

# Farmland Preservation Plan

Atlantic County, New Jersey



May 2018



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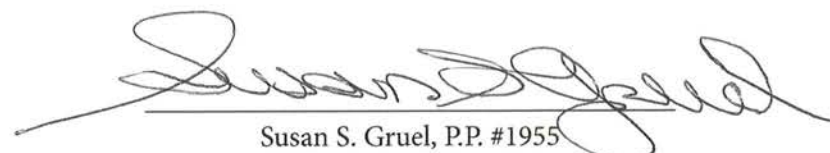
May 2018

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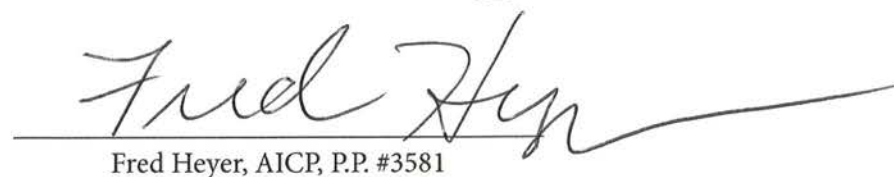
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# TABLE OF CONTENTS

## PROJECT BACKGROUND

### INTRODUCTION

- Location and Size of Agricultural Land Base*
- Soil Distribution and Types*

### I. ATLANTIC COUNTY’S AGRICULTURAL LAND BASE

- Irrigation & Water Resources*
- Statistics & Trends*

### II. ATLANTIC COUNTY’S AGRICULTURAL INDUSTRY- OVERVIEW

- Trends in Market Value of Agricultural Products Sold*
- Historical Crop/Production Trends*
- Support Services*

### III. LAND USE PLANNING CONTEXT

- State Development and Redevelopment Plan*
- New Jersey Pinelands*
- Coastal Area Facilities Review Act*
- The Atlantic County Master Plan*
- Current Land Use & Trends*
- Sewer Service Areas/Public Water Supply Service Areas*
- Municipal Master Plan and Zoning*
- Innovative Planning Techniques*
- Development Pressures and Land Values*

### IV. COUNTY FARMLAND PRESERVATION PROGRAM—OVERVIEW

- Transfer of Development Rights*
- Agricultural Development Areas*
- Permanent Preservation to Date by Program and Municipality*
- SADC Strategic Targeting Project*
- Eight Year Program*
- Coordination with Open Space Initiatives*
- Program Funding Expended to Date by Source*
- Monitoring of Preserved Farms*
- Coordination with TDR Programs*

<b>V. FUTURE FARMLAND PRESERVATION</b>	<b>1</b>	<b>34</b>
<i>Preservation Goals (1, 5 and 10 year acreage targets)</i>		34
<i>Project Area Summaries</i>	2	34
<i>Minimum Eligibility Criteria</i>	2	34
<i>County Ranking Criteria</i>	2	34
<i>County Policies Related to Farmland Preservation Applications</i>		34
<i>Funding Plan</i>	2	34
<i>Administrative Resources</i>	5	35
<i>Factors Limiting Farmland Preservation Implementation</i>	7	35
<b>VI. ECONOMIC DEVELOPMENT</b>	<b>9</b>	<b>35</b>
<i>Consistency with NJ Department of Agriculture Economic Strategies and Other Regional Plans/Initiatives</i>	9	35
<i>Agricultural Industry, Retention, Expansion and Recruitment</i>	10	37
<i>Natural Resource Protection Coordination</i>	11	39
<i>Federal Farm Conservation Programs</i>		39
<b>VII. NATURAL RESOURCE CONSERVATION</b>	<b>12</b>	<b>39</b>
<i>Water Resources</i>	14	40
<i>Waste Management</i>	16	42
<i>Energy Conservation Planning</i>	18	42
<i>Outreach</i>	18	43
<i>Existing Agricultural Industry Support</i>	20	43
<b>VIII. SUSTAINABILITY OF ATLANTIC COUNTY’S AGRICULTURE INDUSTRY</b>	<b>24</b>	<b>43</b>
<i>Agricultural Education, Outreach and Sustainability</i>	27	44
<i>Atlantic County’s Vision for Farmland Preservation</i>		45



**TABLES**

**PROJECT BACKGROUND** 1

**INTRODUCTION** 2

**I. ATLANTIC COUNTY’S AGRICULTURAL LAND BASE** 2

*Table 1.1 Farmland per Municipality* 2

*Table 1.2 Atlantic County Soils* 4

*Table 1.3 Active Farmland by Soil Type* 4

*Table 1.4 Prime Farmland in Atlantic County* 4

*Table 1.5 Farmland of State Importance in Atlantic County* 5

*Table 1.6 Farmland of Unique Importance in Atlantic County* 5

*Table 1.7 Farmland of Local Importance in Atlantic County* 5

*Table 1.8 Not Prime Farmland in Atlantic County* 5

*Table 1.10 Agricultural Land in Atlantic County (1983-2014)* 7

*Table 1.9 Number of Irrigated Farms and Acreage from 1982-2012* 7

*Table 1.11 Farm Specifications in Atlantic County 1992-2012* 8

*Table 1.12 Atlantic County Farms by Farm Size* 8

**II. ATLANTIC COUNTY’S AGRICULTURAL INDUSTRY- OVERVIEW** 9

*Table 1.13 Market Value of Agricultural Products Sold in Atlantic County* 9

*Table 1.15 Crop Production Trends in Atlantic County from 1983-2013* 10

*Table 1.14 Blueberry Production* 10

**III. LAND USE PLANNING CONTEXT** 12

*Table 1.16 SDRP and CAFRA Planning Areas* 16

*Table 1.17 Land Use Land Cover (1986 to 2012)* 20

*Table 1.18 Farmland and Sewer Service Area* 20

*Table 1.19 Municipal Zoning Analysis of Agriculture as a Permitted Use* 25

*Table 1.20 Farmland Preservation Since 1989* 27

**IV. COUNTY FARMLAND PRESERVATION PROGRAM—OVERVIEW** 28

*Table 1.21 Preserved Farmland – County Easements* 31

*Table 1.23 Total Acres Preserved by PDCs* 32

*Table 1.22 Farmland Preserved by SADC through Direct Purchase* 32

*Table 1.24 Determining Base Value of Development Easement in Pinelands Area* 33

**VII. NATURAL RESOURCE CONSERVATION** 39

*Table 1.25 Comparison of Planning Yields to Water Demand in the Southeastern New Jersey Study Area* 40

**VIII. SUSTAINABILITY OF ATLANTIC COUNTY’S AGRICULTURE INDUSTRY** 43

*Table 1.26 Implementation Matrix* 46

**MAPS**

**I. ATLANTIC COUNTY’S AGRICULTURAL LAND BASE** 2

*Existing Farmland* 3

*Soils Pertaining to Farming Operations* 6

**III. LAND USE PLANNING CONTEXT** 12

*State Development & Redevelopment Plan* 13

*Pinelands Management Areas* 15

*Coastal Area Facilities Review Act Management Areas* 17

*County Regions* 19

*Land Use Land Cover* 21

*Loss of Agriculture Lands (1986-2012)* 22

*Preserved Open Space* 23

*Municipal Zoning Analysis Relating to Agriculture as a Permitted Use* 26

**IV. COUNTY FARMLAND PRESERVATION PROGRAM—OVERVIEW** 28

*Preserved Farmland* 29

*Agriculture Development Areas* 30





*Farmland Preservation Plan*





## PROJECT BACKGROUND

The 2017 Atlantic County Master Plan, Farmland Preservation Plan, and Open Space and Recreation Plan are updates to documents that are more than a decade old. As part of the State's post-Sandy recovery effort, the County received a grant for planning work to prepare a Strategic Recovery Planning Report (SRPR). The SRPR was prepared by Heyer Gruel and Associates and submitted to the County in January 2015. One of the main recommendations in the report is to update the County Master Plan and other planning documents. In order to carry out this recommendation, the County received a second Post-Sandy Planning Assistance Grant. A team comprising Heyer Gruel and Associates and Michael Baker International was selected to prepare the new Plans.

As part of the development of the County Master Plan, Farmland Preservation Plan, and Open Space and Recreation Plan, several meetings were conducted to obtain input from stakeholders and County residents.

Shortly after the inception of the plan development process, a meeting was held on the morning of March 24, 2016 at the Anthony Canale Training Center in Egg Harbor Township. County Planning Staff, municipal planners and planning consultants, and representatives from the Atlantic County Utilities Authority (ACUA), the Atlantic County Investment Authority (ACIA), the Casino Reinvestment Development Authority (CRDA), and other agencies were invited and in attendance. This meeting offered the consultant team the opportunity to present the scope of the project and background information. A lively and productive question and comment session provided a strong base from which to build the planning documents.

A second meeting was conducted at the Anthony Canale Training Center on the evening of July 14, 2016 to present draft information, field questions, and take comments from members of the public. This meeting was advertised digitally and in print by the County, and was well attended. Several elected officials, County Staff, and a number of residents were on hand to participate. Recommendations and comments presented by attendees at the meeting were incorporated into the drafting of the plan goals, objectives, and strategies.

On January 18, 2017, a working draft of all three plan documents was provided to the County for circulation, review, and comment. The plan was sent to representatives of each constituent municipality, relevant state and regional planning entities including the State Agriculture Development Board, The Pinelands Commission, and the Department of Community Affairs. Comments were solicited and accepted until February 15, 2017. A number of constructive comments were submitted to the consultant team and subsequently incorporated into the final versions of the plan documents.



## INTRODUCTION

Atlantic County was formed from the eastern part of Gloucester County in 1837. It is located in southeastern New Jersey along the Atlantic Coast, approximately 100 miles south of New York and 60 miles east of Philadelphia. Throughout history, its proximity to major urban centers has influenced its physical and economic development as tourism and service industries have dominated the eastern part of the County.

In western portions of the County, the effects of increased residential and commercial development are evident. However, the rural character of this area has remained relatively intact. Here, Atlantic County's agriculture industry plays an integral role in the local economy as area farms serve a worldwide market.

This Plan will provide a comprehensive study of agriculture in Atlantic County, in an effort to explore ways in which to preserve and enhance this important industry. This Comprehensive Farmland Preservation Plan will explore the history of agriculture in Atlantic County, its role in the area's economy, and how today's actions will ensure its future viability.

This Plan is prepared in accordance with requirements set forth by the State Agriculture Development Committee (SADC). Its format is based on the SADC's "Guidelines for Developing County Comprehensive Farmland Preservation Plans", dated December 14, 2006.



Hammonton

## I. ATLANTIC COUNTY'S AGRICULTURAL LAND BASE

Several sources provide information regarding Atlantic County's agricultural statistics. The United States Department of Agriculture Census of Agriculture utilizes a surveyed sample of the County's farmland owners and operators. Another source, Atlantic County tax data is based upon information provided by landowners on farmland assessment forms, which represent their agricultural operations. The difference in methodologies makes it impractical to compare the data from one source to another, though each source on its own provides valuable information regarding agriculture in Atlantic County.

### Location and Size of Agricultural Land Base

According to the 2014 municipal tax records, there are approximately 40,500 acres of farmland in the County with the majority of farmland being located in the western portion of the County. This area consists of Mullica Township, Hammonton, Folsom, Buena Borough and Buena Vista. Additional farmland is located in Hamilton, Estell Manor, Egg Harbor Township, Corbin City and Weymouth. The following map and table below details the location and the number acres of farmland per municipality in the County.

Municipality	Acreage
Buena Borough	2,478
Buena Vista Township	4,690
Corbin City	184
Egg Harbor Township	3,510
Estell Manor City	4,596
Folsom Borough	905
Galloway Township	4,470
Hamilton Township	6,020
Hammonton Town	7,033
Linwood City	39
Mullica Township	6,410
Northfield City	7
Port Republic	82
Weymouth township	88
<b>Total</b>	<b>40,512*</b>
<i>Source: 2014 Tax Assessment Records</i>	
<i>*All acreages were calculated using GIS</i>	

### Soil Distribution and Types

Knowledge of soil types, characteristics, and their geographic distribution can inform planning and policy processes. It can also influence the smart growth and development of a community. Data on soil depth, permeability, water table and other

physical properties are useful when determining the suitability of soils for foundation construction, location of septic fields, landscaping, and construction of roads, athletic fields, and parks. This soil data in addition to the Important Agricultural Soils Classifications and the County Soils Surveys are maintained by the USDA Natural Resources Conservation Service.

An important consideration in farmland preservation is the quality of soils for agricultural production. The major advantages of prime agricultural soils are their fertility and lack of limitations for crop production purposes. Prime soils will support almost any type of agriculture common to this region. Soil limitations include steep slopes, extreme stoniness or wetness, shallow depth to bedrock and poor percolation properties, all of which may hinder cultivation. Prime agricultural soils produce superior crop yield on a consistent basis due to their high fertility content, when measured against those soils not rated as prime.

Atlantic County soils have a low to high content of organic matter. As a result, the soils require some maintenance for continued agricultural use. In managing soils for crop production, fertility must be maintained, drainage must be provided, and erosion must be controlled. With fertility management practices, the farmland soil is highly enriched. In addition, application of lime and fertilizer is required for all farmland in the county.

The soil data provided in this report is provided by the Natural Resource Conservation Service (NRCS) of the United States Department of Agriculture (USDA), which started conducting national soil surveys in 1935 and continues today.

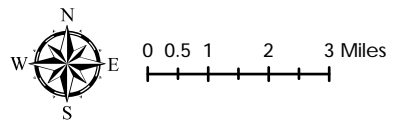
In the County, there are 5 primary soil associations, the Downer-Hammonton-Sassafras Association, Sassafras-Auro-Woodstown Association, Galloway-Lakehurst-Evesboro Association, Atsion-Manahawkin Muck-Mullica Association and the Transquaking Mucky Peat-Fill Land-Coastal Beach Association. These soil associations are briefly described below:

- Downer-Hammonton-Sassafras Association** is nearly level or gently sloping well drained to somewhat poorly drained soils that have loamy subsoil. This association occupies 34 percent of the County. It is about 48 percent Downer soils, 14 percent Hammonton soils, 6 percent Sassafras soils, and 32 percent minor soils. It is dominantly located in the eastern part of the County but occurs in nearly all parts of the county.
- Sassafras-Auro-Woodstown Association** is nearly level or gently sloping, well drained and moderately well drained soils that have loamy subsoil. It occupies 12 percent of the County. Its composition is about 34 percent Sassafras soils, 32 percent Aura soils, 10 percent Woodstown soils, and 24 percent minor soils. It is found in the eastern part of the County at an elevation of about 60 feet and in the western part of the county at an elevation of about 100 feet.



