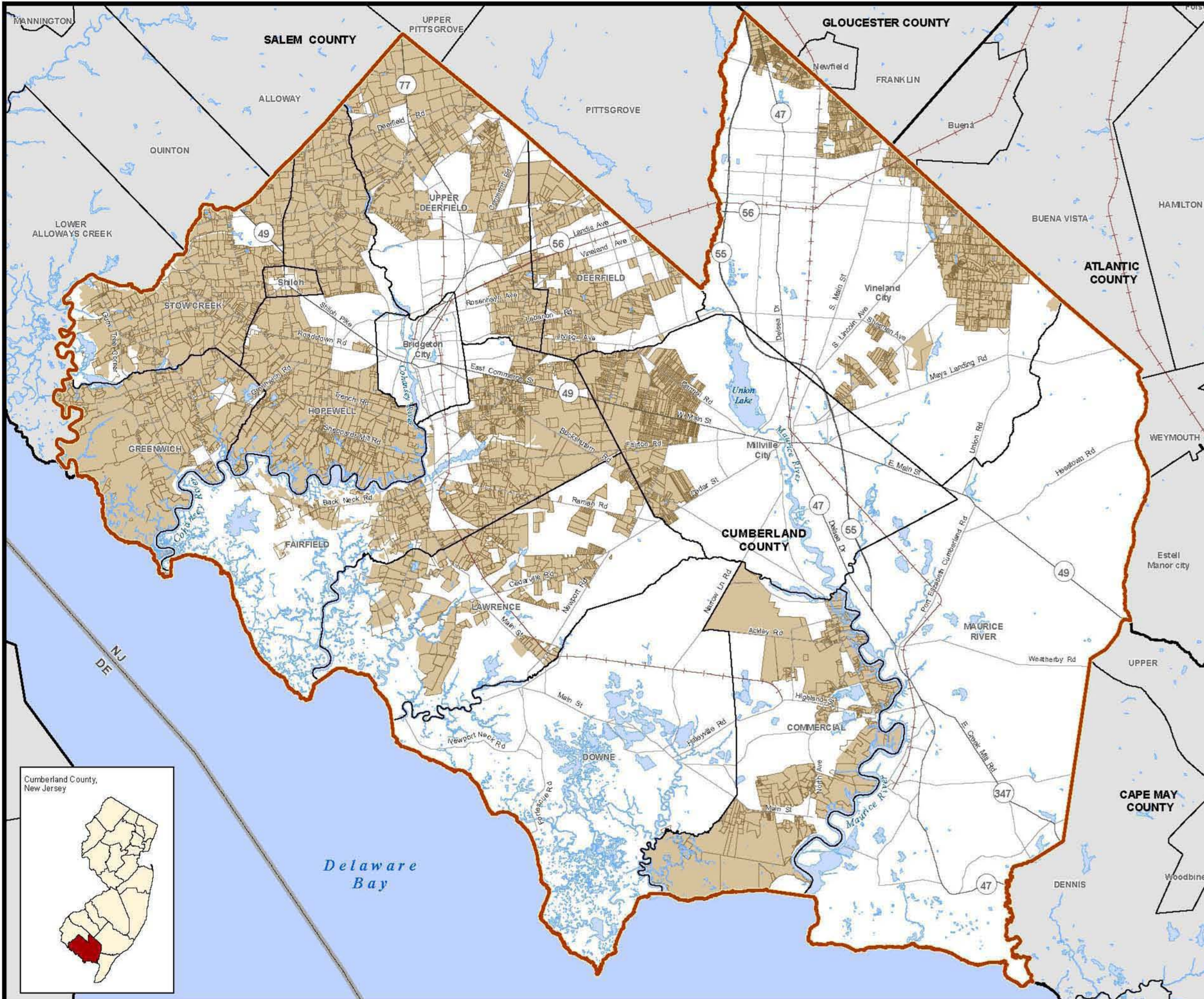
- Commercial
- Conservation
- Residential
- Rural Development
- State Institutional
- Village
- Agriculture
- Forest

Sources: NJDEP, NJDOT, DVRPC, Cumberland Co.  
 This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.



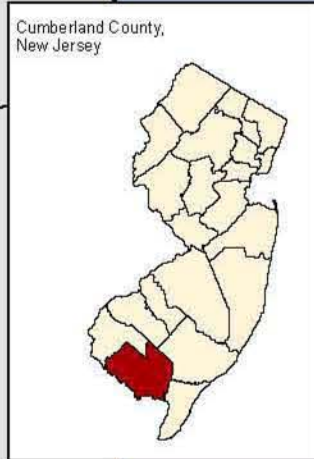
# CUMBERLAND COUNTY

## Map 9: Agricultural Zoning

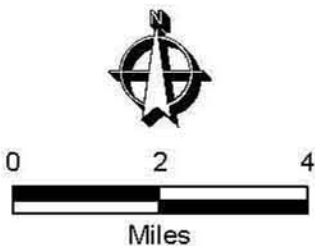


Legend:

- Municipal Boundary
- Agricultural Zoning

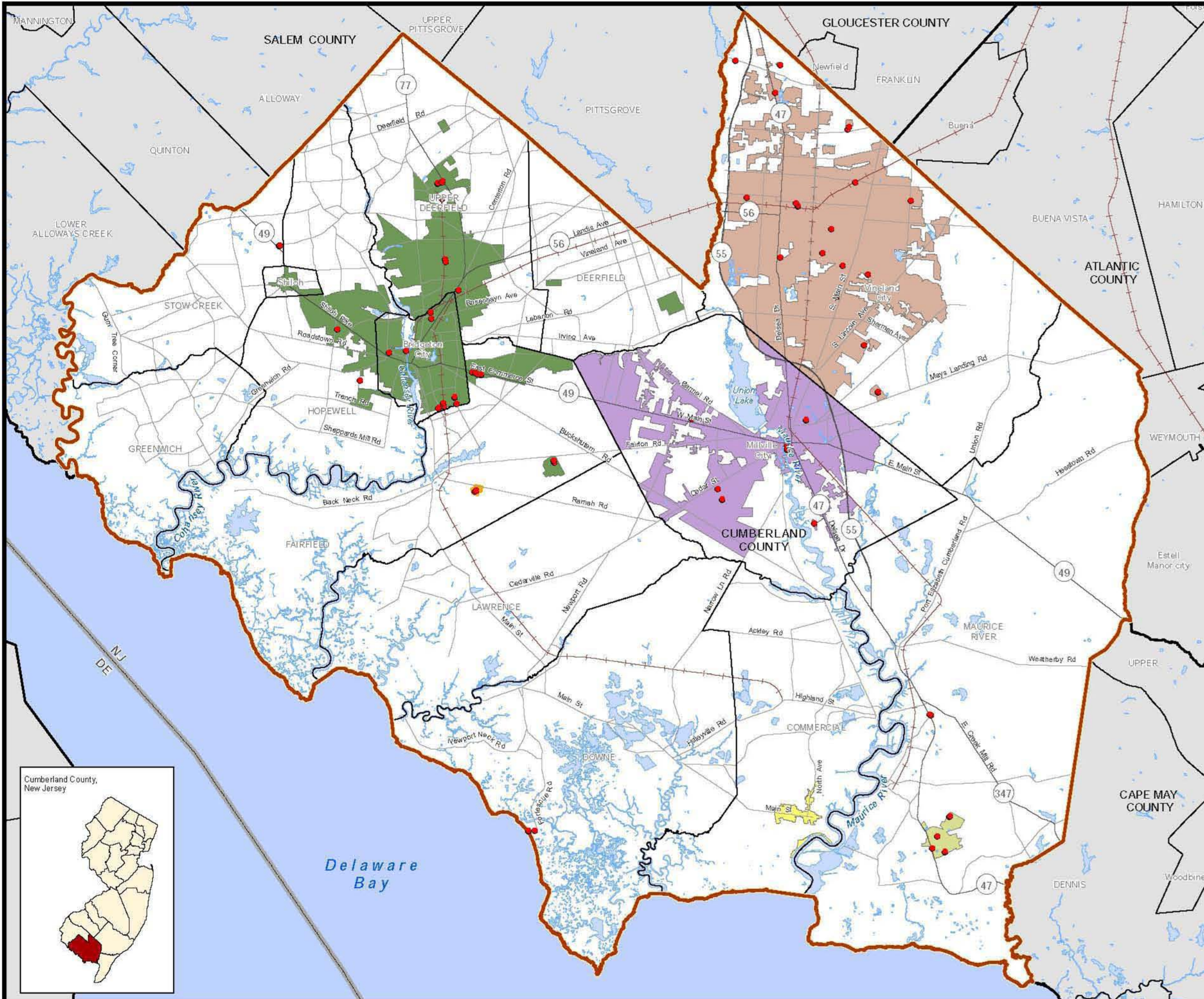


Sources: NJDEP, NJDOT, DVRPC, Cumberland Co.  
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.



# CUMBERLAND COUNTY

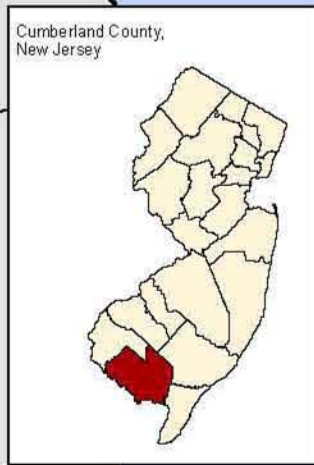
## Map 10: Water & Sewer Infrastructure



- Public Community Well
- Municipal Boundary

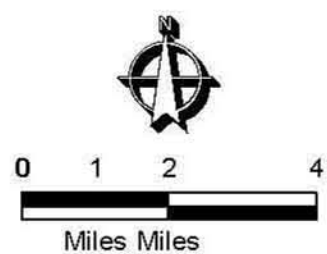
**Sewer Service Areas**

- Cumberland County Utility Authority
- Bayside State Prison
- Fairton Oaks Treatment Plant
- Landis Sewerage Authority
- Millville Sewer Utility
- Port Norris Sewage Treatment Plant



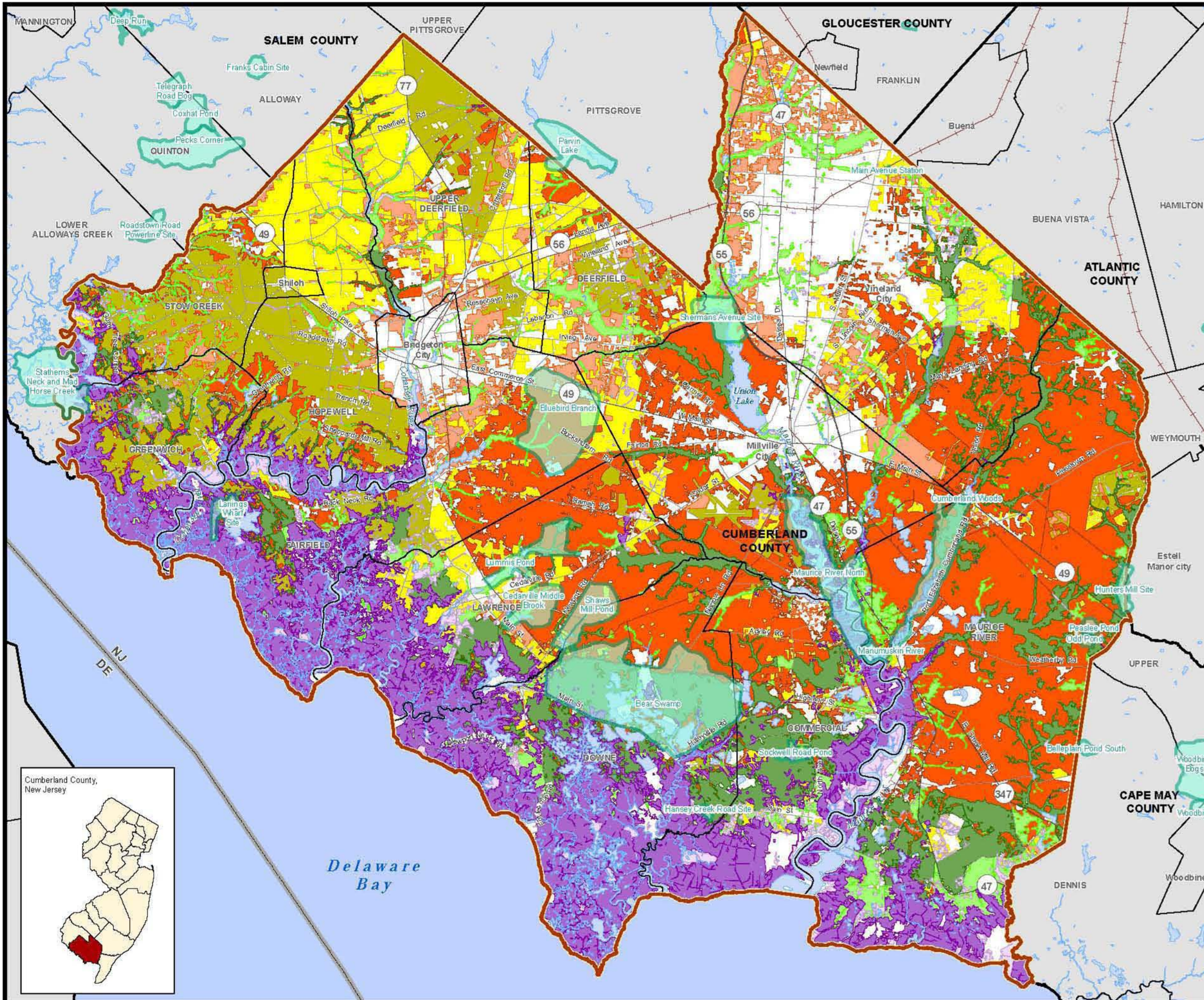
NJDEP Draft Map for  
Wastewater Management Planning

Sources: NJDEP, NJDOT, DVRPC, Cumberland Co.  
This map was developed using New Jersey  
Department of Environmental Protection  
Geographic Information System digital data,  
but this secondary product has not been  
verified by NJDEP and is not state-authorized.



# CUMBERLAND COUNTY

## Map 11: Landscape Project Priority Habitats (2007)

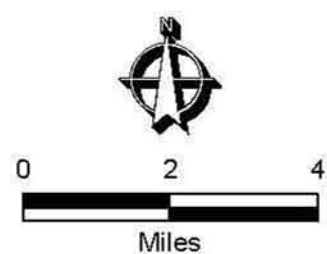


Municipal Boundary  
 Natural Heritage Site

**Conservation Priority Type**

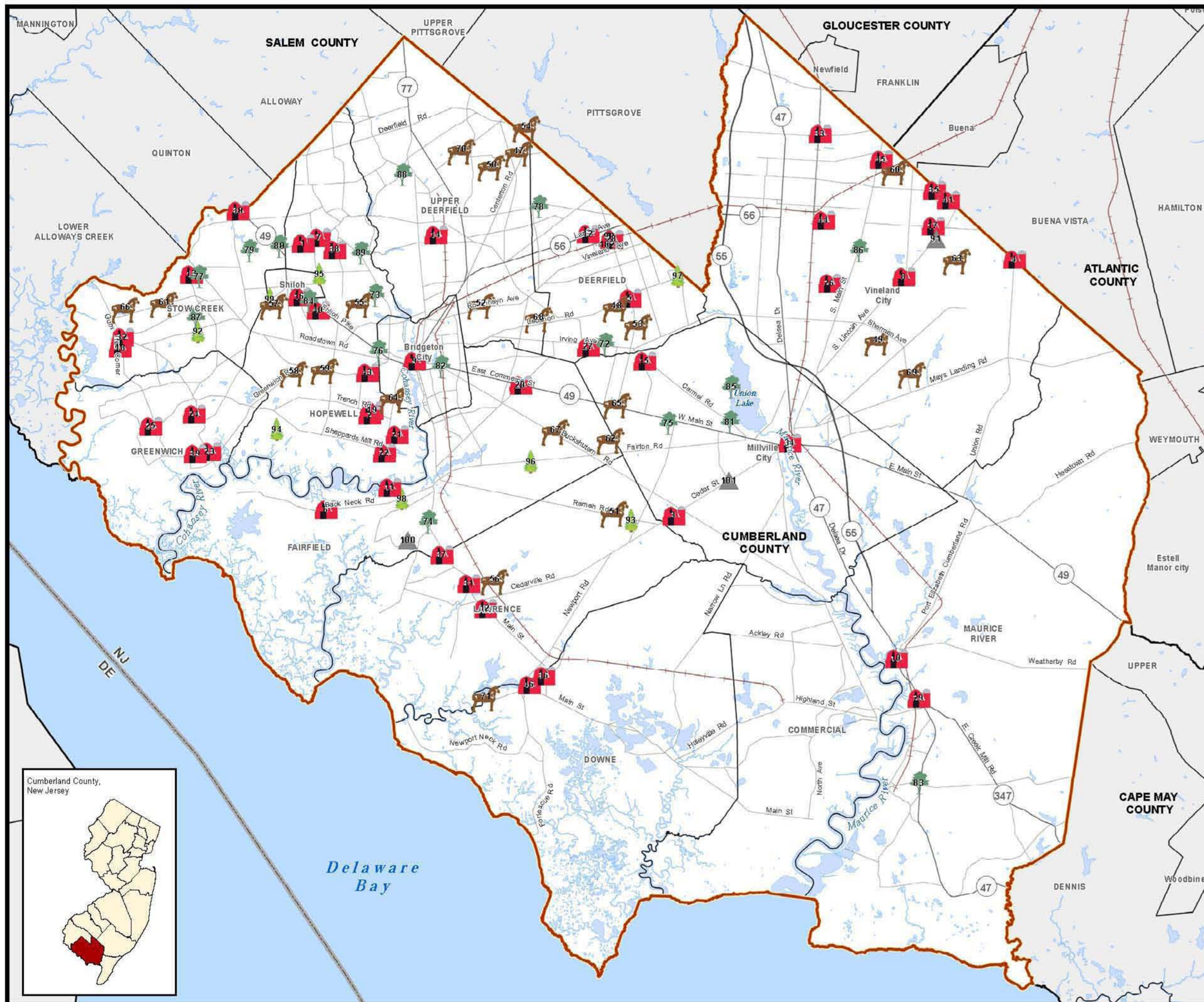
<b>Emergent Wetlands</b>	<b>Upland Forest</b>
<span style="background-color: purple; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> Critical Habitat	<span style="background-color: orange; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> Critical Habitat
<span style="background-color: lightpurple; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> Suitable Habitat	<span style="background-color: lightorange; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> Suitable Habitat
<b>Forested Wetlands</b>	<b>Grasslands</b>
<span style="background-color: green; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> Critical Habitat	<span style="background-color: yellow; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> Critical Habitat
<span style="background-color: lightgreen; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> Suitable Habitat	<span style="background-color: lightyellow; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> Suitable Habitat

Sources: NJDEP, NJDOT, DVRPC  
 This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.



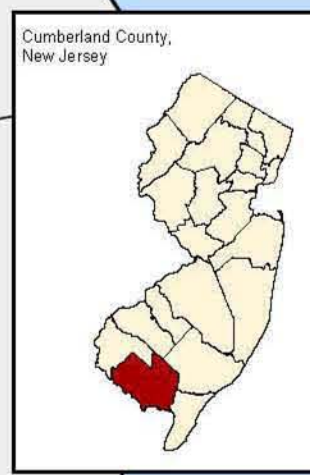
# CUMBERLAND COUNTY

## Map 13: Agritourism

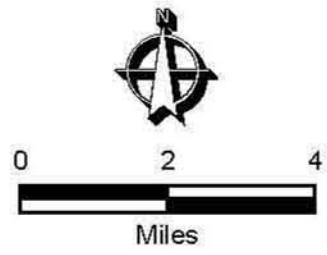


Municipal Boundary  
**Type of Agritourism**  
 Farm Market  
 Greenhouse or Nursery  
 Christmas Tree Grower  
 Horse Farm  
 Other

Farm Markets	Greenhouses or Nurseries	Horse Farms
1. A Taste Of The Garden State	72. Carmel Nursery & Greenhouses	47. Billy G Farm
2. Adamucci Farms	73. Cedrus Nursery	48. Bo's Tack
3. Andy's Countryside Farm Market	74. Greenhouse, The	49. Break Away Stables
4. Badriacco Farms	75. Gawdzicki Nursery & Greenhouses	50. Brian Ale Quarter Horses
5. Besante Farms	76. J & S Home & Garden/Ja Bridgeton Agw	51. Buck mallow Farms
6. Blew Valley Farms	77. Jencho Gardens	52. Capron Farms
7. Bonham's Butcher Shop	78. Kim She II Nursery	53. Chrome Acres
8. Brassie's Farm Market	79. L.G. Hoffman Nurseries	54. Circle D Farm
9. Bridgeton Riverfront Farmers' Market	80. Mar Mill Nursery	55. Dare to Dream Farm
10. Camp's Farm Market	81. Mitchel II Lower Farm & Nursery	56. Eagle Ring Farms
11. Cat-Tail Farm in the City	82. Rolando's Nursery	57. Gary Trull
12. Cedarville Market	83. Scattered Acres Nursery	58. Hidden Ck. Equest. Ctr.
13. Cherry Brook Farm	84. Sloan's Greenhouses	59. JaMar Farms
14. Cruandale Farms Harvest Quarters	85. The Lower Farm Inc.	60. Lisa Wien
15. Cumberland Co. Fairgrounds	86. The Lower Shoppe Ltd.	61. Mad Horse Ranch
16. DeCou Farm Market	87. Wilande Greenhouse	62. P&C Farms
17. D'Otts Farm Market	88. Willowbrook Nursery	63. Panco Farm
18. Dubose Farm	89. Woodside Nursery	64. Parvin Lewis
19. Dutch Neck Village		65. Quarter Mill Farms
20. Four Seasons Farm Market		66. Rockin Horse Farm
21. Frainger Farms		67. Ryan's Morgan Horses
22. Frainger's Cedar Mill		68. Southwind Horse Ctr.
23. Gibbon House		69. Stas Stables Inc.
24. Half-Century Farm & Nursery		70. Stony Acres Ranch
25. Horse Hay Acres		71. Sue Cacchiani
26. Joe's Produce Market		
27. LaSala Farms		
28. Lebanon Creek Farm		
29. Lilian's Farm Market		
30. Marlboro Farm Market		
31. Meadow Bend Farm Market		
32. Meadow View Farms Transport		
33. Miller's Berry Farm		
34. Milkville Farmers Market		
35. Muzzarelli Farms		
36. Nantuxent Farms		
37. Nardelli Bros. Lakeview Farms		
38. Pleasant Acres Farm		
39. Raehaven Farms		
40. Rottkamp Farms		
41. Santanello's Farm		
42. Sparaco's Strawberry Farm & Market		
43. Sunny Slope Farms		
44. Vineland Farmers Market		
45. Wm. Consolo & Sons Farms Inc.		
46. Woodridge Farm		