### Existing Farmland

 Existing Farmland



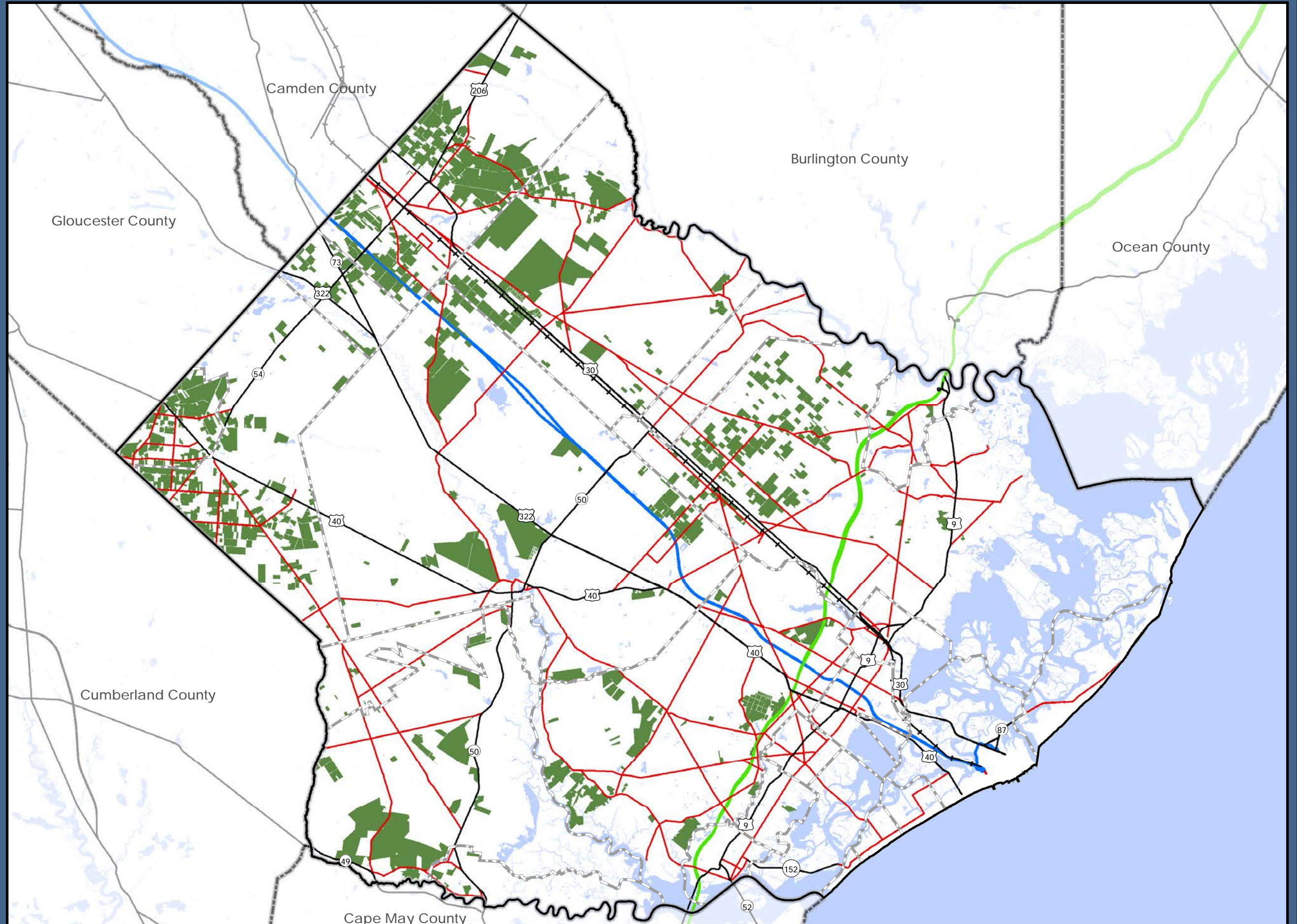
Source: NJDEP, NJGIN, NJOGIS, NJDOT, Atlantic County Office of GIS

This map is for demonstration purposes only and was not developed in accordance with National Map Accuracy Standards. Any use of this product with respect to accuracy and precision shall be the sole responsibility of the user. The map was developed, in part, using New Jersey Department of Environmental Protection Geographic Information System (GIS) digital data, in conjunction with the Atlantic County Office of Geographic Information Systems, but this secondary product has not been verified by NJDEP and is not state authorized.

The geodetic accuracy and precision of the GIS data contained in this map has not been developed nor verified by a professional licensed land surveyor and shall not be nor is intended to be used in matters requiring delineation and location of true ground horizontal and/or vertical controls.



HEYER GRUEL & ASSOCIATES





3. **Galloway-Lakehurst-Evesboro Association** is nearly level to gently sloping, excessively drained to somewhat poorly drained soils that have sandy subsoil. This association occupies 16 percent of the County. It has a makeup of about 33 percent Galloway soils, 25 percent Lakehurst soils, 15 percent Evesboro soils, and 27 percent minor soils. It is fairly large in areas south of the Mullica and Penny Pot Rivers and on both the east and west sides of Great Harbor River.

4. **Atsion-Manahawkin Muck-Mullica Association** is nearly level, poorly drained and very poorly drained soils that have sandy or loamy subsoil, and organic soils underlain mainly by sand. This association covers 23 percent of the County. It is made up of 31 percent Atsion, 29 Percent Manahawkin Muck, 23 percent Mullica and 17 percent minor soils.

5. **Transquaking Mucky Peat-Fill Land-Coastal Beach Association** is nearly level, poorly drained tidal flats; nearly level excessively drained sandy Fill land; and nearly level or gently sloping, excessively drained coastal beaches. This association occupies 15 percent of the county. It has a composition of 75 percent Transquaking Mucky Peat, 12 percent Fill Land, 5 percent Coastal Beach, and 8 percent minor soils.

The farmland classification prescribed by SADC identifies map units as prime farmland soils, farmland soils of statewide importance, farmland soils of unique importance, or other soils that are not suitable for agriculture. Farmland classification identifies the location and extent of most suitable soils for producing food, feed, fiber, forage, and oilseed crops. This identification is useful in the management and maintenance of the resource base that supports the productive capacity of American agriculture. Atlantic County contains soils well suited for agricultural production, including approximately 53,616.2 acres of prime farmland, 130,329.4 acres of state wide importance soils, and 127,307.6 acres of other farmable soils.

Soil Type	Acreage	Percentage
Prime Farmland	53,616.2	13.6%
Statewide Importance	130,329.4	33.2%
Unique Importance	111,901.4	28.5%
Local Importance	15,406.2	3.9%
Not Prime Farmland	46,089.4	11.7%
Water	35,537.5	9.0%
<b>Total</b>	<b>392,880.1</b>	<b>100.0%</b>

Source: NRCS SSURGO v. 12 & 9

Soil Classification	Total Acres in County	Active Farmland (Acres)	% of Active Farmland in County by Soil Category
Prime Farmland	53,616.2	8,655.4	16.1%
Statewide Importance	130,329.4	17,876.1	13.7%
Unique Importance	111,901.4	2,366.1	2.1%
Local Importance	15,406.2	1,926.3	12.5%
Not Prime Farmland	46,089.4	3,617.6	7.8%
Water	35,537.5	9,465.8	26.6%
<b>Total</b>	<b>392,880.1</b>	<b>43,907.3</b>	<b>11.2%</b>

Source: NRCS SSURGO v. 12 & 9

The following table compares the total acreage of soil in the County to that of the active farmland within the County. The active farmland was derived from using the NJDEP's 2012 Land Use Land Cover Classification. Only 13.3% of the prime farmland soils were being used to farm in 2012, while 8.7% of soils of statewide importance were being used to farm in 2012.

*SADC Prime Farmland Soil*

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. SADC Prime Farmland Soils include all those soils in the USDA Land Capability Class I and selected soils from USDA Land Capability Class II. USDA Class I soils have slight limitations that restrict their use. USDA Class II soils have moderate limitations that reduce the choice of plants or require moderate conservation practices.

The criteria for prime farmland designation include: an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges from 0 to 6%.

According to the NRCS, some areas of prime farmland may require measures that overcome a hazard or limitation, such as flooding, wetness, and drought. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

Table 1.4 indicates the SADC Prime Farmland Soils found in Atlantic County.

Name	Acreage	Percentage
Aura Loamy Sand, 0-5% slopes	4,000.0	7.5%
Aura Sandy Loam, 0-2% slopes	1,190.6	2.2%
Aura Sandy Loam, 2-5% slopes	12,869.3	24.0%
Aura Gravelly Sandy Loam, 2-5% slopes	31.9	0.1%
Downer Sandy Loam, 0-2% slopes	1,695.2	3.2%
Hammonton Sandy Loam, 0-2% slopes	4,477.8	8.4%
Hammonton Sandy Loam, Clayey Substratum, 0-2% slopes	631.9	1.2%
Matawan Sandy Loam, 0-5% slopes	2,418.9	4.5%
Sassafras Sandy Loam, 0-2% slopes	9,127.0	17.0%
Sassafras Sandy Loam, 2-5 slopes	12,512.6	23.3%
Woodstown Sandy Loam, 0-2% slopes	4,640.3	8.7%
Woodstown Sandy Loam, 2-5% slopes	20.8	0.0%
<b>Total</b>	<b>53,616.2</b>	<b>100.0%</b>

Source: NRCS SSURGO v. 12 & 9

*SADC Soils of Statewide Importance*

SADC Soils of Statewide Importance include those soils in the USDA Land Capability Class II and Class III that do not meet the criteria as SADC Prime Farmland Soils. USDA Class II soils have moderate limitations that reduce the choice of plants or require moderate conservation practices. Class III soils have severe limitations that reduce the choice of plants or require special conservation practices, or both. These soils can economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce yields as high as SADC Prime Farmland if conditions are favorable. Criteria for defining and delineating this land are to be determined by the appropriate State agency or agencies. In some States, additional farmlands of statewide importance may include tracts of land that have been designated for agriculture by State law.

Table 1.5 on the following page indicates the SADC Soils of Statewide Importance are found in Atlantic County.



**Unique Soils**

Unique Soils are soils other than prime farmland soils that are used for the production of specific high value food and fiber crops. These soils have the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Examples of such crops are citrus, tree nuts, olives, cranberries, and other fruits and vegetables. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It is commonly in areas where there is a special microclimate, such as the wine country in California. Table 1.6 illustrates the Unique Importance Soils found in Atlantic County.

**Soils of Local Importance**

Soils of Local Importance include those soils that are not prime or of statewide importance and are used for the production of high value food, fiber or horticultural crops. In some local areas, certain farmlands are not identified as having national or statewide importance. Where appropriate, these lands are identified by the local agency or agencies concerned as important to local agricultural production. These may also include tracts of land that have been designated for agriculture by local ordinance. The only one type of soil that meets the criteria of local importance in the County can be found in Table 1.7.

**Not Prime Farmland Soils**

Not Prime Farmland Soils include those soils that are not prime farmland, of statewide importance, unique, or of local importance. These soils lack the physical and chemical characteristics which allow for agricultural crops to thrive. Table 1.8 illustrates the SADC Soils of Not Prime Farmland.

*Table 1.5 Farmland of State Importance in Atlantic County*

Name	Acreage	Percentage
Aura Variant Loamy Sand, 0-5% slopes	504.5	0.4%
Downer Loamy Sandy, 0-5% slopes	61,718.5	47.4%
Fallsington Sandy Loams, 0-2% slopes, Northern Coastal Plain*	40.4	0.0%
Fort Mott Sand, 0-5% slopes	3,005.7	2.3%
Galloway Loamy Sand, 0-5% slopes	24,300.7	18.6%
Galloway Loamy Sand, Clayey Substratum, 0-5% slopes	4,736.4	3.6%
Hammonton Loamy Sand, 0-5% slopes	12,459.4	9.6%
Hammonton Loamy Sand, Clayey Substratum, 0-2% slopes	833.9	0.6%
Mullica Sandy Loam, 0-2% slopes*	22,729.9	17.4%
<b>Total</b>	<b>130,329.4</b>	<b>100.0%</b>

Source: NRCS SSURGO v. 12 & 9

*Table 1.6 Farmland of Unique Importance in Atlantic County*

Name	Acreage	Percentage
Appoquinimink-Transquaking-Mispiration Complex, 0-1% slopes	1,180.0	1.1%
Atsion Sand, 0-2% slopes	28,893.6	25.8%
Atsion-Berryland Sands, 0-2% slopes, rarely flooded	2,230.9	2.0%
Berryland Sand, 0-2% slopes, rarely flooded	11,734.9	10.5%
Berryland and Mullica Soils, 0-2% slopes, Occasionally Flooded	152.0	0.1%
Manahawkin Muck, 0-2% slopes, frequently flooded	23,899.6	21.4%
Transquaking Mucky Peat, 0-1% slopes, very frequently flooded	43,810.3	39.2%
<b>Total</b>	<b>111,901.4</b>	<b>100.0%</b>

Source: NRCS SSURGO v. 12 & 9

*Table 1.7 Farmland of Local Importance in Atlantic County*

Name	Acreage	Percentage
Evesboro Sand, 0-5% slopes	15,406.2	100.0%

Source: NRCS SSURGO v. 12 & 9

*Table 1.8 Not Prime Farmland in Atlantic County*

Name	Acreage	Percentage
Berryland Sand, 0-2% slopes, frequently flooded	2,232.4	4.8%
Evesboro Sand, Clayey Substratum, 0-5% slopes	473.0	1.0%
Hooksan-Urban Land Complex, 0-10% slopes, rarely flooded	2,928.3	6.4%
Lakehurst Sand, 0-5% slopes	16,882.0	36.6%
Lakewood Sand, 0-5% slopes	10,271.4	22.3%
Lakewood Sand, 5-10% slopes	520.7	1.1%
Pits, Sand & Gravel	3,305.9	7.2%
Psammets, 0-3% slopes	2,623.2	5.7%
Psammaquents, Sulfidic Substratum, 0-3% slopes, frequently flooded	6,656.4	14.4%
Udorthents, Refuse Substratum, 0-8% slopes	196.2	0.4%
<b>Total</b>	<b>46,089.4</b>	<b>100.0%</b>

Source: NRCS SSURGO v. 12 & 9

**Irrigation & Water Resources**

Atlantic County communities rely on both surface and ground water supply sources for their water needs. Surface water supplies are derived from various reservoirs, lakes and streams situated throughout the County, while subsurface sources are obtained from the unconfined Kirkwood-Cohansey and the underlying Atlantic City 800-Foot Sands aquifer systems.

The Kirkwood-Cohansey and Atlantic City 800-Foot Sands aquifers are the major water supply sources for the County. The Kirkwood-Cohansey aquifer is a shallow, unconfined formation consisting of sands and gravel that quickly respond to recharge influxes from surface precipitation. This response, in conjunction with the hydraulics of the formation, greatly impacts the Great Egg Harbor River and Mullica River watersheds that overlay this aquifer. Within the County, the thickness of the Kirkwood-Cohansey is greatest along the shoreline and thins out as you approach the western portion of the state.

The Atlantic City 800-Foot Sands aquifer underlies the Kirkwood-Cohansey formation but is separated by a massive confining clay layer that can be as thick as 400 feet below parts of the Atlantic City area. This aquifer is composed of sands, gravel and fragmented shell materials. It is also the predominant source of water for public wells pumping more than 1.0 MGD along the barrier island communities, while lower yielding municipal wells are situated within western portions of the County.