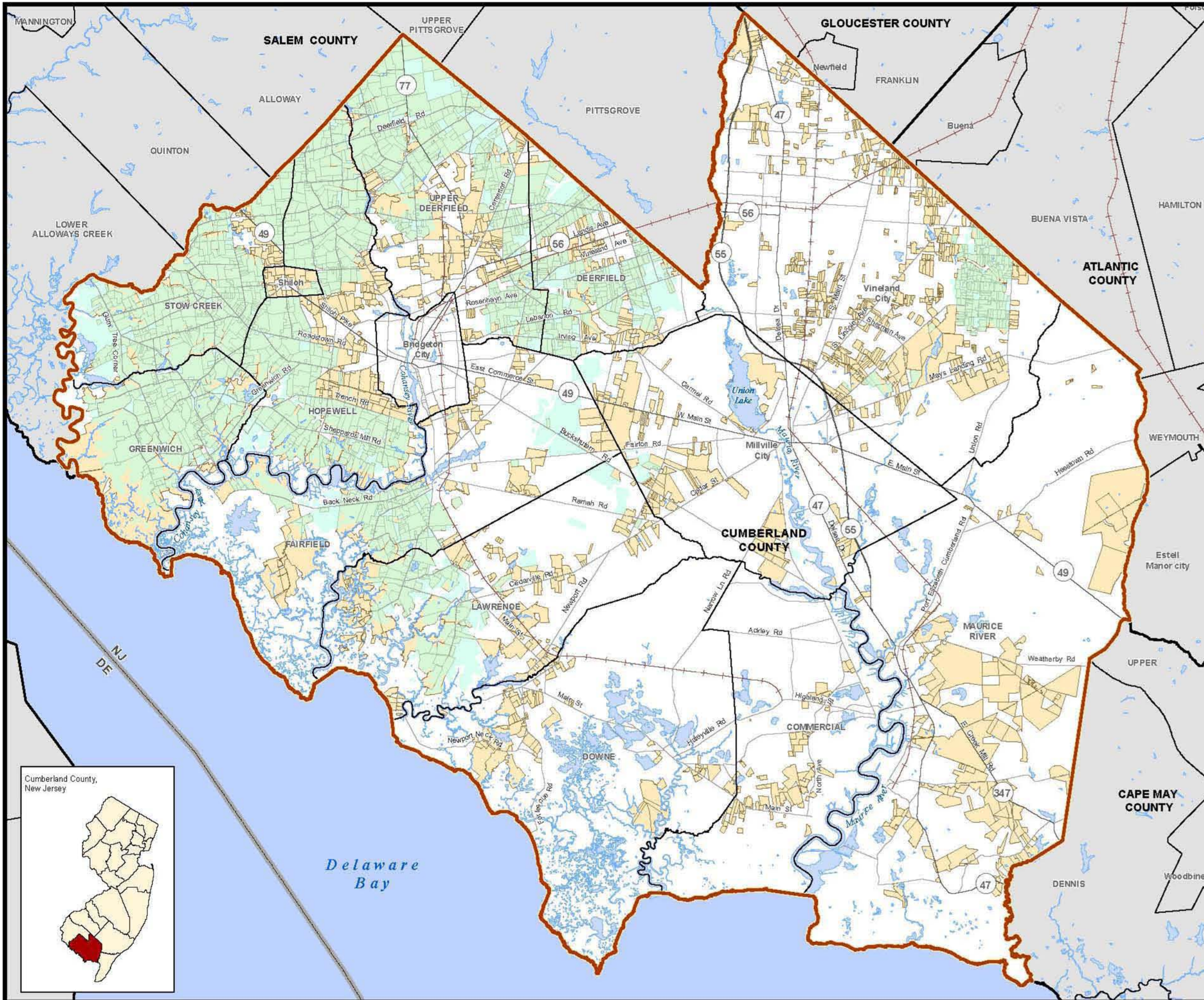


Sources: Cumberland County, N.J. Department of Environmental Protection, N.J. Department of Transportation, D.V.R.P.C.  
 This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by N.J. Department of Environmental Protection and is not state-authorized.

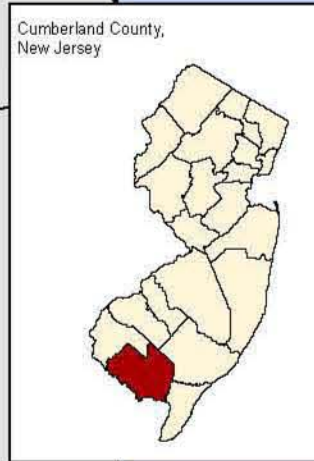


# CUMBERLAND COUNTY

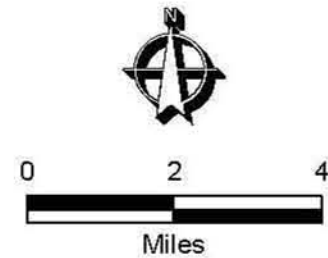
## Map 14: Agricultural Development Areas



	Municipal Boundary
	Farm Assessed
	Agricultural Development Area

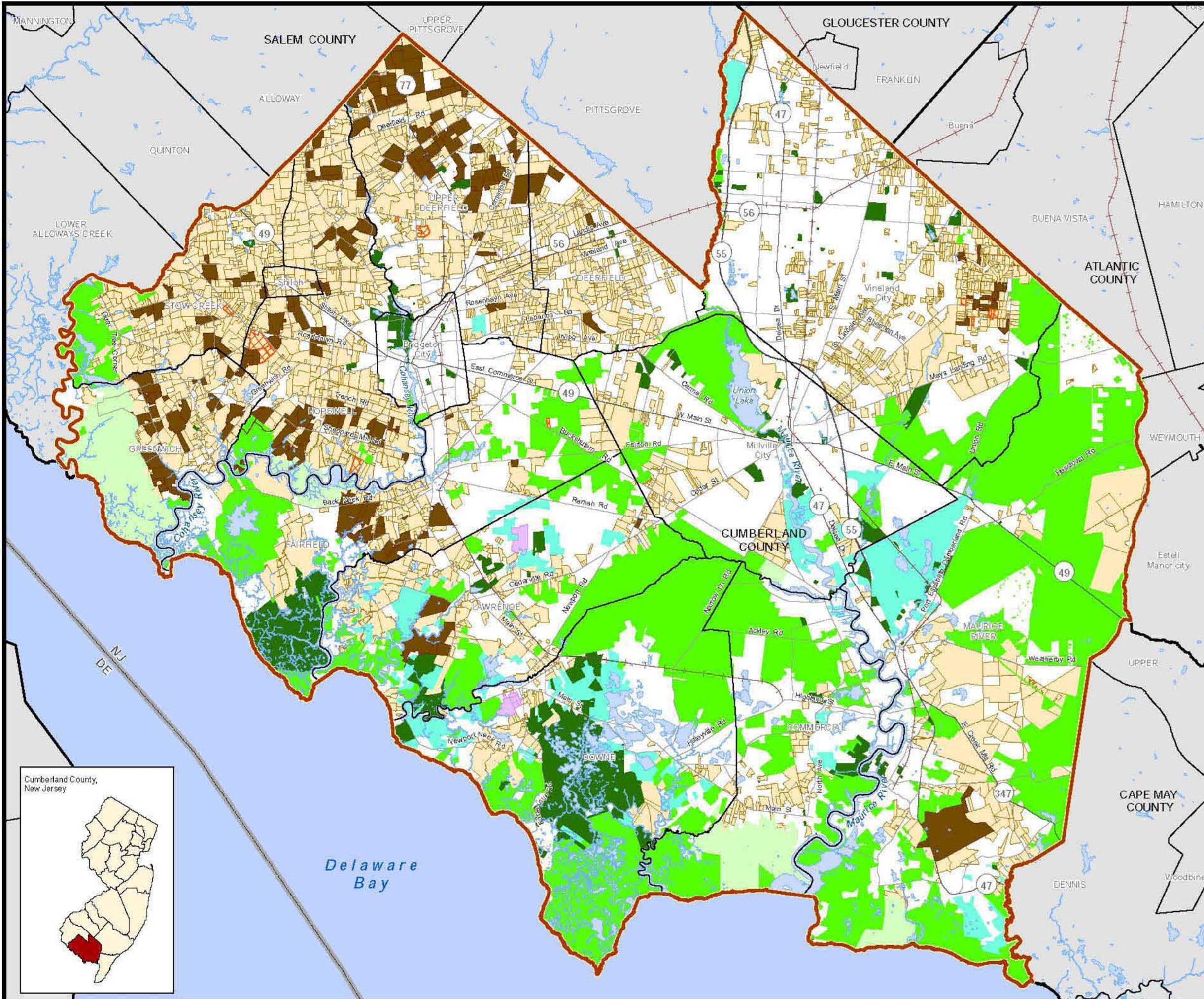


Sources: NJDEP, NJDOT, DVRPC, Cumberland Co.  
 This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.



# CUMBERLAND COUNTY

## Map 15: Protected Open Space, Preserved Farms, and Eight-Year Farms

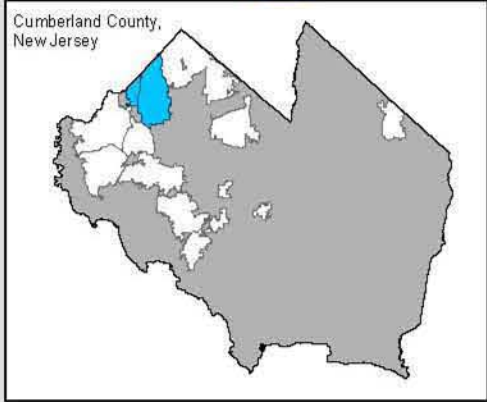


- Water
- Municipal Boundary
- Farm Assessed
- Developed
- Farmland Preservation Type**
  - State or County
  - Nonprofit
  - Eight-Year
- Protected Open Space**
  - Federal or Utility
  - State Owned
  - Locally Owned
  - Nonprofit Owned