Concerns have arisen, due to excessive pumping from these aquifers, regarding saltwater intrusion, aquifer contamination and reductions in stream flows have resulted. Surface water and surface elevations fluctuate in response to changes in the Kirkwood-Cohansey's groundwater table. Such impacts can negatively affect water quality by reducing the amount of water available to dilute dissolved solids and sustain biological components within the ecosystem

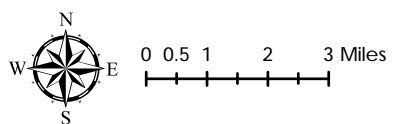
Groundwater withdrawals from the Kirkwood-Cohansey are primarily residential and agricultural wells. Agricultural use can raise the withdrawal rate from the aquifer by a factor of 300 percent over the domestic use. The combination of increased development activities (resulting in increased impervious surface), installation of sewers, and an increase in agricultural uses has a cumulative effect of reducing stream flows. Pumping from the water table reduces groundwater elevations which in turn reduces surface water elevation and flow rates. Withdrawals during summer months when there is higher demand must be closely monitored for potential impacts resulting from reduced stream flows. During the summer and fall seasons, evapotranspiration also significantly reduces the water surface elevations of water bodies.

The primary concern pertaining to the Atlantic City 800-Foot Sands is the potential for the saltwater front to progress further inland and adversely impact the potable water supply. Excessive pumping from this aquifer has created a regional cone of depression that extends from Ocean County to Cape May County, and is centered near Absecon



# Soils Pertaining to Farming Operations

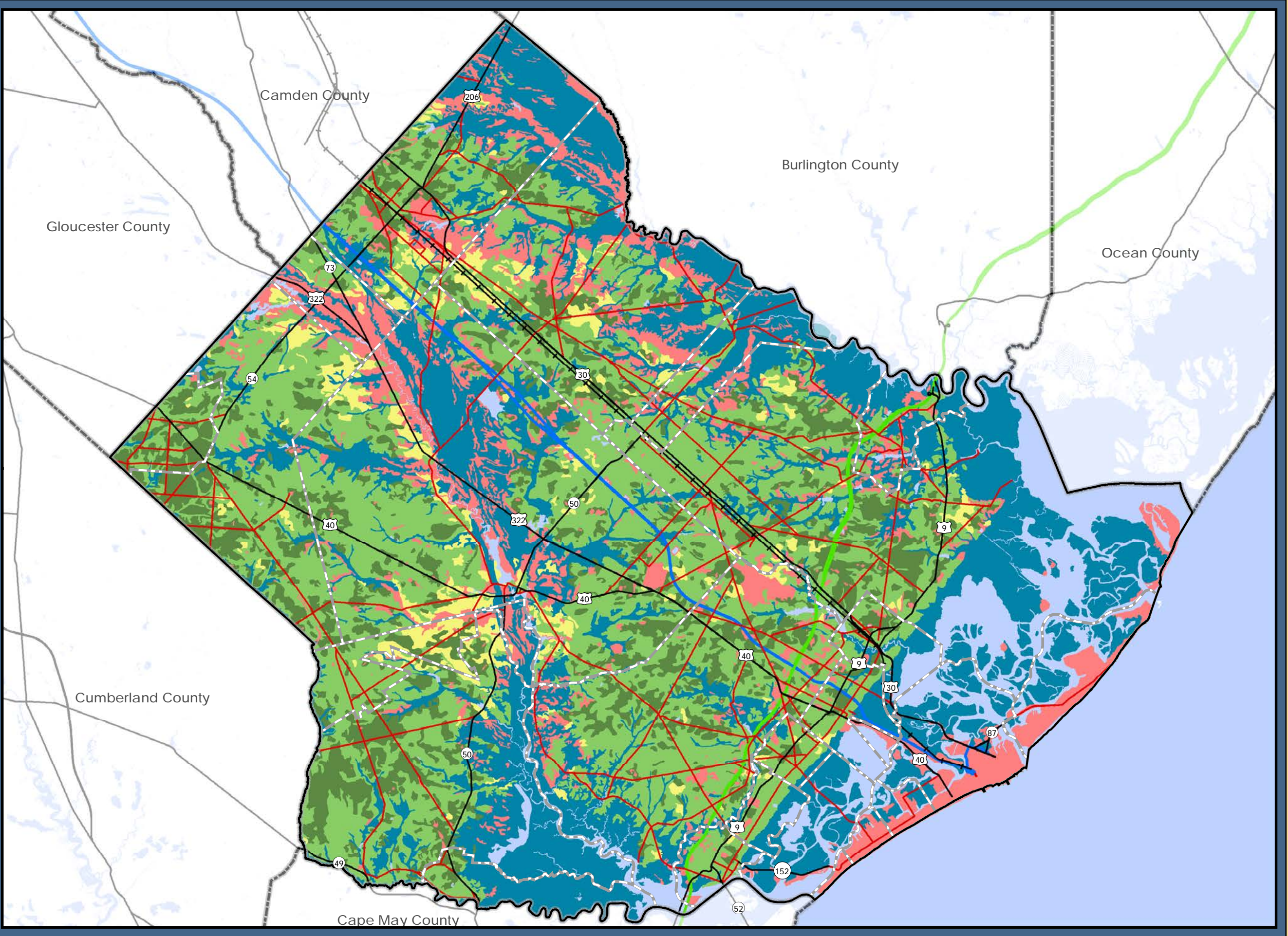
- Farmland Soils**
- All Areas Prime Farmland
  - Farmland of Statewide Importance
  - Farmland of Local Importance
  - Farmland of Unique Importance
  - Not Prime Farmland
  - Water



Source: NJDEP, NJGIN, NJOGIS, NJDOT, Atlantic County Office of GIS

This map is for demonstration purposes only and was not developed in accordance with National Map Accuracy Standards. Any use of this product with respect to accuracy and precision shall be the sole responsibility of the user. The map was developed, in part, using New Jersey Department of Environmental Protection Geographic Information System (GIS) digital data, in conjunction with the Atlantic County Office of Geographic Information Systems, but this secondary product has not been verified by NJDEP and is not state authorized.

The geodetic accuracy and precision of the GIS data contained in this map has not been developed nor verified by a professional licensed land surveyor and shall not be nor is intended to be used in matters requiring delineation and location of true ground horizontal and/or vertical controls.





Island. The cone is a representation of water pressures within the regional area. The pressure levels are greatest near Absecon Island, being approximately 110 feet below sea level. They gradually rise concentrically to sea level midway within the County. Prior to development within the County, groundwater flows were directed seaward; flows have now been redirected inland due to reductions in the freshwater pressure head, which in turn advances the saltwater front.

Groundwater models prepared by the United States Geological Survey (USGS) show the potential exists for the continued decline of water pressures in the Atlantic County region.

Over the long term, these declining pressure levels will advance the saltwater front into the aquifer. According to information obtained from wells located on Absecon Island, the saltwater front is presently situated 10 miles offshore. Mainland wells should not be immediately impacted through the study year of 2040. Although saltwater intrusion is a slow process, there is evidence that the aquifer is not adequately recharging itself to offset the advancement of the saltwater front.

There are other minor aquifer formations (such as the confined Rio Grande and Piney Point aquifers) that underlie Atlantic County. The Rio Grande is a primary supply source for Cape May County while the Piney Point Aquifer is a significant source within Buena Borough, several barrier island communities in Ocean County, and Dover, Delaware.

However, within Atlantic County these formations generally do not yield sufficient amounts of potable water necessary to sustain a public water system.

Surface water withdrawals within the County are primarily obtained from two reservoirs operated by the Atlantic City Municipal Utilities Authority (ACMUA). These facilities are identified as Kuehnle Pond and Doughty Pond, both of which are located along branches of the Absecon Creek. Water from the Mullica River and its tributaries are also significant irrigation supply sources for agricultural operations.

**Irrigation Activities in Atlantic County**

Although natural precipitation can provide some water for agricultural operations, it does not provide a consistent supply of water to sustain farming activities. As a result, farmers must adopt irrigation practices based on their farm’s location and surrounding environment.

The most common sources of irrigation include:

- Drilling wells and pumping water from the ground. This method is regarded as the most popular technique, but is also the costliest.
- Farm pond irrigation method. This technique captures surface water from the surrounding area. In areas where the water table is very close to the surface, it taps into the groundwater.

- Pumping water from a stream. Farmers may adopt this method if their farmland is close to streams, lakes and rivers.

Farmers can then choose between different methods of irrigation, including sprinkler or drip irrigation systems. Generally, drip irrigation systems are thought to be the more efficient method. The table below represents the number of farms and acres irrigated within the County, based on US Census of Agriculture data.

As displayed in Table 1.9, the number of irrigated farms has been steadily decreasing since 1987. In 2012, the number of irrigated farms reached its lowest number over the past 30 years. A similar trend is seen in the acreage of irrigated farms. Since 1997, the number of irrigated acres has also fluctuated; an increase of irrigated acres occurred in 2002. However, since 2002, acreage has decreased by over 1,100 acres.

**Statistics & Trends**

According to the NJ Farmland Assessment Data, the total acreage of farmland in the County has fluctuated over the past 10+ years. The Chart 1.1 on the following page and Table 1.10 (below) show the total acreage of agriculture along with the acreage of cropland harvested, cropland pastured, permanent pasture, and total woodland acreage. Since 2004, the total acreage of agricultural land has decreased, dropping to a low of 35,670 acres in 2013. For the most part, cropland harvested has also remained relatively constant, averaging around 18,000 acres annually; permanent pastured land has also fluctuated little, averaging 1,000 acres annually. Cropland pastured has decreased significantly since its peak in 2003 from 903 acres to merely 483 acres in 2014.

*Table 1.9 Number of Irrigated Farms and Acreage from 1982-2012*

Year	Farms		Acreage	
	Number	Change	Number	Change
1982	207	-	10,619	-
1987	229	10.6%	11,030	3.9%
1992	216	-5.7%	12,164	10.3%
1997	214	-0.9%	12,085	-0.6%
2002	186	-13.1%	12,397	2.6%
2007	194	4.3%	11,702	-5.6%
2012	171	-11.9%	11,281	-3.6%

Source: USDA Census of Agriculture

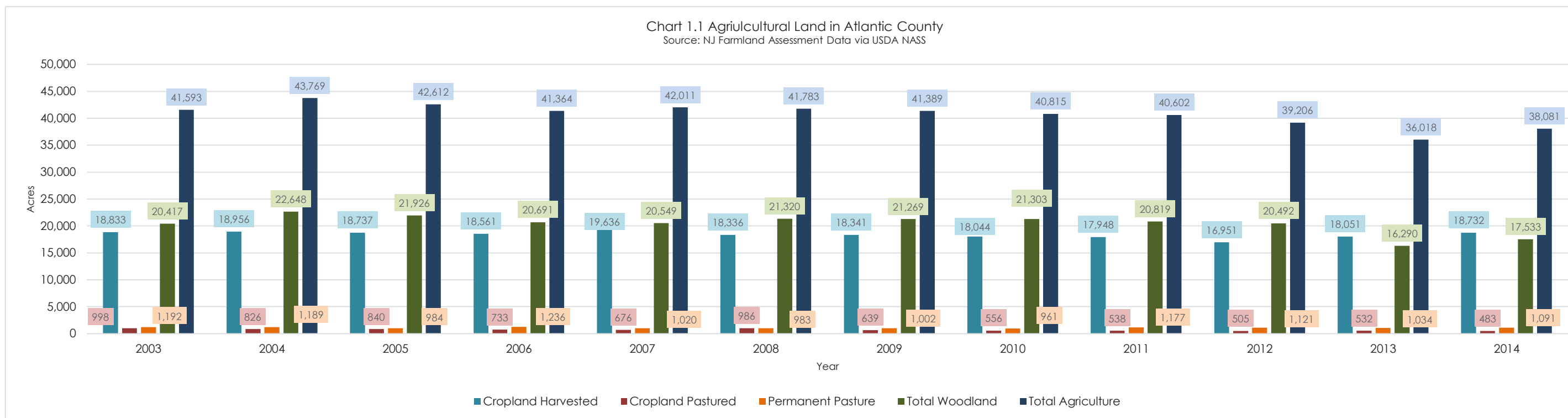
The Census of Agriculture is the leading source of agricultural facts and statistics in the United States. It provides a detailed picture of local farm and ranch operations every five years and is the only source of uniform, comprehensive agricultural data. The most recent Census of Agriculture, conducted in 2012, indicates that there are roughly 29,479 acres of farmland in Atlantic County. The New Jersey farmland assessment records indicate that there were 39,206 acres of agricultural land in the County in 2012. The discrepancy is based on the types of land included in the analysis and methodological differences.

*Table 1.10 Agricultural Land in Atlantic County (1983-2014)*

Year	Cropland Harvested	Cropland Pastured	Permanent Pasture	Active Agriculture Subtotal	Unattached Woodland	Attached Woodland	Total Woodland	Equine	Renewable Energy	Total Agriculture
1983	16,004	751	682	17,436	-	-	26,626	-	-	44,062
1990	19,561	1,112	1,034	21,707	11,614	6,988	18,602	-	-	40,309
2000	18,852	814	949	20,615	14,101	4,714	18,815	61	-	39,491
2003	18,833	998	1,192	21,023	13,773	6,644	20,417	153	0	41,593
2004	18,956	826	1,189	20,971	16,242	6,406	22,648	151	0	43,769
2005	18,737	840	984	20,561	16,000	5,926	21,926	125	0	42,612
2006	18,561	733	1,236	20,530	14,767	5,924	20,691	143	0	41,364
2007	19,636	676	1,020	21,332	14,654	5,895	20,549	130	0	42,011
2008	18,336	986	983	20,305	14,976	6,344	21,320	158	0	41,783
2009	18,341	639	1,002	19,982	15,180	6,089	21,269	141	0	41,389
2010	18,044	556	961	19,561	15,495	5,808	21,303	98	0	40,815
2011	17,948	538	1,177	19,663	15,229	5,590	20,819	120	1	40,602
2012	16,951	505	1,121	18,577	15,090	5,402	20,492	137	1	39,206
2013	18,051	532	1,034	19,617	10,725	5,565	16,290	111	1	36,018
2014	18,732	483	1,091	20,306	12,423	5,110	17,533	172	70	38,081

Source: New Jersey Farmland Assessment Records



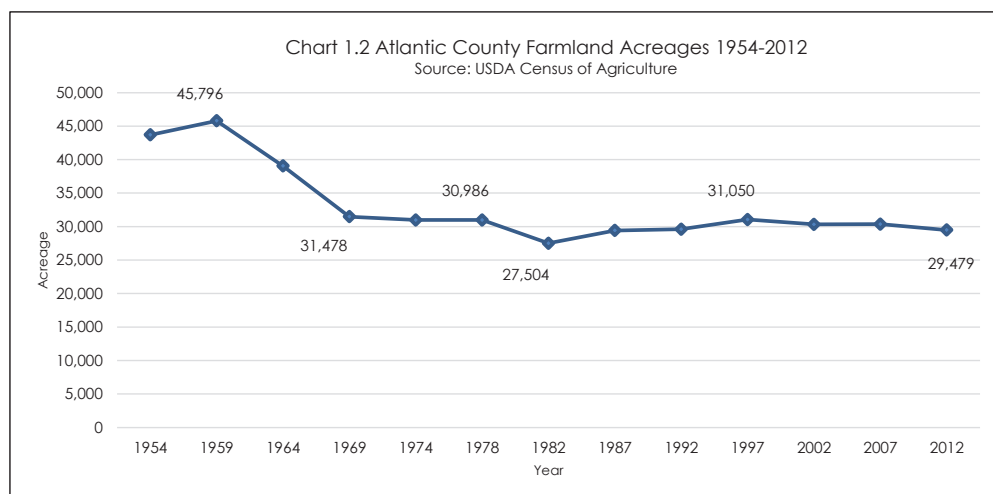


Based on Census of Agriculture data from 1954 to 2012, Chart 1.2 indicates that the amount of acreage in Atlantic County dedicated to agricultural activity peaked in 1959, at 45,796 acres. The lowest farmland acreage, according to the Census, was in 1982, at 27,504 acres. Despite these fluctuations, for the past 60 years Atlantic County has generally maintained a steady amount of farmland - around 30,000 acres. Based upon these figures, it appears that the County has not lost a significant amount of farmland to non-agricultural development in recent years, as has occurred in other New Jersey counties. Census of Agriculture statistics indicate that overall, the State of New Jersey has lost more than half of its farmland acreage over the last 50 years, from over 1.5 million acres in 1957 to only 715,057 acres in 2012.

Table 1.11 illustrates there were less farms in 2012 than in the previous 15 years; 1992 was the only year where there were fewer than 400 farms. However, 2012 has less acres dedicated to farming than in the previous 20 years. This trend identifies that less land is being farmed throughout the County. However, in 2012 the average farm in the County is significantly larger than in 2007, with a size of 73 acres compared to 61 acres. Throughout the past 20 years, the average farm size peaked in 1992 at 76 acres, and slowly declined to 61 acres in 2007. However, 2012 showed an increase in the average farm size to 73 acres. The median farm size has remained relatively constant over the past 15 years; in 2002, the median farm size was 21 acres, where as in 2007 it decreased to 19 acres. In 2012, the median farm size was 20 acres.

Farm Specifications	1992	1997	2002	2007	2012
Number of Farms	391	424	456	499	402
Land in Farms (acres)	29,606	31,050	30,337	30,372	29,479
Average size of Farms (acres)	76	73	67	61	73
Median size of Farms (acres)	N/A	20	21	19	20

Source: USDA Census of Agriculture



Nevertheless, Table 1.12 illustrates that between the years 1992 and 2002, newer farms entering the market tend to be smaller in size - less than 50 acres - while the number of large farms (greater than 500 acres) has remained relatively unchanged. In 2012, there was a significant decrease in the number of farms less than 50 acres, a decrease of nearly 100 farms or 25.6%. However, another farm greater than 500 acres was created.

Year	1-49 acres		50 to 499 acres		500 or more acres	
	Number	% Change	Number	% Change	Number	% Change
1992	268	-	115	-	8	-
1997	296	10.4%	120	4.3%	8	0.0%
2002	323	9.1%	125	4.2%	8	0.0%
2007	375	16.1%	116	-7.2%	8	0.0%
2012	279	-25.6%	114	-1.7%	9	12.5%

Source: USDA Census of Agriculture



## II. ATLANTIC COUNTY'S AGRICULTURAL INDUSTRY- OVERVIEW

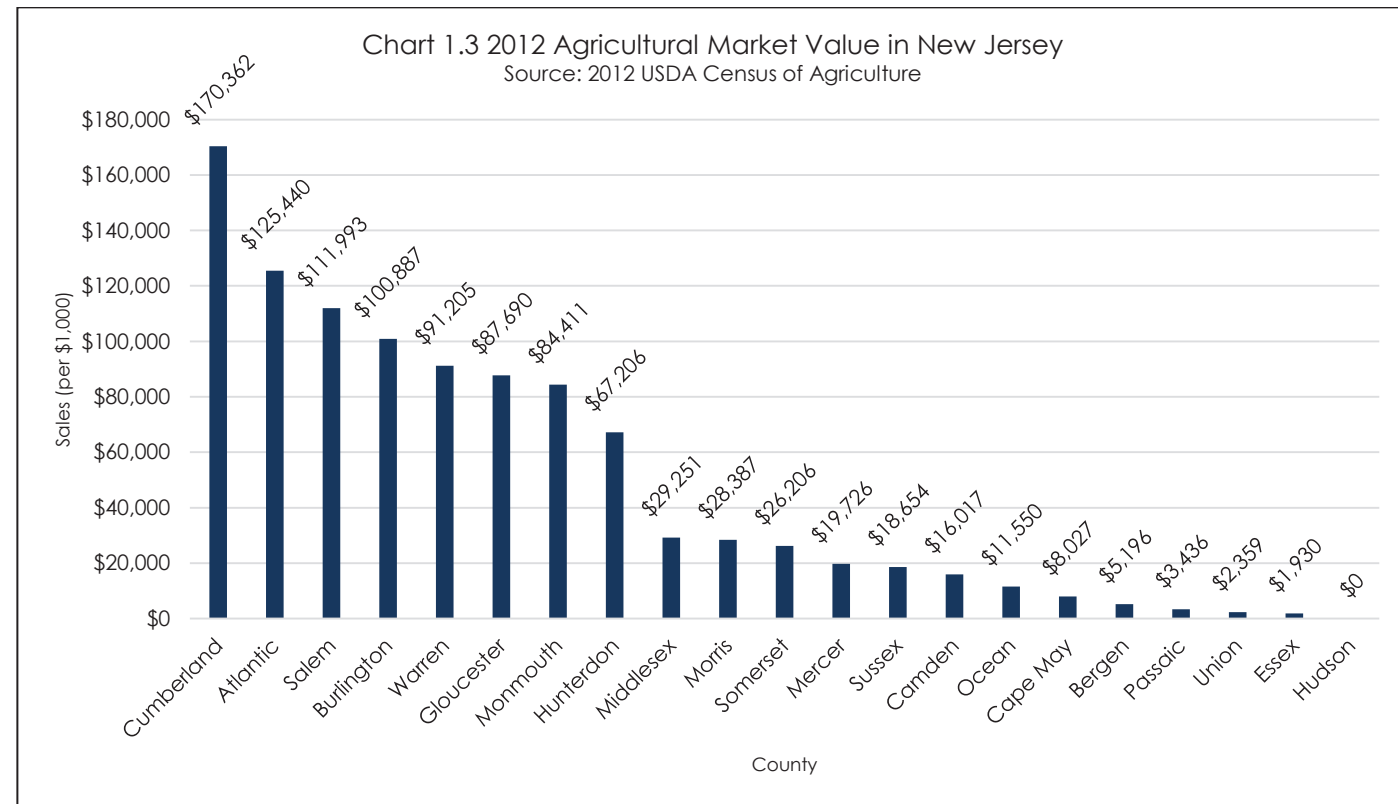
A productive and viable agricultural industry is critical to several western Atlantic County communities. Much of the land base in these communities is devoted to agriculture, and land use is strictly regulated, as will be discussed further in Chapter Three. For this reason, the local economy is dependent on farm activities. Although not captured in agricultural production figures, several ancillary businesses that support agriculture play an integral role in the agriculture industry and will also be examined.

### Trends in Market Value of Agricultural Products Sold

Although not the largest county in terms of lands devoted to agriculture, Atlantic County ranked second in New Jersey, in the 2012 Census of Agriculture for total value of agricultural products sold, at over \$125,000,000 (See Chart 1.3). The county was ranked first in New Jersey in the sale of fruits, tree nuts, and berries. It ranked fourth in the sale of vegetables, melons, potatoes, sweet potatoes, and aquaculture.

The market value of agricultural products sold in Atlantic County has nearly tripled over the past 30 years. Table 1.13 illustrates that both the market value of agricultural products sold and average per farm have progressively increased. However, in 2012, the market value decreased by 2.3% from its peak in 2007.

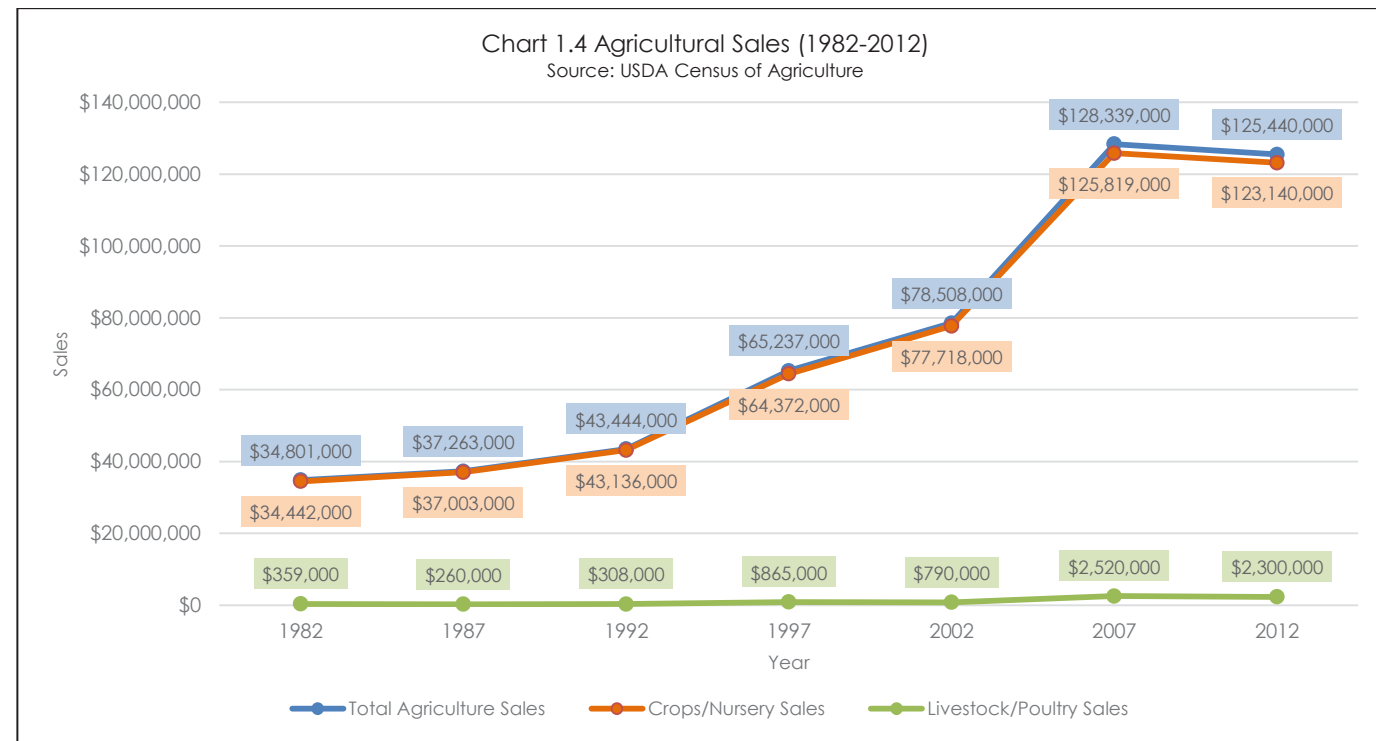
The growing market value of Atlantic County's agricultural products over the years can be attributed to a combination of factors. First, production shifted from lower value field crops and poultry to intensive production of higher value vegetable, fruit and ornamental crops. In addition, utilization of new technologies and improved agricultural practices have maximized production. For example, the Atlantic Blueberry Company started in 1935 with only five acres of farmland. It has now grown to over 1,300 acres to become the largest high-bush blueberry farm in the world. Chart 1.4 details the agricultural sales dedicated to crops/nursery sales, livestock and poultry sales and total agricultural sales over the past thirty years. As shown, crops/nursery sales contributed nearly all of the total agricultural sales.



*Table 1.13 Market Value of Agricultural Products Sold in Atlantic County*

Year	Market Value			Average Per Farm		
	Amount	Change		Amount	Change	
		Number	Percentage		Number	Percentage
1982	\$34,801,000	-	-	\$91,823	-	-
1987	\$37,262,000	\$2,461,000	7.1%	\$97,038	\$5,215	5.7%
1992	\$43,444,000	\$6,182,000	16.6%	\$111,110	\$14,072	14.5%
1997	\$63,469,000	\$20,025,000	46.1%	\$149,690	\$38,580	34.7%
2002	\$78,508,000	\$15,039,000	23.7%	\$172,166	\$22,476	15.0%
2007	\$128,339,000	\$49,831,000	63.5%	\$257,193	\$85,027	49.4%
2012	\$125,440,000	-\$2,899,000	-2.3%	\$312,040	\$54,847	21.3%

Source: US Census of Agriculture





### Historical Crop/Production Trends

Agricultural production with tangible, economic value in the County dates back to the 1700s. Early agriculture in the County developed along the Mullica and Egg Harbor Rivers and in the eastern portion of the County. Records show that as early as 1776, Chestnut Neck (near Smithville) was the largest village on the New Jersey coast. It was the trading center where ships carrying agricultural products – beef, pork, wool, potatoes, mutton and grain – departed for Manhattan.

The towns of Mays Landing and Somers Point produced similar farm products along the Tuckahoe River to ship to Philadelphia around Cape May Point. Later, the innovation of rail transportation transformed Hammonton, Buena and Egg Harbor City into agricultural centers.

As settlement and farming in the US expanded westward in the late 1800’s and early 1900’s, livestock and grain production faded rapidly in Atlantic County. Higher value horticultural crops became more important for Atlantic County farmers. Through the late 1800’s, Egg Harbor was considered the leading wine-grape growing area in the East. Hammonton developed fruits such as blackberries, raspberries, and peaches, and some vegetables. The first farmers’ cooperative in the United States (the Fruit Growers Union) was established here in 1868. The Buena, Landisville area was best known as the cucumber-pickle center of the East and farmers there specialized in cucumbers, peppers and sweet potatoes.

Today, blueberries are the dominant farm product in Atlantic County. According to New Jersey Farmland Assessment records, Atlantic County accounted for 67.6% of the blueberry area harvested in the State of NJ in 2013, with 6,854 acres harvested. The Town of Hammonton claims the title of ‘Blueberry Capital’, though it also hosts several large vegetable farms, a half dozen farm markets, and the state’s second largest sod producer, Tuckahoe Turf Farm. As previously mentioned, the Atlantic Blueberry Company is one of the largest high-bush blueberry farm in the world.

Table 1.14 shows trends in blueberry production in the County. Blueberry production peaked in 2008 when 7,193 acres were devoted to the crop. Since 2008, blueberry production has fluctuated, while declining to 6,687 acres in 2012. The year 2012 had the lowest number of acres harvested since 2004.

Fresh vegetables and herbs dominate the agricultural landscape in Buena Borough and Buena Vista Township. More than seventy types of vegetables are grown during nine months of the year, for shipment to specialty markets throughout the eastern United States and Canada. Egg Harbor, Galloway, Hamilton and the smaller farming communities support a diversified mixture of fruit and vegetable farms, nurseries of all sizes, and a variety of farm-to-consumer direct marketing and agritourism establishments. Table 1.15 illustrates crop production trends in Atlantic County over the past 30 years.