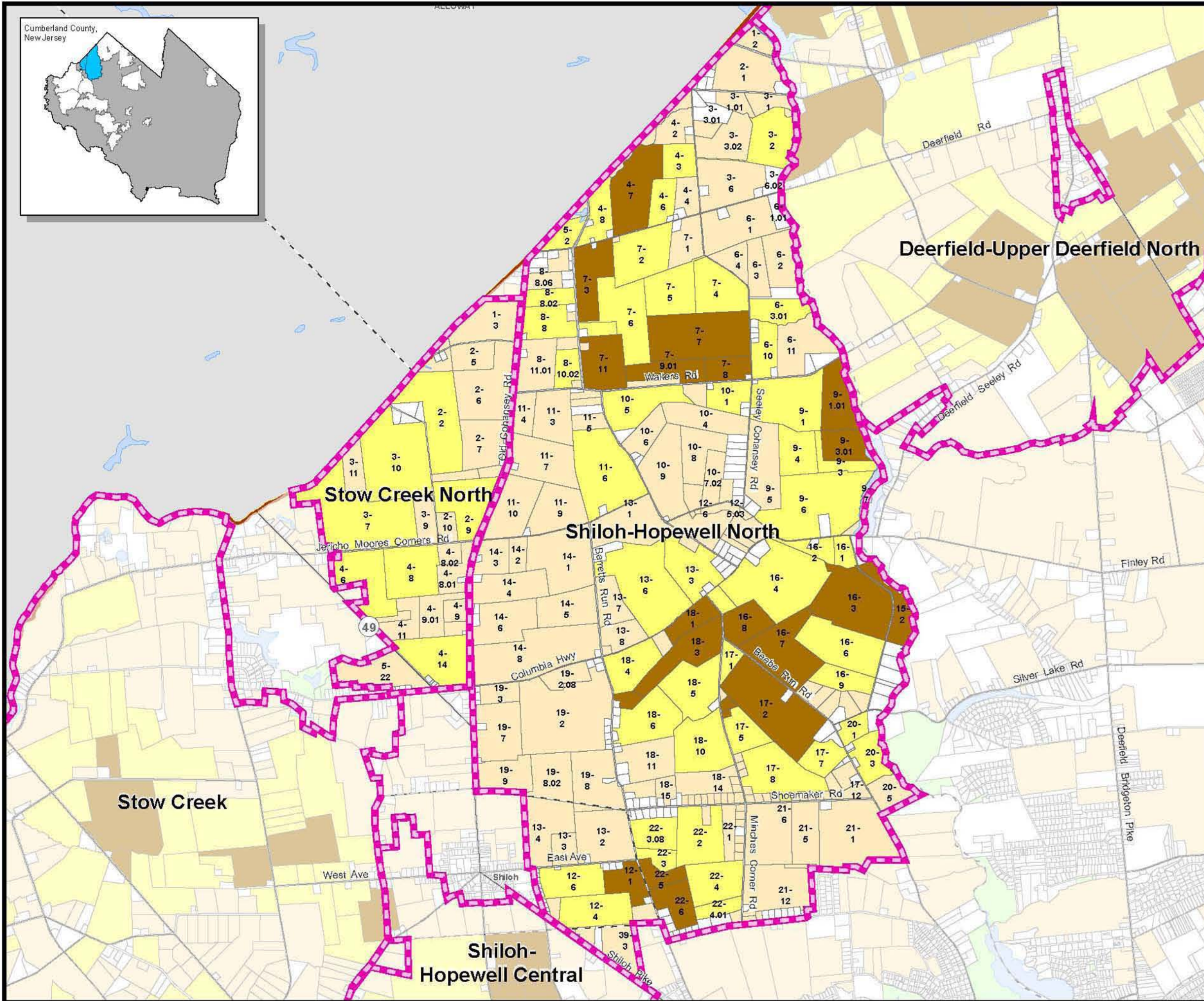
Sources: NJDEP, NJDOT, DVRPC, Cumberland Co, NJCF, SADC. This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.





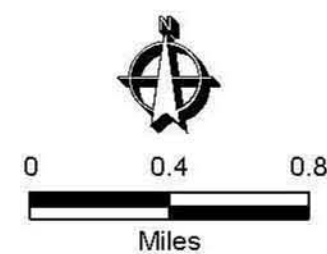
# CUMBERLAND COUNTY

## Map 17A: Stow Creek North and Shiloh - Hopewell North Project Areas



-  2008 Project Area
-  Preserved Farm
-  Target Farm
-  Farm Assessed
-  Protected Open Space
-  Water

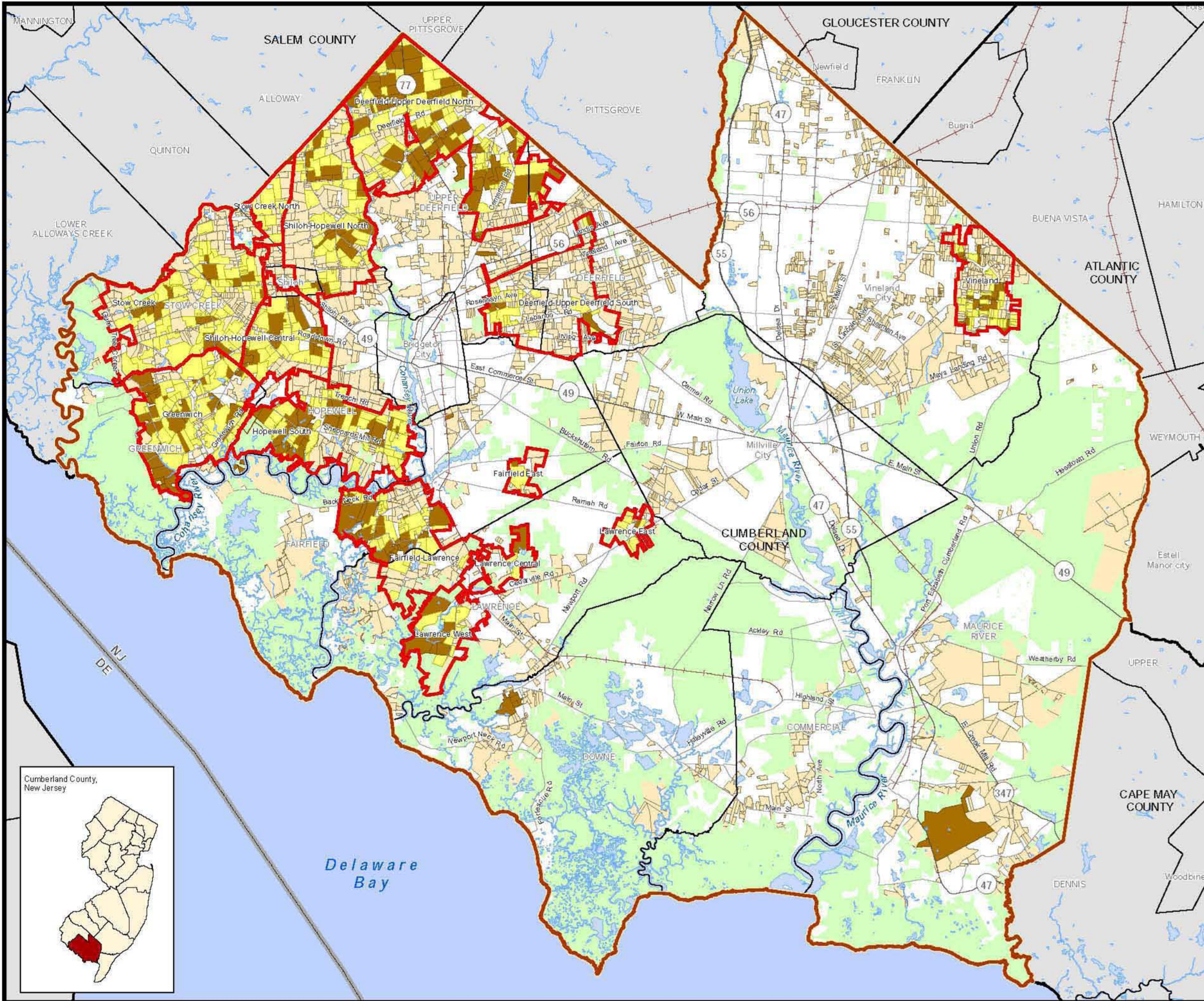
Sources: NJDEP, NJDOT, DVRPC,  
Cumberland Co., SADC.  
This map was developed using New Jersey  
Department of Environmental Protection  
Geographic Information System digital data,  
but this secondary product has not been  
verified by NJDEP and is not state-authorized.



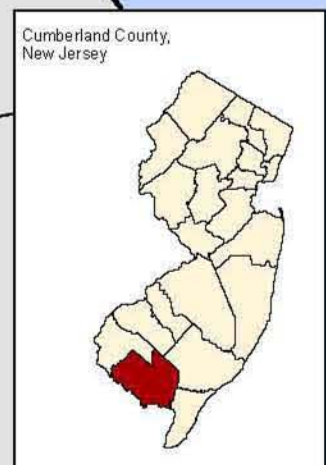


# CUMBERLAND COUNTY

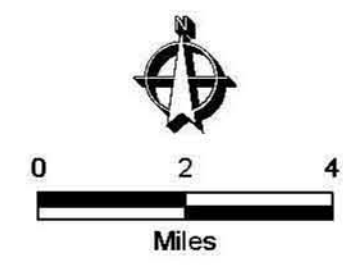
## Map 16: Project Areas, Farm Assessed, Target & Preserved Farms

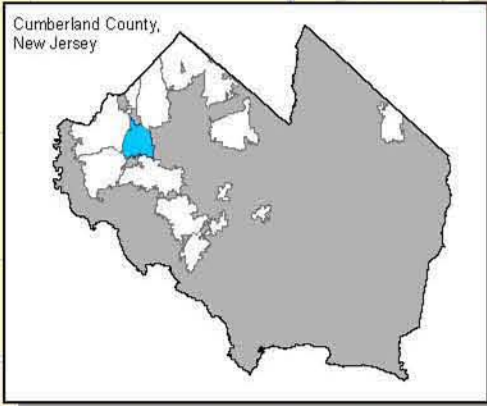


	Municipal Boundary
	2008 Project Area
	Preserved Farm
	Target Farm
	Farm Assessed
	Protected Open Space



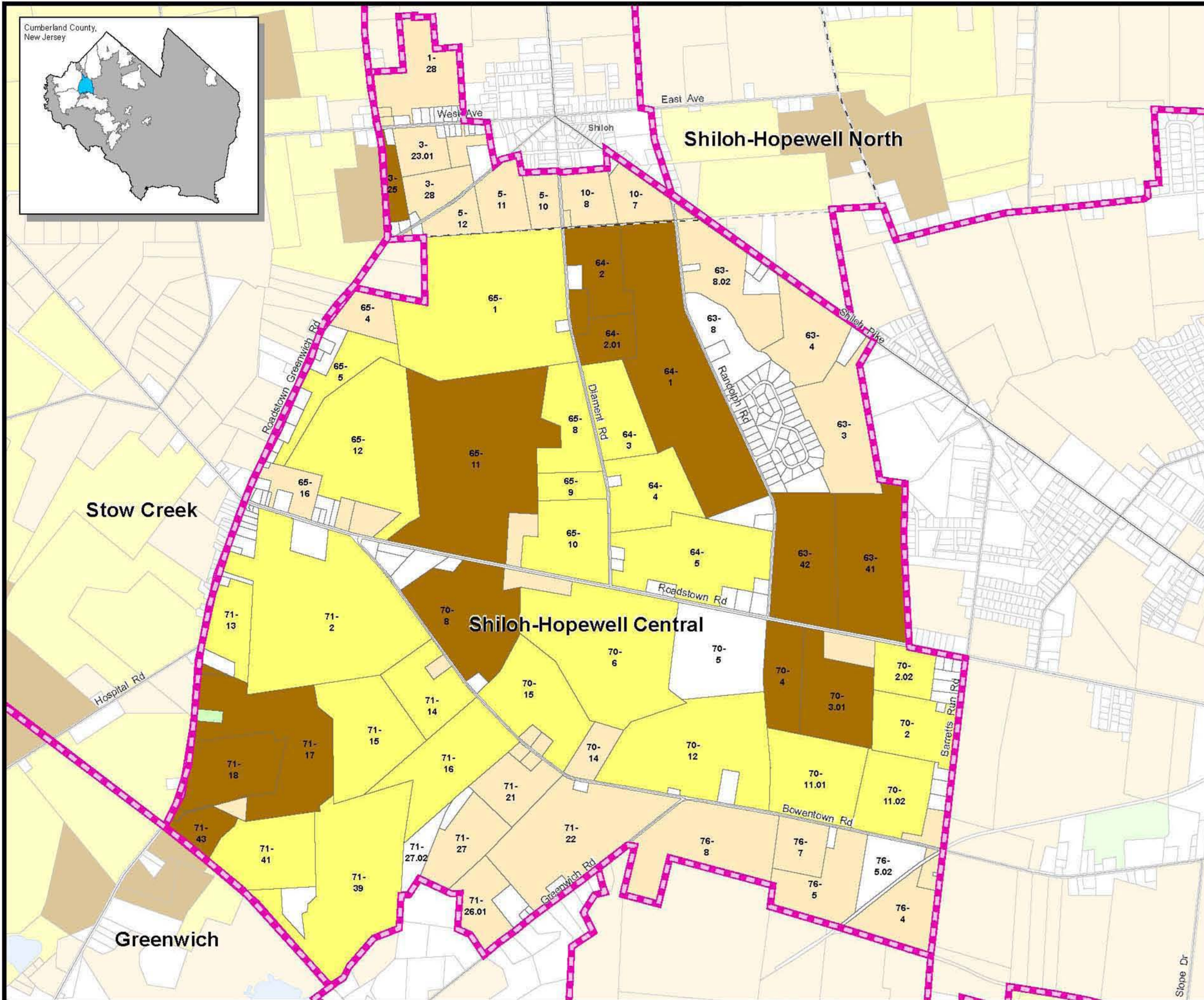
Sources: NJDEP, NJDOT, DVRPC, Cumberland Co., SADC.  
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.





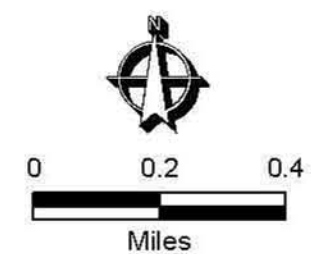
# CUMBERLAND COUNTY

## Map 17B: Shiloh - Hopewell Central Project Area



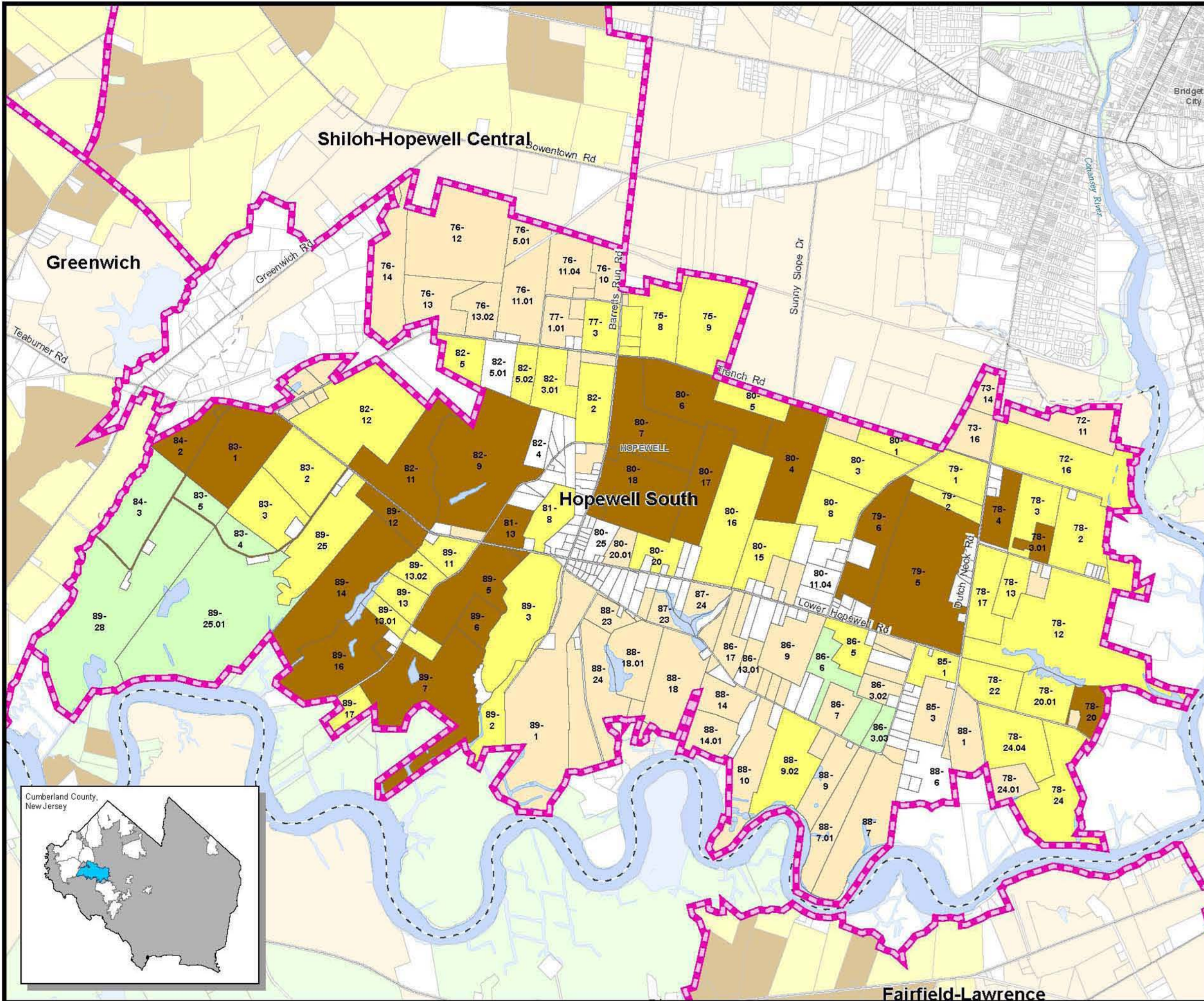
-  2008 Project Area
-  Preserved Farm
-  Target Farm
-  Farm Assessed
-  Protected Open Space
-  Water

Sources: NJDEP, NJDOT, DVRPC,  
Cumberland Co., SADC  
This map was developed using New Jersey  
Department of Environmental Protection  
Geographic Information System digital data,  
but this secondary product has not been  
verified by NJDEP and is not state-authorized.

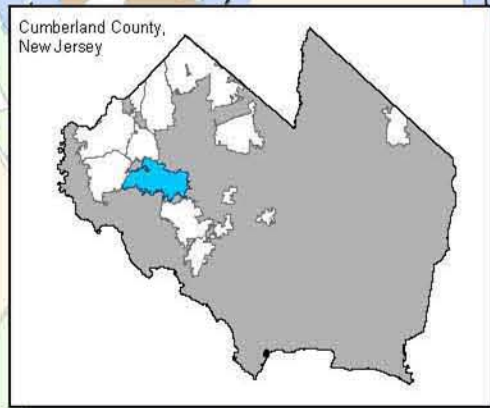


# CUMBERLAND COUNTY

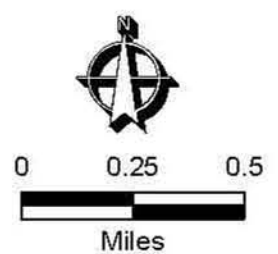
## Map 17C: Hopewell South Project Area

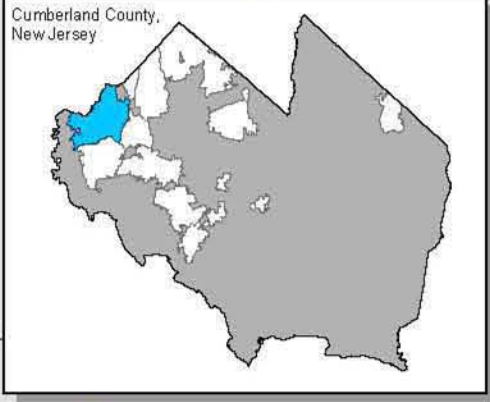


- 2008 Project Area
- Preserved Farm
- Target Farm
- Farm Assessed
- Protected Open Space
- Water



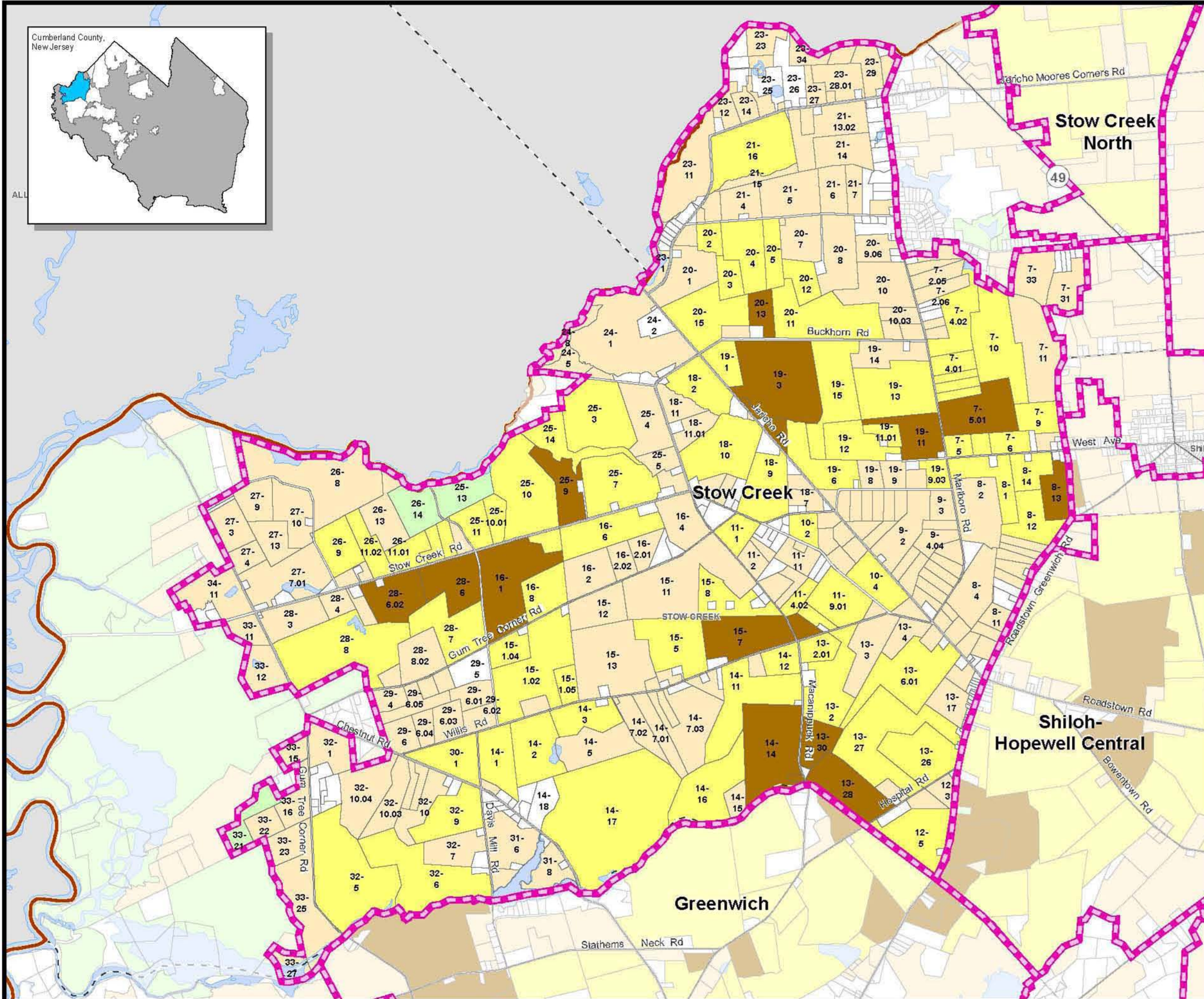
Sources: NJDEP, NJDOT, DVRPC, Cumberland Co., SAD C.  
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.