Blueberry Fields in Hammonton

Year	Atlantic County (in acres)	County Change	
		Number	Percentage
1983	4,781	-	-
1990	5,256	475	9.9%
2000	5,758	502	9.6%
2002	5,888	130	2.3%
2004	6,645	757	12.9%
2005	6,726	81	1.2%
2006	6,771	45	0.7%
2007	6,889	118	1.7%
2008	7,152	263	3.8%
2009	7,193	41	0.6%
2010	7,000	-193	-2.7%
2011	7,131	131	1.9%
2012	6,687	-444	-6.2%
2013	6,854	167	2.5%

Source: New Jersey Farmland Assessment, USDA NASS

Year	Total Field Crops (acres)	Total Cover Crops (acres)	Total Fruit (acres)	Total Berries (acres)	Grapes (acres)	Total Nursery (acres)	Total Vegetables (acres)	TOTAL CROP LAND ACREAGE
1983	1,859	486	2,579	4,984	326	1,198	5,179	16,611
1990	2,516	457	2,148	5,367	275	2,049	7,323	20,135
1995	2,804	471	1,749	5,151	52	2,409	6,936	19,572
2000	2,212	545	649	5,881	74	2,328	6,594	18,283
2001	2,481	532	402	6,295	90	2,311	6,602	18,713
2002	2,476	389	582	6,000	87	2,393	6,388	18,315
2003	2,520	365	485	6,309	106	2,540	6,589	18,914
2004	2,572	411	346	6,761	105	2,457	6,247	18,899
2005	2,422	374	414	6,790	107	2,246	6,406	18,759
2006	2,503	462	389	6,925	135	2,389	5,931	18,734
2007	2,543	338	292	7,043	131	2,214	5,892	18,453
2008	2,305	252	299	7,303	115	1,970	5,898	18,336
2009	2,254	289	208	7,350	145	1,981	6,041	18,341
2010	1,964	247	283	7,262	81	1,931	5,972	18,044
2011	2,108	180	191	7,344	131	1,767	5,509	17,948
2012	1,900	322	147	6,905	126	1,696	5,783	16,951
2013	2,756	223	183	7,021	136	1,997	5,740	18,051

Source: New Jersey Farmland Assessment, USDA NASS



### Support Services

Businesses in and around Atlantic County provide a variety of fundamental supplies and services to farm operators. These services revolve around both the input and output aspects of the industry. Some input services include integrated pest/crop management (IPM/ICM) and crop production consultants, fertilizer suppliers, pest control chemical suppliers, and irrigation supplies/installation. Also included on this list are tractor sales and parts, seed and feed vendors, banks and financial institutions, hardware/equipment retailers, large animal veterinarians, manure removers, etc. Local hardware stores within the County also serve as vendors for farming goods and supplies.

In relation to the output sector, local farmers are served by produce wholesalers, cold storage warehouses, packaging manufacturing, food processors and distributors, local roadside and farmers markets, as well as grocers that serve as market outlets for the County's produce. The County's location within the Northeast corridor, with major highway and rail connections, allows local farmers to reach distant markets, particularly in larger metropolitan areas. As a result, most Atlantic County produce is shipped out of state by specialized shippers. Plant-scapers and grounds maintenance businesses also provide a market for Atlantic County nursery, greenhouse and field flower producers.

The Green Pages (<http://salem.rutgers.edu/greenpages/service.pdf>) database is an online reference created by the Rutgers Cooperative Extension of Salem County, providing contact information for a variety of farm service providers and agriculture-related businesses. There are five categories of support: Public Programs (USDA program offices, Rutgers Cooperative Extension, and Soil Conservation Districts), Agricultural Associations (the National Farmer Workers Advocacy Groups and the New Jersey Farm Bureau), Service Providers (for agribusinesses and local farmers), Market Availability (cooperatives, auctions, tri-state regional farmers markets), and Information Resources (Web sites and Internet information on production, NOAA climate forecasts and many more).

### Other Agricultural Related Industries

In addition to traditional farming operations, Atlantic County farmers continue to tap into unique specialty markets:

**Wineries.** Atlantic County has a growing wine industry, which produces different varieties of wines – dry, semi-dry, sparkling, fruit and dessert wines. These operations also add to the local economy through certain agritourism opportunities, including festivals and tours, which include wine tasting or sampling. These offerings present additional opportunities for the marketing and sale of locally grown and produced products.

Balic Winery 6623 US Highway 40 Mays Landing, NJ 08330 609-625-2166 www.balicwinery.com	Bellview Winery 150 Atlantic Street Landisville, NJ 08326 856-697-7172 www.bellviewwinery.com
Plagido's Winery 570 North First Street Hampton, NJ 08037 609-567-4633 www.plagidoswinery.com	Renault Winery 72 North Breman Avenue Egg Harbor/Galloway, NJ 08215 609-965-2111 www.renaultwinery.com
Tomasello Winery 225 White Horse Pike Hampton, NJ 08037 800-MMM-WINE www.tomasellowinery.com	DiMatteo Vineyards 779 11th Street Hampton, NJ 08037 609-567-3909
Sylvan Farms Winery 24 North Vienna Avenue Germania, NJ 08215 609-965-1548	

**Aquaculture.** Aquaculture continues to be a growing industry in this region. As demand for fresh, local seafood products increases, suppliers must search for new, innovative ways to increase the supply. Aquaculture supplements the local harvest of wild-caught seafood through the 'farming' of fish and seafood products. Those who are approved to engage in aquaculture activities may be eligible for Right to Farm protections.

The New Jersey Aquaculture Development Plan was established in 1995. Based on the recommendations in the Plan, the New Jersey Aquaculture Development Act was signed into law in 1997.

Atlantic County has been recognized as a leading county in non-conventional farming practices such as aquaculture. According to the 2012 Census of Agriculture, Atlantic County was ranked number 4 in New Jersey for Aquaculture farming. In 2007, the County was ranked number one in aquaculture farming. The estimated market value for aquaculture products in the County is \$1,885,000. The following presents a list of aquaculture operations in Atlantic County, as listed in the New Jersey Aquaculture Directory.

Avery's Quality Bay Clams Bill Avery 741 E Great Creek Rd Galloway, NJ 08205-9686 Ph: 609-345-7703 Alt: 609-345-7703 Fax: 609-748-6630 wavery57@ix.netcom.com http://www.dozenclams.com	Products: Faster growing hard clam seed, quality littleneck clams, oysters  Equipment and Supplies: Custom manufacturing of hatchery and field grow-out equipment  Consulting: Shellfish and commercial fishing industry
Mathis Clam Farm George Mathis Jr. 143 Leektown Rd Lot 11 Egg Harbor, NJ 08215-4811 Ph: 609-296-7026 Alt: 609-290-8879 cell: 609-290-8879	Products: Hard clam (seed, market size)
Nautical Nuggets Ray Crema PO Box 314 Port Republic, NJ 08241-0314 Ph: 609-344-1677 Alt: 609-652-8763 http://www.nauticalnuggets.com	Products: Hard clams
Robert Wilson 128 Pomona Rd, PO Box 410 Port Republic, NJ 08214-0410 Ph: 609-652-7978 wilsonclam@aol.com	Products: Hard clams

Source: NJ Agriculture Directory





Horses in Egg Harbor Township

**Equine Industry.** According to the 2013 farmland assessment data, there were 479 horses by head count in the County with 111 acres associated with equine purposes; 31 acres are used for boarding, 21 acres for rehabilitation, 53 acres for training and 6 for non-specific uses. According to Jersey Equine, there are three equine facilities in Atlantic County:

Baker Stables 5929 Baker Avenue Mays Landing, NJ 08330 609-476-2664 backerstablesnj.com	Lessons, boarding, training, English
D&D Stables 279 Pancoast Mill Road Buena, NJ 08310 856-697-6317 ddstables.com	Breeding, shows/clinics, training, sales, English, boarding, rental, Western, lessons/ instruction
Rainey Day Horse Farm, LLC 4727 Moss Mill Road Egg Harbor, NJ 08215 609-965-6423 horsecarebyowner@comcast.net horsecarebyowner.homestead.com	Boarding, turnouts, training, English, Western

Source: NJ Equine Advisory Board

### III. LAND USE PLANNING CONTEXT

Land use development patterns within Atlantic County are controlled by various state, county and local planning efforts. Comprehensive planning documents and regulations are developed at each of these levels to provide goals and policy statements, which guide the growth and development within the County. The following planning documents and regulations are described in more detail in this section:

1. New Jersey State Development and Redevelopment Plan
2. The Pinelands Comprehensive Management Plan
3. The Coastal Area Facilities Review Act
4. Atlantic County Master Plan
5. Municipal Master Plans, Zoning and Development Standards
6. Current Land Use Trends, Public Infrastructure, Development Pressures & Land Values
7. Description of Innovative Planning Techniques.

#### State Development and Redevelopment Plan

The primary objectives of the New Jersey State Development and Redevelopment Plan (SDRP) is to strike a balance between public and private sector investment in infrastructure, to coordinate planning efforts between state, county and local governments, to revitalize the State's urban centers by providing adequate and affordable housing in reasonable proximity to places of employment and to promote the conservation and protection of the environment. To accomplish its objectives, the SDRP utilizes a combination of Planning Areas, Centers and Statewide Policies

The SDRP jurisdiction covers the entire state of New Jersey, with the exception of the Pinelands Region, with the goal of creating a seamless policy map to guide land use decisions throughout the state. However, because of existing municipal, regional and statewide comprehensive plans and regulations, the SDRP overlays with other existing jurisdictions. As such, the SDRP acknowledges these overlay areas and has specifically created the goal to acknowledge these existing Planning Regions and coordinate and integrate the policies of these established regional agencies with the policies of the SDRP. The overlay areas are addressed with the Cross Acceptance process which is discussed later in this section

A majority of Atlantic County falls under the jurisdiction of the Pinelands Comprehensive Management Plan (Pinelands Plan) and the Coastal Areas Facilities Review Act (CAFRA). There is only a small portion of Atlantic County where the New Jersey State Development and Redevelopment Plan does not overlay either of these Regional Plans. This area is in the western part of the County in the municipalities of Buena Borough and Buena Vista Township where land use is governed primarily by municipal zoning.

#### Planning Areas

The SDRP divides the state into seven (7) major planning areas, setting forth different development guidelines for each area. These planning areas attempt to strike a balance between the need to provide opportunities for development with the need to protect and preserve the environment. This includes maintaining and enhancing the economic viability of the agriculture industry.

The State Planning Areas within Atlantic County's boundaries that are not within the Pinelands, are illustrated in the following map.

The Planning Areas as defined in the SDRP are grouped below by growth potential.

- Areas for Growth: Metropolitan Planning areas (Planning Area 1), Suburban Planning Areas (Planning Area 2) and Designated Centers in any planning area.
- Areas for Limited Growth: Fringe Planning Areas (Planning Area 3), Rural Planning Areas (Planning Area 4), and Designated Centers in any planning area
- Areas for Conservation: Fringe Planning Area (Planning Area 3), Rural Planning Areas (Planning Area 4), and Environmentally Sensitive Planning Areas (Planning Area 5).

#### SDRP Planning Areas Overlay with Municipal Zoning

The areas within Atlantic County where the SRDP Planning Areas overlap exclusively with municipal zoning includes areas of Buena Borough and Buena Vista Township. The majority of this area is within the PA4 – Rural Planning Area.

According to the SDRP, the lands of the Rural Planning Area (PA4) include most of New Jersey' prime farmland, and contains lands that are currently being farmed or have a strong potential for farming activities.

In the PA4 - Rural Planning Area, the State Plan's intention is to:

- Maintain the environs as large contiguous tracts of farmland and open space
- Promote a viable agricultural industry and compatible off-the-farm economic opportunities for farmers
- Revitalize existing rural centers



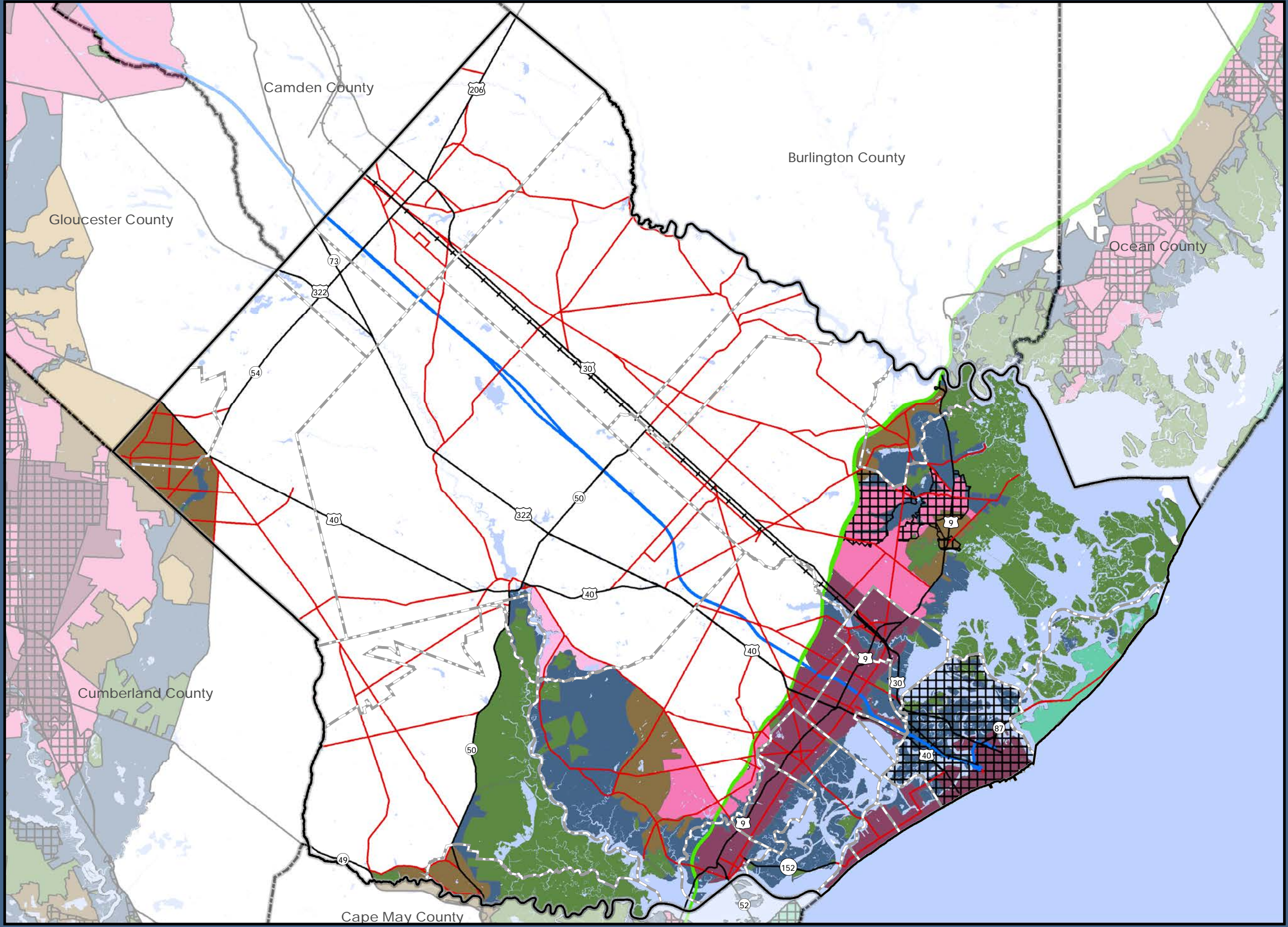
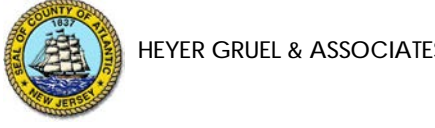
# State Development & Redevelopment Plan

- Planning Areas**
- PA 1: Metropolitan
  - PA 2: Suburban
  - PA 3: Fringe
  - PA 4: Rural
  - PA 4B: Rural/Environmentally Sensitive
  - PA 5: Environmentally Sensitive
  - PA 5B: Environmentally Sensitive/Barrier Island
  - PA 6, 7 & 8: Parks & Natural Areas
  - Designated Centers
  - Pinelands Area

Source: NJDEP, NJGIN, NJOGIS, NJDOT, Atlantic County Office of GIS

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***SDRP Planning Areas overlay with CAFRA Zone***

Within the CAFRA overlap areas, the mapping of the Planning Areas varies and includes:

- PA1 –Metropolitan Planning Areas of encompassing the municipalities of Atlantic City, Ventnor, Margate, Longport, Somers Point, Linwood, Northfield, Pleasantville, Absecon, and portions of Galloway Township; and
- PA2 –Suburban Planning Areas within the municipalities of Galloway Township and Egg Harbor Township; and
- PA3 –Fringe Area in Hamilton Township near Mays Landing; and
- PA4 –Rural Planning Areas in municipalities of Galloway Township, Egg Harbor Township, Corbin City and Port Republic; and
- PA5 –Environmentally Sensitive Areas encompass the remainder of land area not covered by PA1 – PA4.