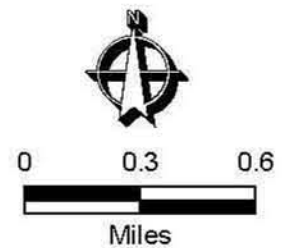
# CUMBERLAND COUNTY

## Map 17D: Stow Creek Project Area



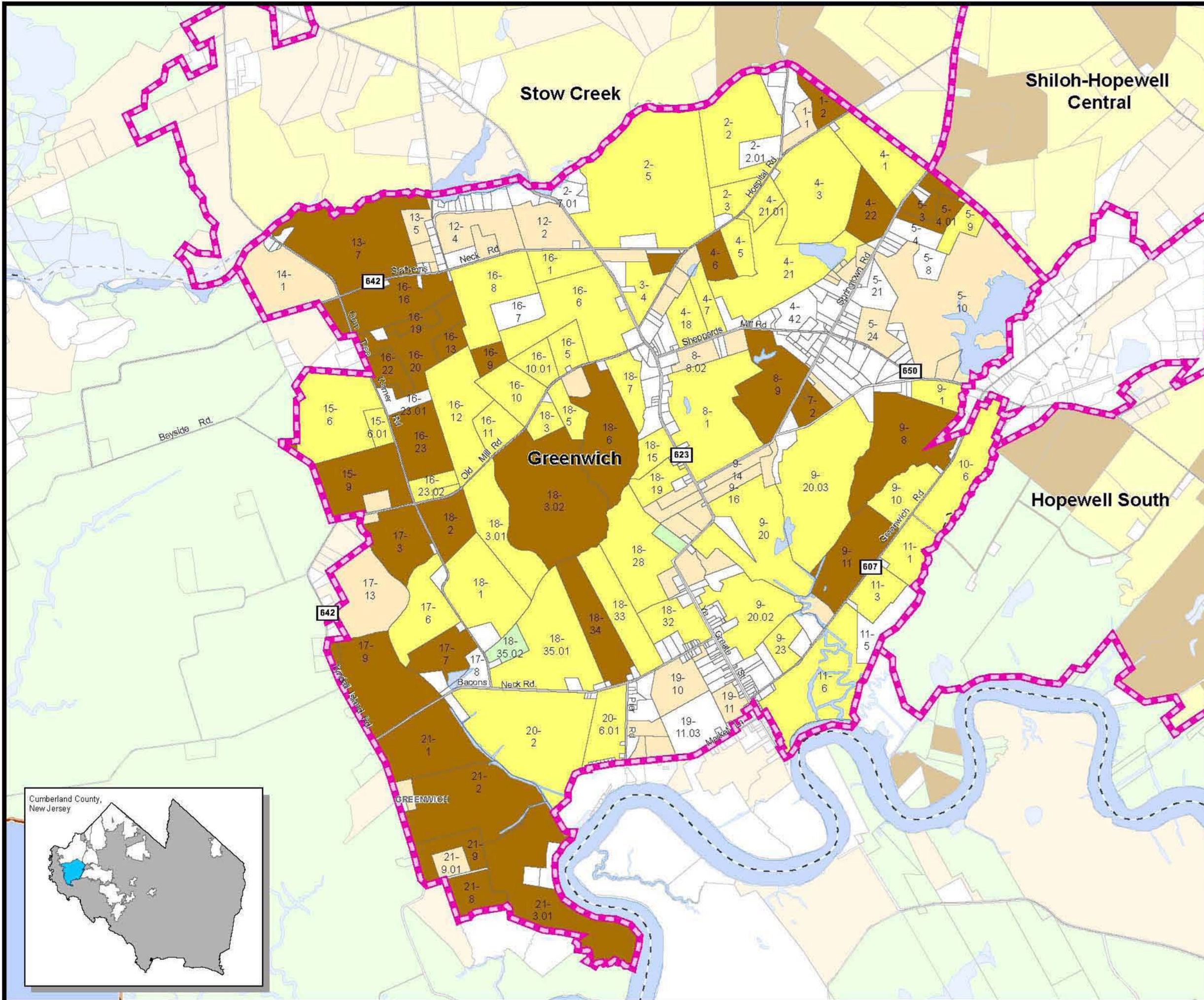
-  2008 Project Area
-  Preserved Farm
-  Target Farm
-  Farm Assessed
-  Protected Open Space
-  Water

Sources: NJDEP, NJDOT, DVRPC, Cumberland Co., SADC.  
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.

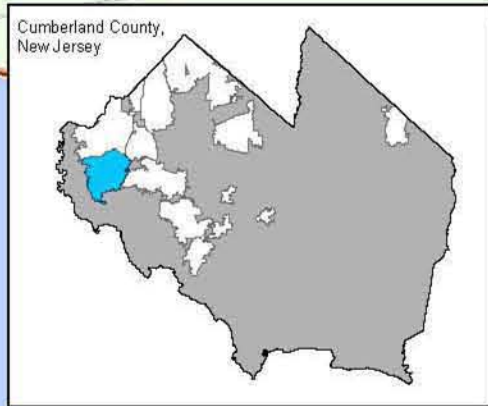


# CUMBERLAND COUNTY

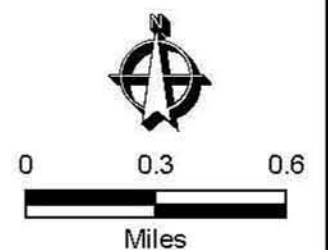
## Map 17E: Greenwich Project Area

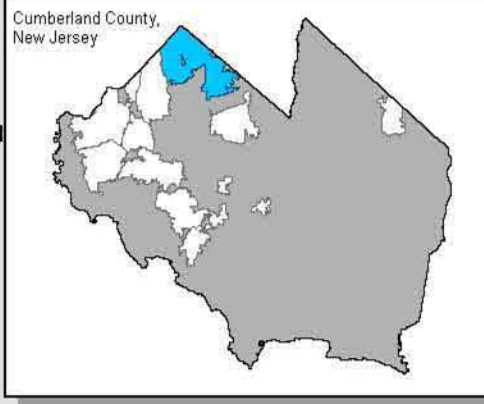


- 2008 Project Area
- Preserved Farm
- Target Farm
- Farm Assessed
- Protected Open Space
- Water



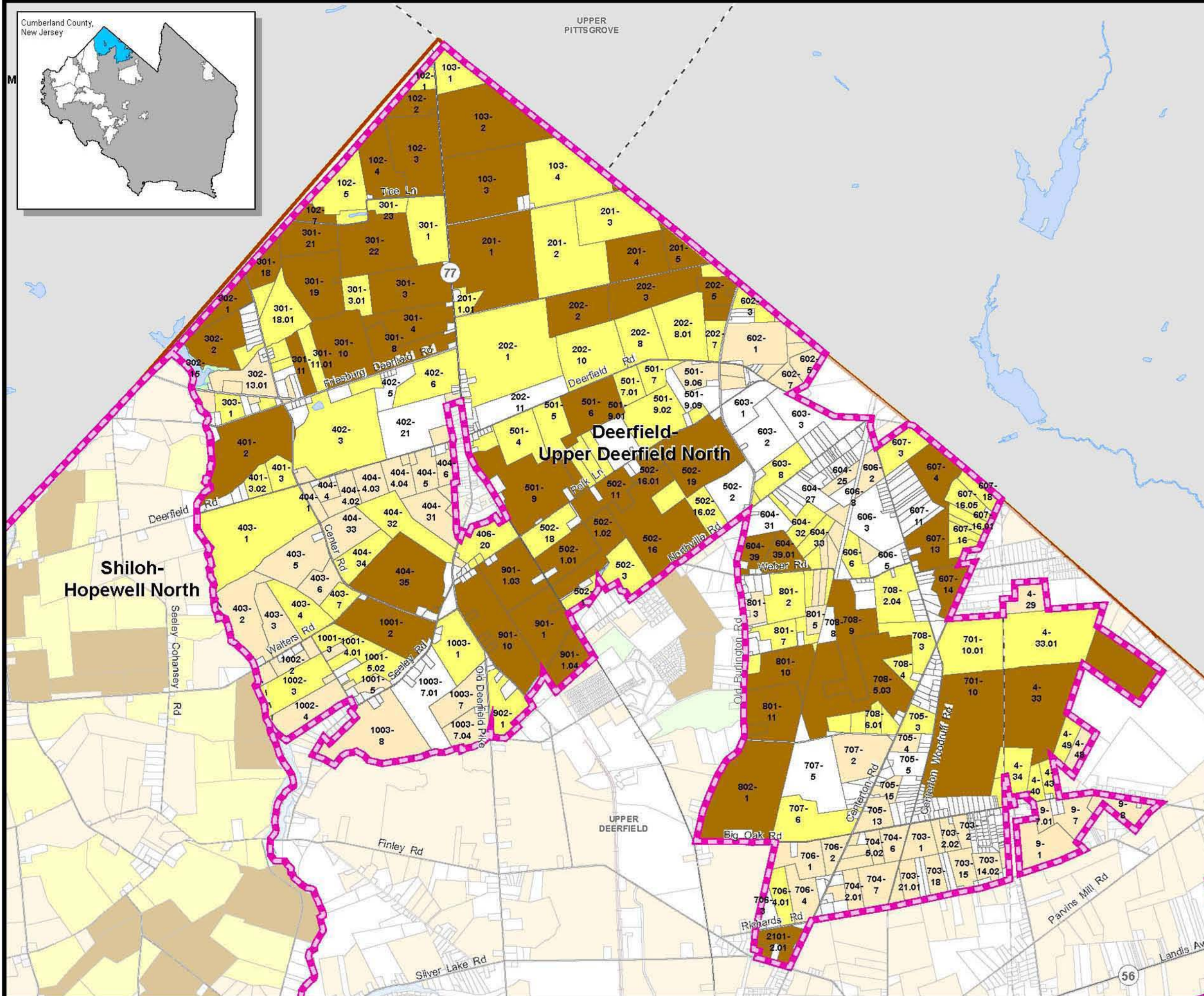
Sources: NJDEP, NJDOT, DVRPC,  
Cumberland Co., SADC.  
This map was developed using New Jersey  
Department of Environmental Protection  
Geographic Information System digital data,  
but this secondary product has not been  
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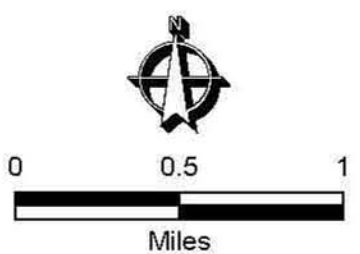
# CUMBERLAND COUNTY

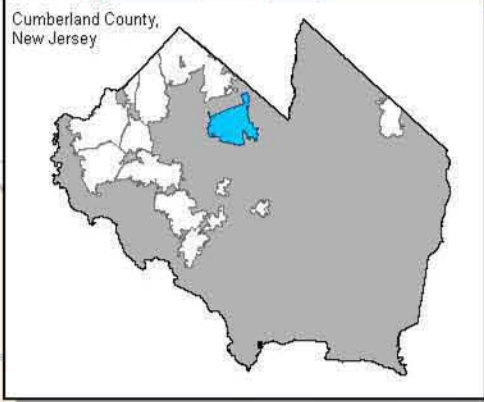
## Map 17F: Deerfield - Upper Deerfield North Project Area



-  2008 Project Area
-  Preserved Farm
-  Target Farm
-  Farm Assessed
-  Protected Open Space
-  Water

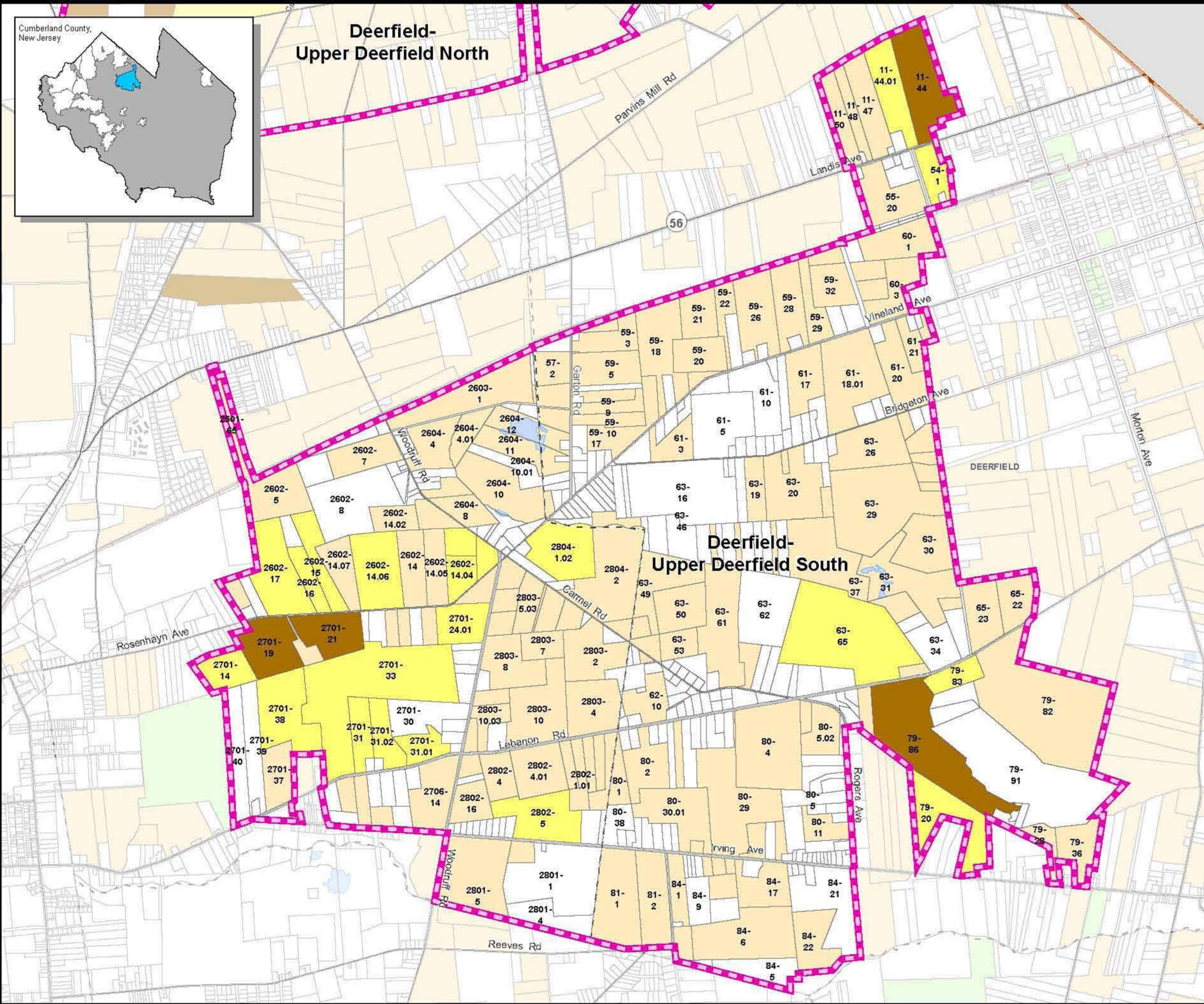
Sources: NJDEP, N.JDOT, DVRPC,  
Cumberland Co., SADC  
This map was developed using New Jersey  
Department of Environmental Protection  
Geographic Information System digital data,  
but this secondary product has not been  
verified by NJDEP and is not state-authorized.





Deerfield-  
Upper Deerfield North

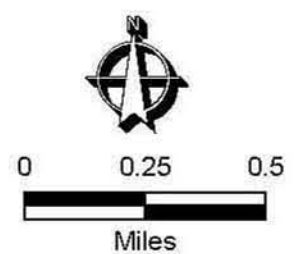
**CUMBERLAND COUNTY**  
**Map 17G:**  
**Deerfield -**  
**Upper Deerfield South**  
**Project Area**



Deerfield-  
Upper Deerfield South

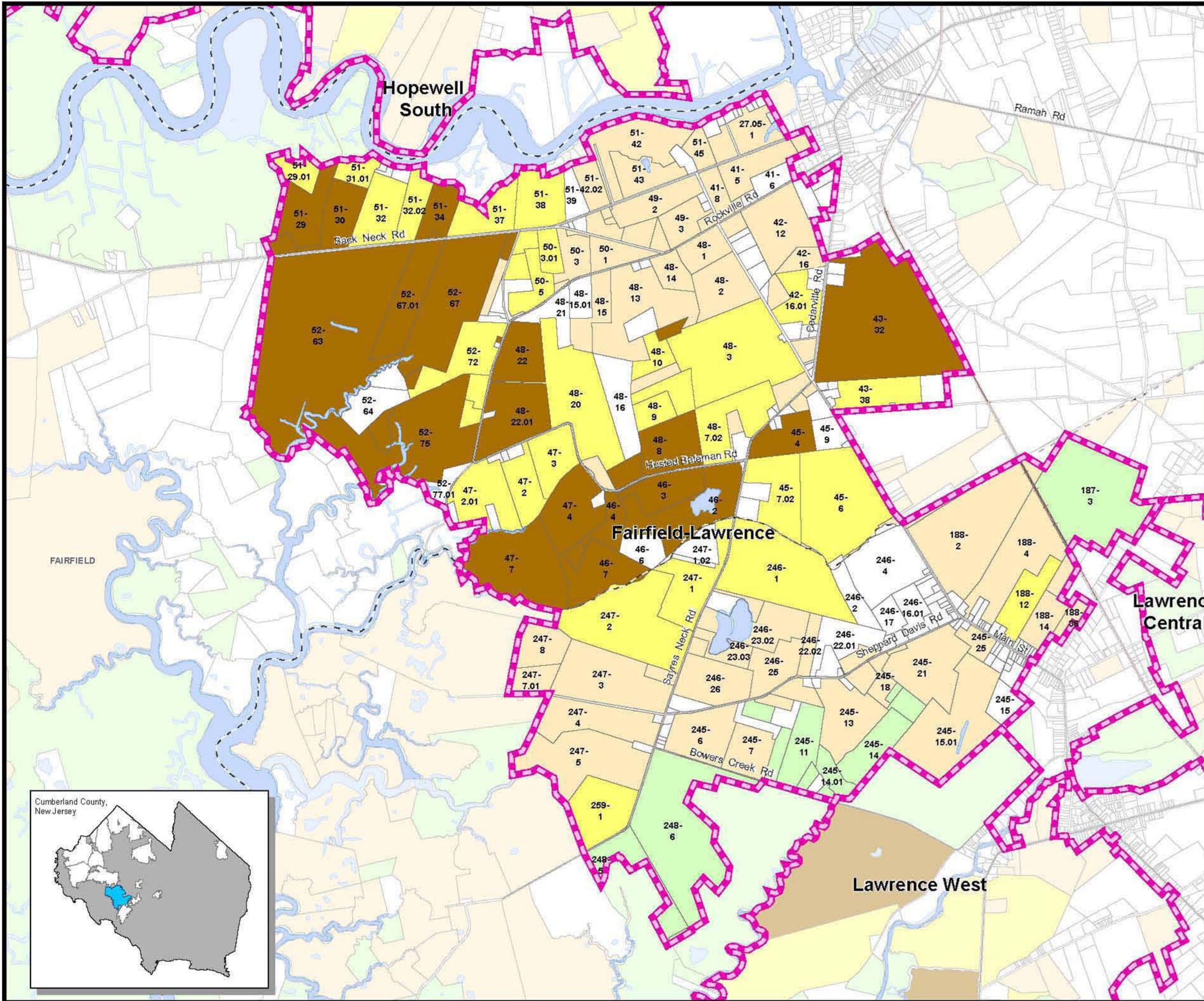
-  2008 Project Area
-  Preserved Farm
-  Target Farm
-  Farm Assessed
-  Protected Open Space
-  Water

Sources: NJDEP, NJDOT, DVRPC,  
Cumberland Co., SADC.  
This map was developed using New Jersey  
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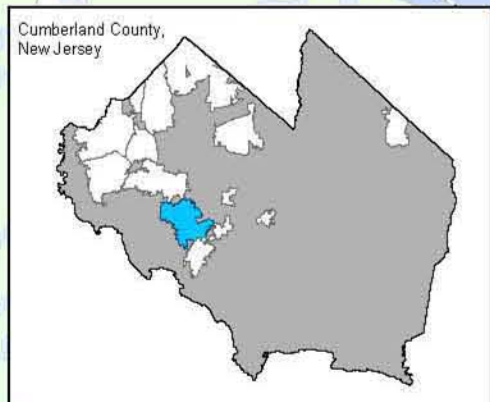


# CUMBERLAND COUNTY

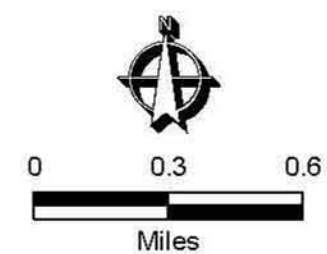
## Map 17H: Fairfield - Lawrence Project Area



- 2008 Project Area
- Preserved Farm
- Target Farm
- Farm Assessed
- Protected Open Space
- Water