***SDRP Planning Areas Overlay with the Pinelands Management Areas***

The SDRP has accepted the Pinelands Management Areas and incorporated them into the State Plan Policy Map. These Pinelands Management Areas are similar to the SDRP Planning Areas and are identified below. The Pinelands Management Areas are described in more detail under the Pineland Protection Act section.

- Preservation Area District
- Forest Area
- Agricultural Production Area
- Rural Development Area
- Regional Growth Area
- Town
- Military and Federal Institution Area
- Village
- Special Agricultural Production Area

Farming and secondary farming activities are permitted in the Forest, Rural Development, Agricultural Production and Special Agricultural Production Areas of the Pinelands. A majority of the farming activities are located within the Agricultural Production Area and Special Agricultural Production Areas.

***Designated Centers and Endorsed Plans***

In addition to the Planning Areas, the SDRP has created an additional layer known as Centers. These Centers are special places within any of the Planning Areas that would allow an increase in the permitted development intensity.

Within Atlantic County there are four (4) Centers which are all located within the CAFRA region. They are (1) the City of Atlantic City which is an Urban Center, (2) Oceanville in Galloway Township which is a Village, (3) Smithville in Galloway Township which is a Town and (4) Wrangleboro Estates in Galloway Township is

classified as a Town. The Atlantic City Urban Center does not have an expiration date; however, the Designated Centers in Galloway Township are set to expire December 31, 2018.

***Statewide Policies***

In addition to the Planning Areas and Centers, nineteen (19) Statewide Policies have been adopted. These policies are applied to each Planning Area and Center to achieve the goals of the State Planning Act. They include policies on:

1. Equity
2. Comprehensive Planning
3. Public Investment Priorities
4. Infrastructure Investments
5. Economic Development
6. Urban Revitalization
7. Housing
8. Transportation
9. Historic, Cultural and Scenic Resources
10. Air Resources
11. Water Resources
12. Open Lands and Natural Systems
13. Energy Resources
14. Waste Management, Recycling and Brownfields
15. Agriculture
16. Coastal Resources
17. Planning Regions Established by Statute
18. Special Resource Areas
19. Design

The specific SDRP policies concerning Agriculture are:

“Promote agriculture as an industry and preserve the agricultural land base by coordinating planning and innovative land preservation techniques to support agricultural sustainability in recognition of agriculture’ valuable contributions to conserving the State’s natural resources and its quality of life, while accommodating growth in rural areas in ways that are consistent with the State Plan’ vision and goals.”

“The Challenge: To promote agriculture as an economically viable industry in this highly urbanized state by defining and supporting appropriate agricultural niches, while also continuing to preserve the farmland base when agricultural land values often adversely compete with land values for residential and commercial development.”

***Cross-Acceptance***

Cross-Acceptance, created under the State Planning Act, is a process in which the public and all levels of government participate in the development of the state plan.

Part of this process involves the review and comparison of local, county and regional plans, maps and regulations to determine their consistency with the SDRP. The intent of this process is to develop consistent land use policies among all levels of governmental agencies.

Due to the overlap of the statewide policy map with the existing municipal, regional and statewide comprehensive plans and regulations there is a need to determine what inconsistencies and consistencies exist among the plans.

***SDRP Summary***

The majority of the farmland exclusively located under the SDRP Planning Areas is located within the Rural Planning Area (PA4). Within Atlantic County this includes areas in the western portion of the County in the municipalities of Buena Borough and Buena Vista Township and in sections of the municipalities of Galloway Township, Egg Harbor Township and Port Republic.

***New Jersey Pinelands***

The single most influential regional plan governing future growth and development within Atlantic County is the New Jersey Pinelands Comprehensive Management Plan (CMP) which was adopted in 1980. By administering the goals, policies and objectives of the CMP, the Pinelands Commission is empowered to protect and preserve the natural, ecological, agricultural, archaeological, historic, cultural and recreational resources within the Pinelands boundaries. The designated Pinelands boundary applies to about 67% of the County.

Areas within the Pinelands boundaries are divided into nine different land use management areas to regulate growth in varying degrees ranging from areas for preservation to areas for growth and development. The Pinelands Land Use Management Areas are identified below and are mapped on the Pinelands Management Areas Map.

- Preservation Area District
- Forest Area
- Agricultural Production Area
- Rural Development Area
- Regional Growth Area
- Town
- Military and Federal Institution Area
- Village
- Special Agricultural Production Area

***Preservation Area District and Forest Areas***

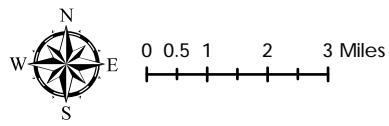
According to the CMP the Preservation Area District represents the most critical ecological region in the Pinelands which is especially vulnerable to degradation. The



### Pinelands Management Areas (State Designated Areas)

#### Pinelands Management Areas

- Preservation Area
- Forest Area
- Agricultural Production Area
- Special AG Production Area
- Federal or Military Facility
- Pinelands Town
- Pinelands Village
- Regional Growth Area
- Rural Development Area



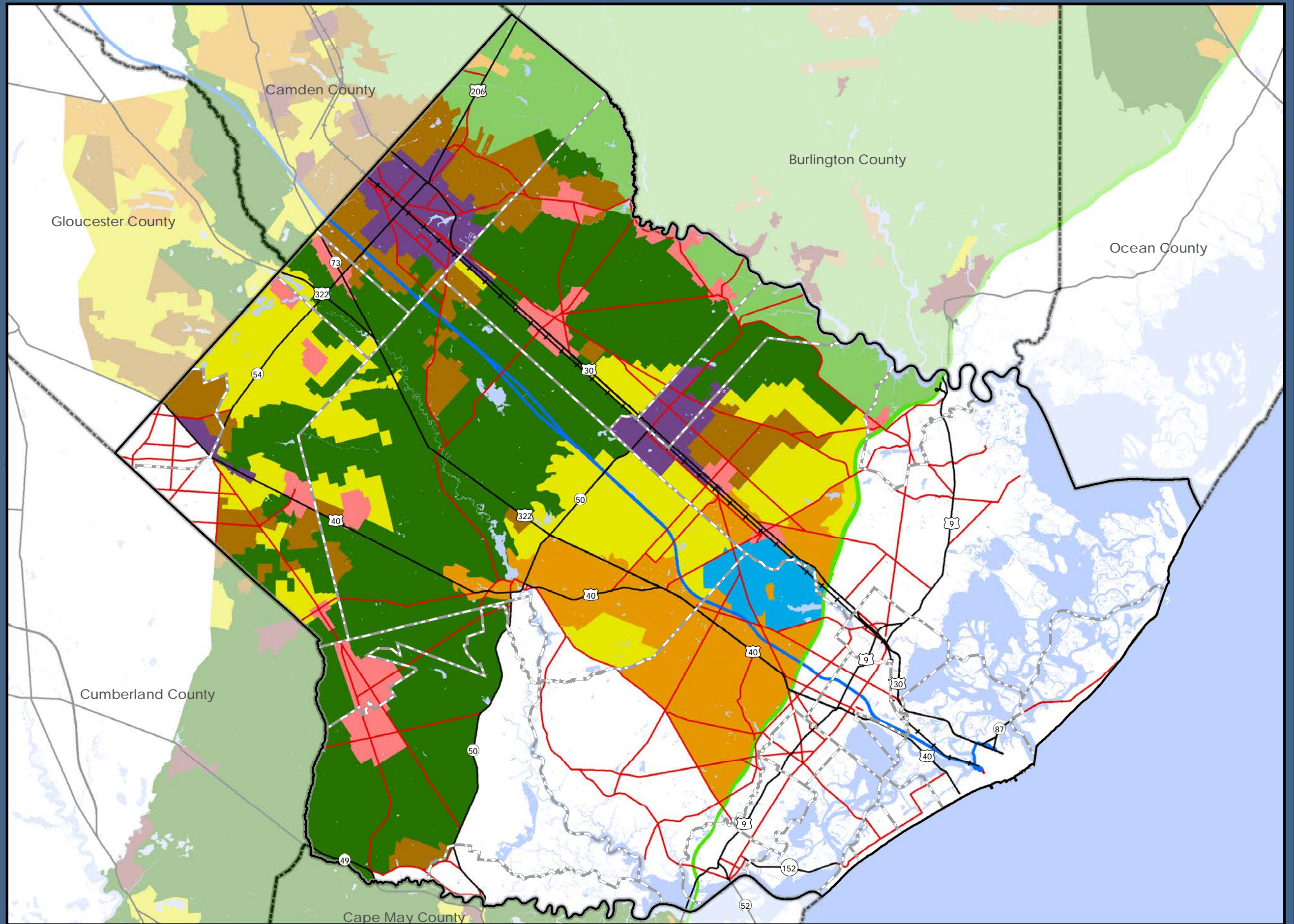
Source: NJDEP, NJGIN, NJOGIS, NJDOT, Atlantic County Office of GIS, NJ Pinelands

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Forest Areas represent largely undisturbed forest areas to be preserved. Development in these areas is severely limited in order to protect the long term ecological integrity of this sensitive area.

In Atlantic County, the Preservation Area and Forest Areas have been designated along the Mullica River which encompasses the northern portions of Hammonton, Egg Harbor City, Galloway Township, Mullica Township and Port Republic, along with the western portion of Hamilton Township, and large portions of Weymouth Township, Estell Manor, Folsom Borough and portions of Buena Vista Township.

*Agricultural Production Areas and Special Agricultural Production Areas*

Development is restricted in the Agricultural Production and Special Agricultural Production Areas in favor of preserving farmland and agricultural related uses. These areas have been designated in portions of Hammonton, Mullica Township, Hamilton, Township, Galloway Township, Buena Vista Township and Buena Borough.

*Rural Development Areas*

These are transitional areas that include existing agricultural activities that are inter-mixed between existing areas of rural development. In general, this area is designated for limited development with residential dwelling densities of 3.2 to 5 acres per dwelling unit due to the absence of public sewer and water. Agricultural uses and processing activities are permitted in this area.

The Rural Development Areas are found in Buena Vista Township, Folsom, Hamilton Township, Mullica Township and Galloway Township.

*Pinelands Towns and Villages*

Towns and Villages are existing settlements within the Pinelands that have been identified in the CMP. Infill development is permitted in Towns and Villages that is compatible with the existing character of these settlements.

There are three (3) Pinelands Towns within Atlantic County;

- Hammonton
- Buena Borough
- Egg Harbor City

Pinelands Villages are typically centered around the intersection of two roads and can accommodate a higher density of development than their adjacent rural surroundings.

In Atlantic County the Pinelands Villages are:

- Collings Lake, Milmay, Newtonville and Richland in Buena Vista Township;
- Folsom in Folsom Borough;
- Mizpah in Hamilton Township;
- Elwood, Westcoatville-Nesco, Sweetwater and Weekstown in Mullica Township;

- Estell Manor in Estell manor;
- Cologne-Germania and Pomona in Galloway Township; and
- Dorothy and Belcoville in Weymouth Township.

*Regional Growth Areas*

Regional Growth Areas are the areas in the Pinelands where higher density residential, commercial, industrial and warehouse uses are concentrated. These Growth Areas are located in or adjacent to existing developed areas with public infrastructure (sewer & water). The Regional Growth Areas are also the area within the Pinelands that have been designated to receive development credits.

Atlantic County Regional Growth Areas are concentrated within the municipalities of Galloway, Hamilton and Egg Harbor Townships. These areas have the existing or potential infrastructure to support the permitted densities of this growth area.

Military and Federal Installations - In Atlantic County this area is the William J. Hughes Federal Aviation Technical Center (FAATC) where the Egg Harbor, Hamilton and Galloway Township borders intersect.

*Pinelands Summary*

The majority of Atlantic County’s farmland is located within the Pinelands boundary. Farming and secondary farming activities are permitted in the Forest, Rural Development, Agricultural Production and Special Agricultural Production Areas of the Pinelands. However, a majority of the farming activities are located within the Agricultural Production Area and Special Agricultural Production Areas.

*Coastal Area Facilities Review Act*

The Coastal Area Facilities Review Act (CAFRA) was adopted to regulate development along the coastline of New Jersey and within 150 feet of the mean high water line. The CAFRA boundary in Atlantic County generally includes areas east of the Garden State Parkway and areas between Route 50 and Ocean Heights Avenue. The CAFRA Map shows the CAFRA boundaries along with the designated Coastal Centers.

The Coastal Area Facilities Review Act requires that all regulated development activity within the CAFRA region must obtain a permit from the NJ Department of Environmental Protection. Regulated development activity includes residential projects with 25 or more units, any public or industrial development and commercial projects with 50 or more parking spaces if the property is located beyond 150 feet of the mean high water line. If the property is located within 150 feet of the mean high water line, CAFRA regulates three or more residential units, commercial projects with five (5) or more parking spaces or any public or industrial development.

CAFRA does not control land uses but controls the impacts of a proposed use by issuing permits that meet standards related to development intensities identified in SDRP Planning Areas, impervious coverage, storm water management and impacts to wetlands

As previously discussed, the SDRP acknowledges its overlap with the existing CAFRA boundaries. It is a specific goal of the plan to coordinate and integrate the policies of these established regional agencies with the policies of the SDRP. As such the SDRP has incorporated the SDRP Planning Areas into the CAFRA region.

The CAFRA Planning Areas correspond to the SDRP Planning Areas. Table 1.16 represents a list of the Planning Areas and their Key Locations.