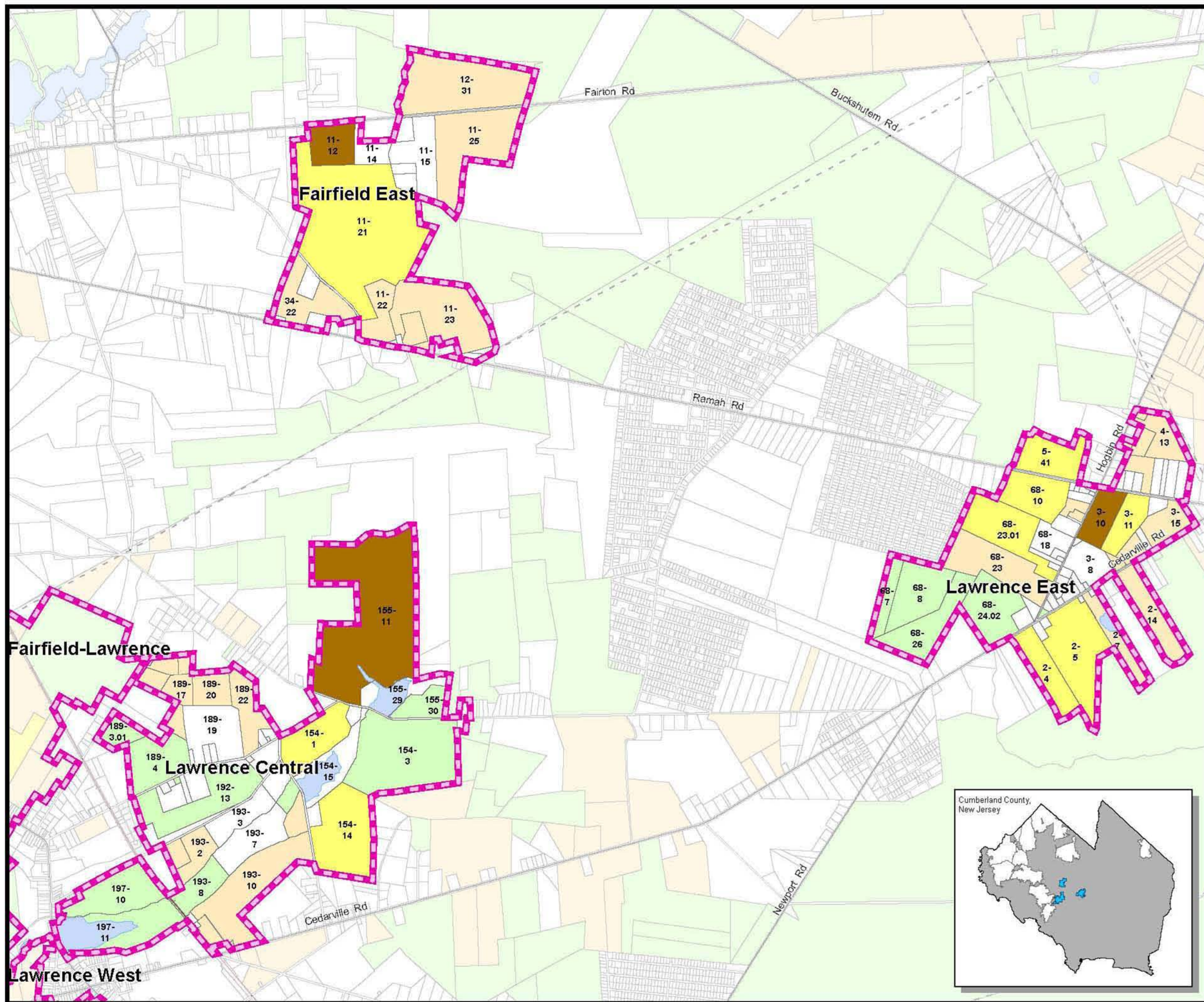
Sources: NJDEP, NJDOT, DVRPC, Cumberland Co., SADC.  
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.



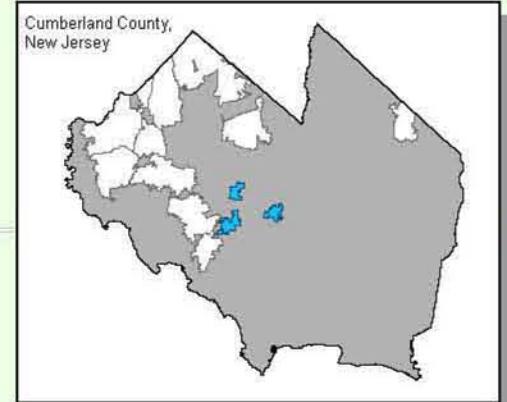


# CUMBERLAND COUNTY

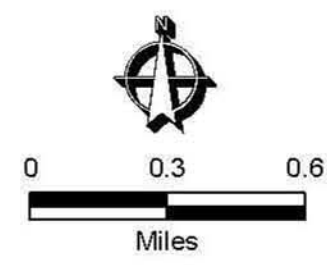
## Map 17I: Fairfield East, Lawrence Central, and Lawrence East Project Area



- 2008 Project Area
- Preserved Farm
- Target Farm
- Farm Assessed
- Protected Open Space
- Water

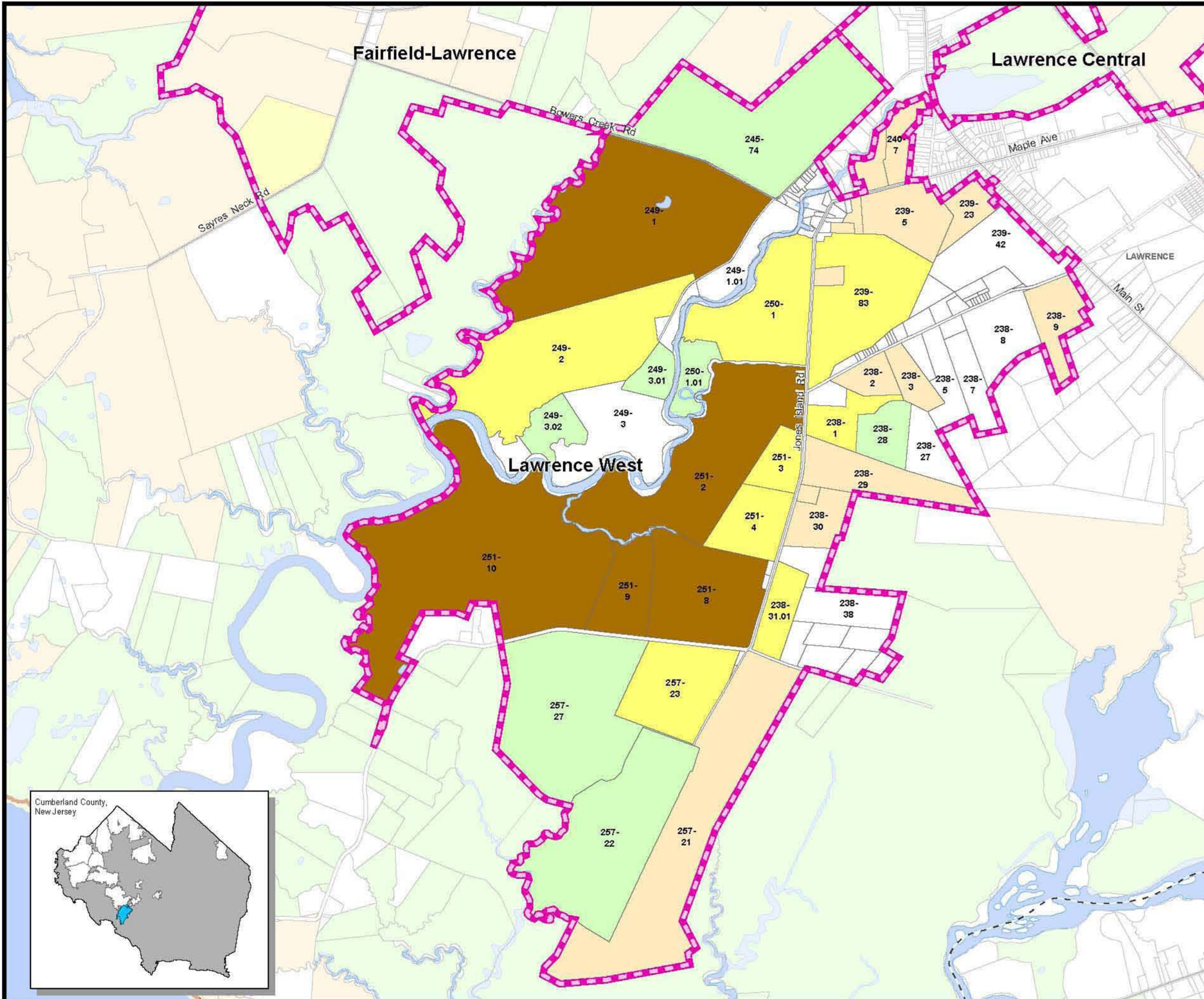


Sources: NJDEP, NJDOT, DVRPC, Cumberland Co., SADC  
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.

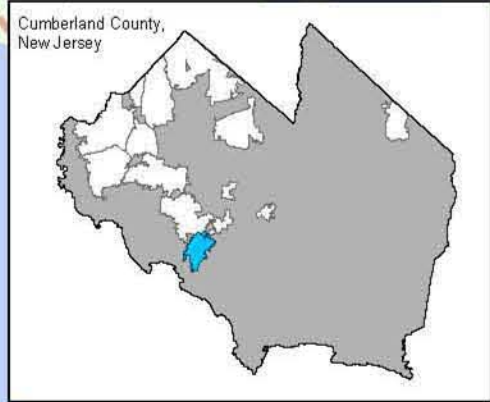


# CUMBERLAND COUNTY

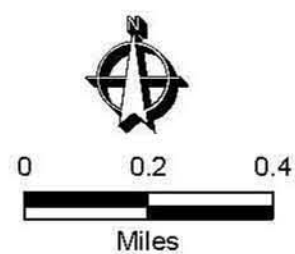
## Map 17J: Lawrence West Project Area



- 2008 Project Area
- Preserved Farm
- Target Farm
- Farm Assessed
- Protected Open Space
- Water



Sources: NJDEP, NJDOT, DVRPC, Cumberland Co., SADC.  
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# DELAWARE VALLEY REGIONAL PLANNING COMMISSION

## Publication Abstract

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**Title:** Cumberland County,  
Farmland Preservation Plan

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**Geographic Area Covered:** Cumberland County, New Jersey

**Key Words:** Agriculture, agricultural development areas (ADAs), agricultural industry, agricultural Project Areas, conservation, Cumberland County, Cumberland County Agriculture Development Board, environment, farm assessment, farm marketing, farm support businesses, farming industry, farmland, farmland preservation, food innovation, Jersey Fresh, land preservation, land use planning, Landscape Project, Natural Resource Conservation Service (NRCS), New Jersey farming, Planning Incentive Grant, State Agriculture Development Committee (SADC), threatened and endangered species

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### ABSTRACT

This publication outlines a plan for county action to preserve farmland and the agricultural industry in Cumberland County, New Jersey. The Plan describes the farming industry within the county, outlines land use planning at the state, county, and municipal levels, and compiles information on land preservation. It delineates 14 agricultural Project Areas within the county across 11 municipalities, and identifies target farms and farm parcels within those Project Areas for priority preservation. The document's contents meet the requirements of the NJ State Agriculture Development Committee for a county Farmland Preservation Plan and support application to the state for a Farmland Planning Incentive Grant for Cumberland County.

Information on Cumberland County's agricultural land base, its soils and water, the region's agricultural status, township zoning, farmland preservation options, and ideas to support local farmers and strengthen the local agricultural industry are provided through text, tables, and maps. Farmland already preserved in Cumberland County is documented, and future plans to protect farmland are outlined, including a multi-year funding plan for future farmland preservation through purchase of development easements. Cumberland County farmland preservation ranking criteria and other policies are included and described. There is extensive information on existing programs of support for farmers, including information on marketing and economic enhancements, resource management, energy conservation, and natural resource protection. Several tables of farming-related businesses in Southern New Jersey are also included.

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