Table 1.16 SDRP and CAFRA Planning Areas		
SDRP Planning Area	CAFRA Planning Area	Key Locations
PA 1: Metropolitan	Coastal Metropolitan	Atlantic City, Ventnor, Margate, Longport, Somers Point, Linwood, Northfield, Pleasantville, Absecon, and portions of Galloway Township
PA 2: Suburban	Coastal Suburban	Galloway Township and Egg Harbor Township
PA 3: Fringe	Coastal Fringe	Hamilton Township near Mays Landing
PA 4: Rural	Coastal Rural	Galloway Township, Egg Harbor Township and Port Republic
PA 5 & 5B: Environmentally Sensitive*	Coastal Environmentally Sensitive*	Portions of Absecon, Atlantic City, Brigantine, Corbin City, Egg Harbor Township, Galloway, Mays Landing, Linwood, Northfield, Pleasantville, Port Republic, Somers Point, Ventnor, and Weymouth
PA 8: Park	Coastal Park	Primarily Federal, State & County Parks located in portions of Absecon, Atlantic City, Brigantine, Corbin City, Egg Harbor Township, Estell Manor, Galloway, Mays Landing, Northfield, Pleasantville, Port Republic, Somers Point and Weymouth

*\*This category includes the Environmentally Sensitive Barrier Island Planning Areas*

*CAFRA Summary*

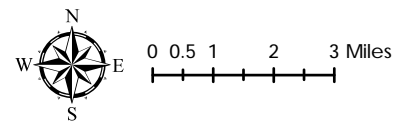
The CAFRA Planning Areas correspond with the SDRP Planning Areas to determine existing and future land uses within the CAFRA zone. The PA4 – Rural Planning Areas in the CAFRA zone are home to existing and potential farmland activities and are located in the municipalities of Galloway Township, Egg Harbor Township and Port Republic.



### Coastal Area Facilities Review Act Management Areas

#### CAFRA Coastal Planning Areas

- Coastal Metropolitan
- Coastal Fringe Planning Areas
- Coastal Suburban Planning Areas
- Coastal Rural Planning Areas
- Coastal Environmentally Sensitive Planning Area
- Coastal Park
- CAFRA Coastal Centers



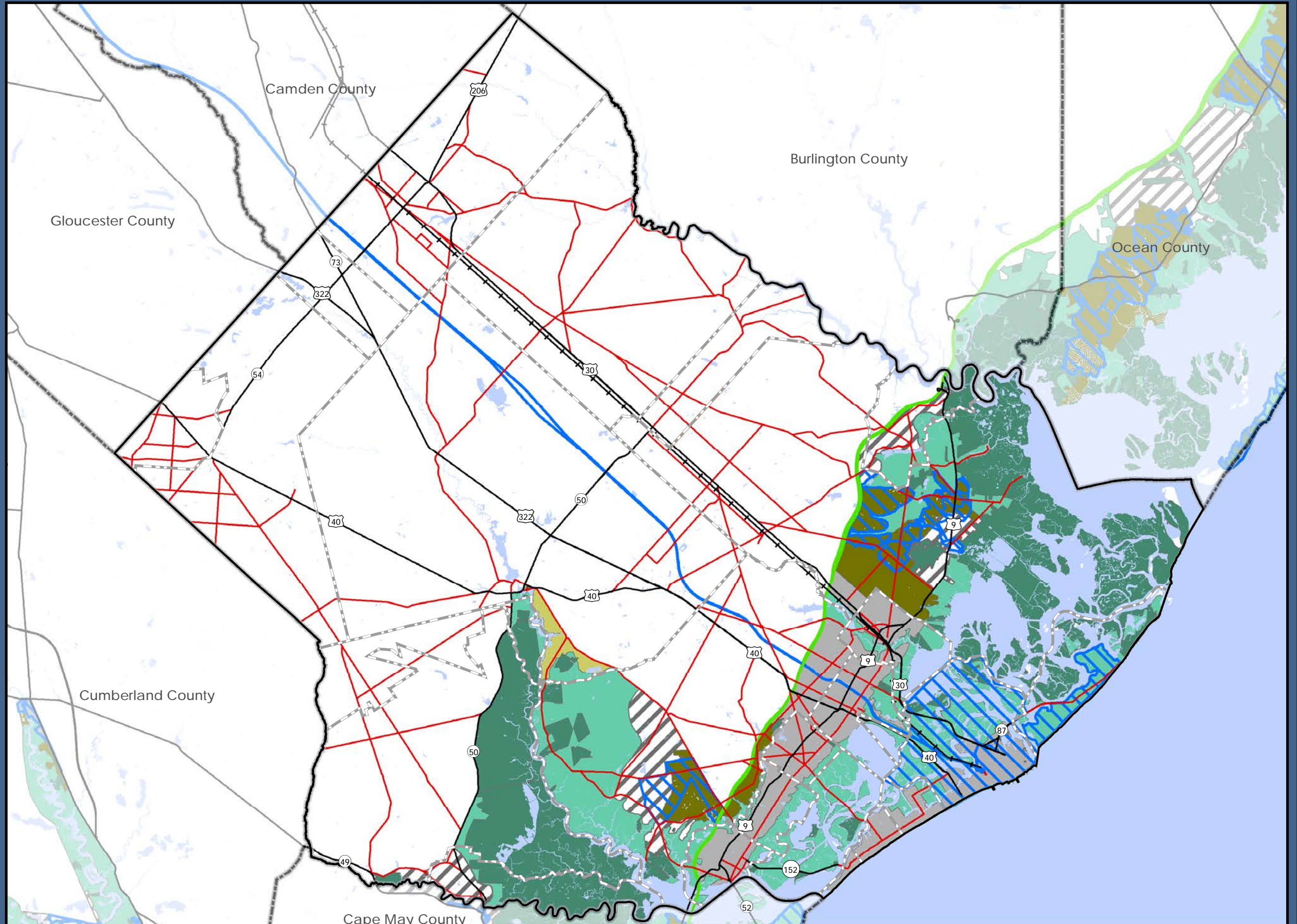
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## *The Atlantic County Master Plan*

The 2017 Atlantic County Master Plan and Land Use Element are an update to the 2000 Atlantic County Master Plan. These documents guide the physical development of the County in accordance with the County Planning Act. In the recent planning efforts, a major focus has been placed on concepts of sustainability and resiliency in response to the impact of Superstorm Sandy. In addition, the County has been struggling to emerge from the global economic recession and significant downturn in the Atlantic City casino industry. The Atlantic County Master Plan makes recommendations for the development within its borders and prioritizes capital expenditures consistent with the goals and objectives of the plan. The County Planning Act directs the County Master Plan to consider existing public infrastructure; including streets, bridges, waterways, parks, airports along with sanitary, water and drainage facilities; agricultural areas, forests and parks for purposes of conservation; areas for urban re-development and other features that may be unique and important to the development of the County.

The County Master Plan does not have the authority to establish zoning or dictate land uses, but it does promote different intensities of growth in areas designated by the Master Plan. The Atlantic County Master Plan divides the County into four regions for analysis; based on existing development, demographics, land use trends and the potential for growth. The Barrier Island, Back Bay, Suburban, and Rural Regions are depicted on the County Regions Map.

### *The Barrier Island Region*

The Barrier Islands region comprises the two barrier islands in the eastern most portion of the County. It is defined geographically as the municipal boundaries of the five communities that it comprises. Brigantine Island is approximately six miles long, and consists of the City of Brigantine. Across the Absecon Channel from Brigantine Island is Absecon Island, the larger of the two. Absecon Island houses the communities of Atlantic City, Ventnor City, Margate City, and Longport Borough. Both islands are largely built out with the exception of the back-bay wetlands areas and the several areas of preserved open space.

The Barrier Islands were the portion of the County most substantially affected by Superstorm Sandy. These areas continue to address the land use and infrastructure challenges associated with rebuilding. Any new development in this region is likely to consist of infill development, and there is no potential for agricultural production.

### *The Back Bay Region*

The Back Bay region comprises the portion of the County bound by Route 9 on its western edge, and the Barrier Island Region at its eastern edge. This region consists of portions of seven municipalities: Port Republic City, Galloway Township, Absecon City, Pleasantville City, Northfield City, Linwood City, Somers Point City, and Egg Harbor Township.

The Back Bay region tends to be the more densely built-out and urbanized portion of the County communities along with the undeveloped wetlands areas located within the Absecon Inlet that separate the mainland portion of the County from the Barrier Islands. This portion of the County experienced damage related to Superstorm Sandy, but not to the degree that the Barrier Island Region suffered.

Smaller farms and secondary farm uses still exist in the Back Bay Area and are often mixed between the existing residential and commercial developments in this area. These smaller farms have survived the demand for residential and commercial development and provide a beneficial use which supports the population of the area

### *The Suburban Region*

The Suburban region is made up of non-contiguous portions of the County that share similar characteristics. The boundaries to this area were developed by identifying the portions of the County that are encompassed by the districts that accommodate growth within the Coastal Area Facilities Review Act (CAFRA) Zone (Coastal Metropolitan, Coastal Fringe Planning, Coastal Suburban) and the Pinelands Comprehensive Management Plan (CMP) (Regional Growth Area, Pinelands towns, Rural Development Areas, Federal/Military). In addition, the areas identified as 'Urban' in the New Jersey Department of Environmental Protection (NJDEP) and the portion of the County in the Sewer Service Area are included in this area.

The communities within the Suburban Region include large sections of Galloway Township, Egg Harbor Township, Hamilton Township, smaller areas within Egg Harbor City, Mullica Township, and Hammonton Township, along with the portions of Absecon City, Pleasantville City, Northfield City, Linwood City, and Somers Point City that are not within the Back Bay Region.

The Suburban Region has been the section of the County that has experienced the greatest population growth and residential development over the last several decades. The regulatory framework of the CAFRA Zone and Pinelands CMP have directed much of the growth to this area. The most recent demographic trends indicate that new construction and development have fallen off since the mid-2000s and population growth trends appear to be plateauing.

Since the available developable land in the Barrier Island and Back Bay Area is becoming increasingly scarce and a majority of the land in the Rural Areas is environmentally sensitive, the Regional Growth Area will continue to experience the greatest development pressure and absorb the majority of new residential and commercial development.

### *Rural Region*

The Rural Region consists of the remainder of the County. These are the portions of the

County located within the lower density Pinelands Management Areas and CAFRA Districts. It includes environmentally sensitive areas such as forests and wetlands, along with farmland, low density residential development, and several village centers. The communities located entirely within the Rural Region are Folsom Borough, Buena Vista Township, Buena Borough, Weymouth Township, Estell Manor, and Corbin City. In addition, the Region includes the portions of Hammonton Town, Mullica Township, Egg Harbor City, Port Republic City, Galloway Township, Hamilton Township, and Egg Harbor Township that are not within the other Regions.

Growth potential within the Rural Region is limited by infrastructure limitations, land use regulations, and the presence of environmentally sensitive features. The planning goals and objectives for this region are related to farmland preservation, the provision of open space for conservation and recreation purposes, and the management of low impact growth and development in centers and other targeted areas. This region contains the majority of the active farmland in the County.

### *Goals & Objectives - 2017 Atlantic County Master Plan*

The 2017 Atlantic County Master Plan identifies goals and objectives related to Farmland Preservation. Specific Goals & Policy Statements identified in the 2017 County Master Plan for Farmland Preservation are:

#### **Overall Land Use Goals:**

- Protect farmland within the County and promote the continued economic viability of farming.
- Advocate for the preservation and protection of important natural resources while working to reevaluate the capacity of growth areas and the scope of permitted uses and activities within the Pinelands.

#### **Rural Region Goals and Objectives:**

- Continue to preserve farmland
- Support agriculture as an industry

### *Atlantic County Master Plan Summary*

The Atlantic County Master Plan divides the County into four regions for growth based on existing development, demographics, land use trends and the potential for growth and prioritizes capital expenditures consistent with the goals and objectives of these growth areas. The majority of the farmland is located in the Rural Region which is identified by the County Master Plan for preserving and maintaining the historic and undeveloped portions of the County.

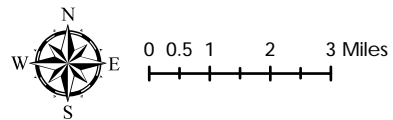
### *Current Land Use & Trends*

Over the past decade within Atlantic County, development and population growth has shifted from the Barrier Island and Back Bay Regions westward into the Suburban Region of the County. This westward push has affected land use patterns in historically rural areas located in the western portions of the County.



### County Regions

-  Barrier Islands
-  Back Bay Communities
-  Suburban
-  Rural



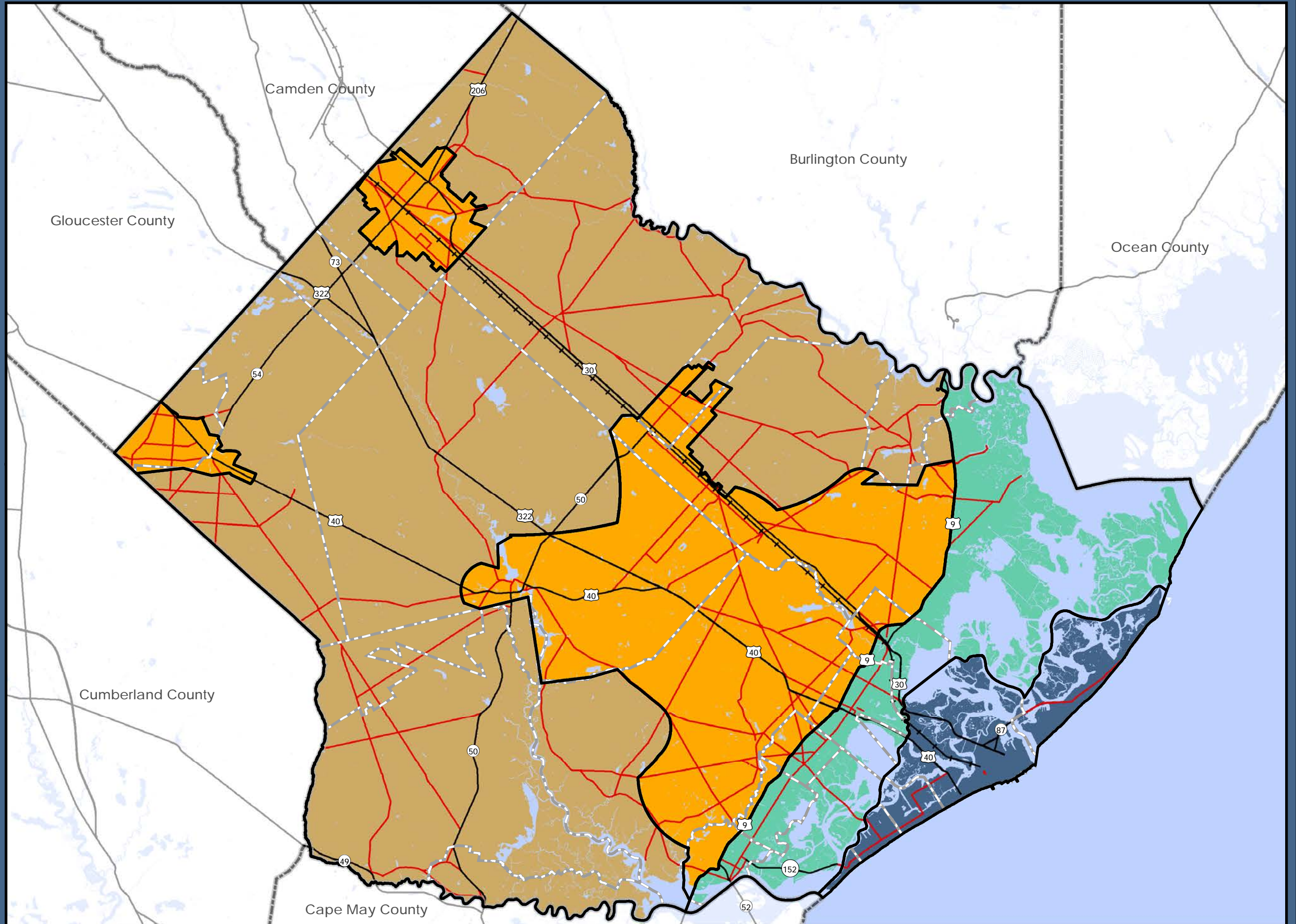
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Although the development pressure has increased, the western portions of the County will continue to host the majority of farming operations in Atlantic County.

The New Jersey Department of Environmental Protection’s (NJDEP) Bureau of Geographic Information Systems (GIS) Land Use / Land Cover uses aerial imagery to interpret land use patterns. The NJDEP’s LU/LC classification system employs GIS and digital orthophotography data to examine land features within the context of their surrounding landscape. Human activities that impact the land are described as Land Use (LU) and the physical surface of the land is Land Cover (LC).

The Anderson classification system identifies six general categories which are represented in the Atlantic County landscape. They are specified in numerical order, URBAN LAND (1000), AGRICULTURE (2000), FOREST (4000), WATER (5000), WETLANDS (6000), and BARREN LAND (7000). The Land Use Land Cover Map gives a graphical view of where these land classifications are located.

Table 1.17 compares Atlantic County LU/LC data from 1986 to 2012. Urban Lands experienced tremendous growth over the past two decades, particularly between 1995 and 2007, indicative of the rapid pace of development during that time. Based upon the figures provided, it appears that most of the development within this period occurred on lands that were previously categorized as forested, barren, and agriculture.

Agricultural lands have experienced a steady decline since 1986, when it occupied 27,930 acres or 7% of the total County area. In 2012, agriculture consisted of 22,885 acres or 5.8% of the total County area. Approximately 18% of the agricultural land within Atlantic County has diminished, most likely due to the growth of urban lands. It is of utmost importance that the County remain proactive in preserving the remaining farmland within the County.

### Sewer Service Areas/Public Water Supply Service Areas

In Atlantic County, the developed regions of the Barrier Island, Back Bay and Suburban Regions hold the major concentration of sewer and public water supply services. The Sewer Service Area Map overlays the current sewer service areas with the municipal boundaries and existing farmland of Atlantic County. Although not mapped, the public water infrastructure generally follows the sewer service areas. The Sewer Service Area Map clearly shows that the public investment in sewer infrastructure falls within the established areas and the future growth areas of the County.

In western portions of the County, where Pinelands regulations restrict development in sensitive areas, public water and sewer supply is less prevalent. The majority of Pinelands communities are serviced by private wells and septic systems. The exception in the western portion of the County is the existing sewer treatment plants in the Town of Hammonton and Buena Borough. These treatment plants have provided and will continue to provide sewer service to the established population centers around these farming communities.

With the availability of public sewer and water, higher densities and more intense land uses are possible. Without this infrastructure, development will remain at low densities more conducive to the farming industry. Thus, the western portion of the County is more conducive to farming due to its rural nature and lack of public infrastructure such as sewer and water.

There are approximately 3,980 acres of farmland located within the County’s Sewer Service Area (SSA), of which 225 acres have been preserved via SADC Direct Easement Purchase and County Easement Purchase. Another 77 acres of farmland within the SSA are enrolled in the Eight-Year Program. Details regarding these programs are contained within the following Section, County Farmland Preservation Program—Overview.

The remaining 37,700 acres of farmland are located outside of the Sewer Service Area. It should be noted that approximately 13,000 acres of farmland are located within a half-mile of the SSA. Should development pressures increase, farmland located adjacent to the SSA will likely be the first developed. Table 1.18 gives a breakdown of Atlantic County’s existing farmland based upon the Sewer Service Area, preservation program, and acreage.

### Municipal Master Plan and Zoning

Land use and lot size requirements are primarily a function of local governments through their zoning powers. Thus, the decisions that shape land use patterns within the County are primarily made at the local government level through the municipal planning process which involves the adoption of a municipal master plan and corresponding zoning ordinances and land development regulations.

In addition to municipal zoning, the Pinelands Comprehensive Management Plan requires that local land development ordinances and Master Plans conform to the provisions of the Pinelands Comprehensive Management Plan. Thus, the local plans must be consistent with the density requirements and uses identified under each of the Pinelands Management Areas.

Since a majority of Atlantic County’s farmland is within the Pinelands boundaries and master plans and zoning ordinances have to be consistent with the CMP, a review of the permitted uses within the Pinelands Management Areas was conducted to determine which areas allow agriculture uses. The CMP requires that municipalities permit agriculture within the following Pinelands Management Areas.

- Preservation Area District (berry agriculture only)
- Forest Area
- Agricultural Production Area
- Special Agricultural Production Areas (berry agriculture only)

Municipalities have the option of permitting agriculture in all other Pinelands management areas and many do so, particularly in the Rural Development Area.

Table 1.17 Land Use Land Cover (1986 to 2012)

Type	1986 (Acres)	1995 (Acres)	2002 (Acres)	2007 (Acres)	2012 (Acres)	Net Change (1986 to 2012)	
						Acreage	Percentage
Agriculture	27,930	25,214	24,458	23,460	22,885	-5,045	-18.1%
Barren Land	4,735	3,961	4,283	2,900	2,460	-2,275	-48.0%
Forest	150,774	148,580	142,752	138,231	137,428	-13,346	-8.9%
Urban Land	51,061	53,168	59,133	65,553	67,416	16,355	32.0%
Water	34,976	36,356	37,391	39,079	39,152	4,176	11.9%
Wetlands	120,682	123,536	122,798	121,593	121,741	1,059	0.9%
Total	390,158	390,815	390,815	390,815	391,082	-	-

Source: NJDEP Land Use Land Cover

Table 1.18 Farmland and Sewer Service Area

Farmland Type	Within Sewer Service Area	Within 1/2 mile from SSA	1/2 mile and greater from SSA	Total
Existing Farmland	3,981	13,064	24,639	41,684
Preserved Farms	303	2,949	6,459	9,711
SADC Easement	132	891	1,383	2,406
County Easement	94	872	1,989	2,955
Pinelands Development Credits	0	857	2,605	3,462
Eight-Year Program	77	329	482	888

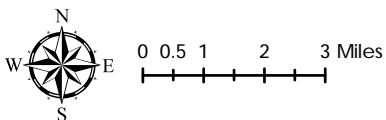
Note: All acreages were calculated using GIS and may not accurately reflect the total recorded acreage of the preserved land.



# Land Use Land Cover (2012)

## Land Use Land Cover (2012)

-  Agriculture
-  Barren Land
-  Forest
-  Urban
-  Water
-  Wetlands



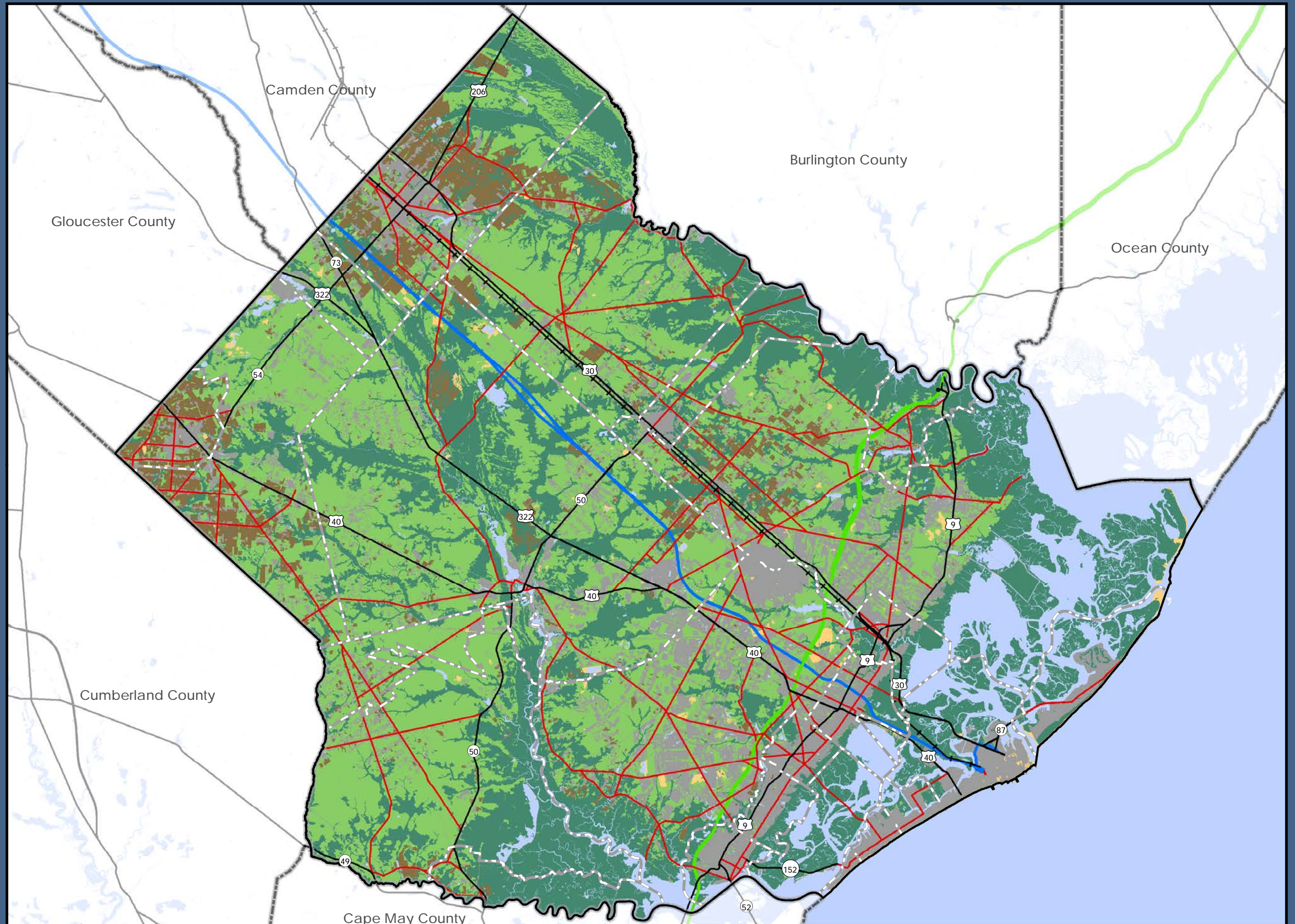
Source: NJDEP, NJGIN, NJOGIS, NJDOT, Atlantic County Office of GIS

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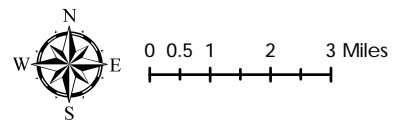
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# Loss of Agricultural Lands (1986-2012)

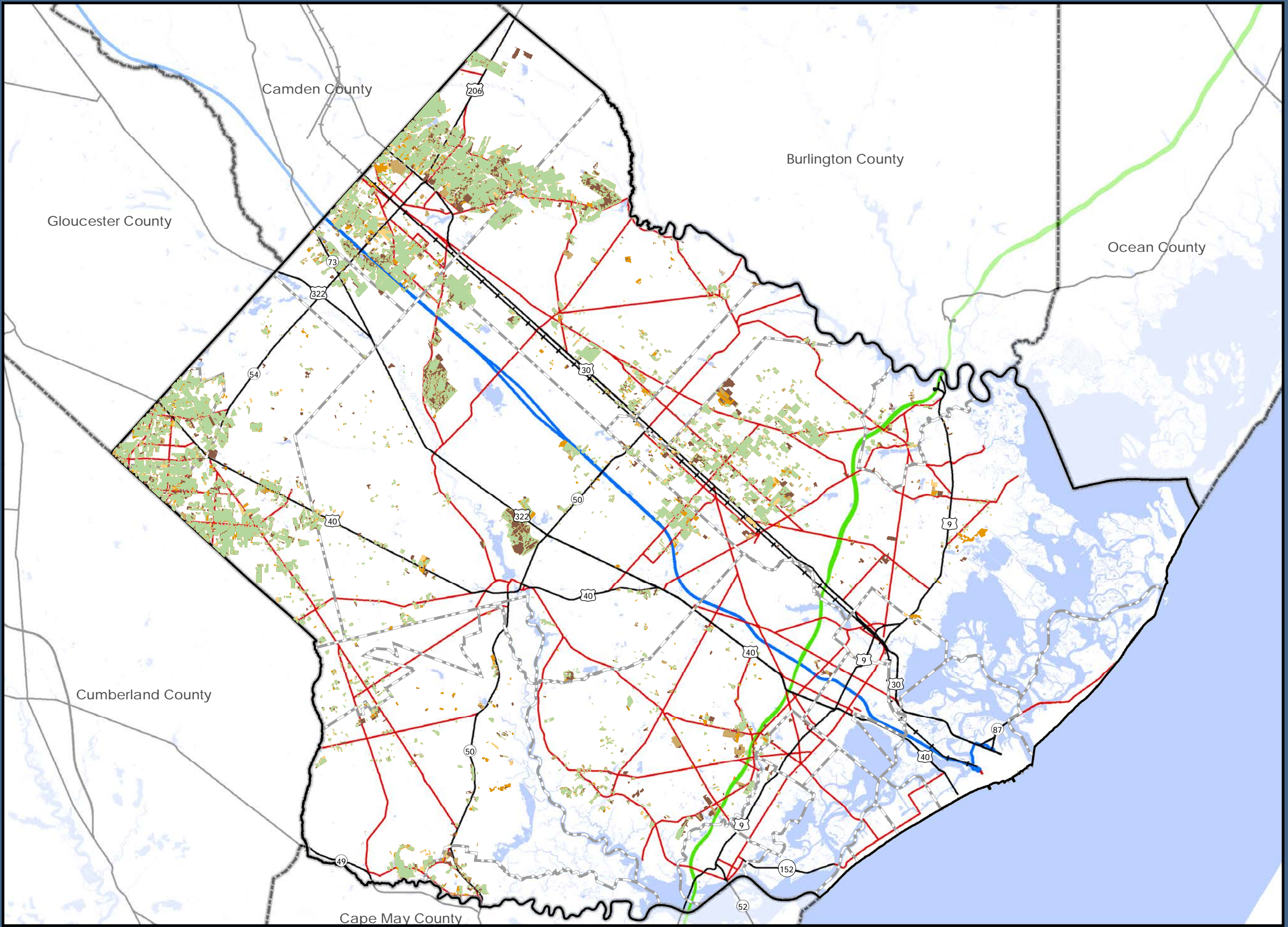
- Existing Farmland (2012 LULC)
- Agricultural Lands Lost by Year
- 2007
- 2002
- 1995
- 1986



Source: NJDEP, NJGIN, NJOGIS, NJDOT, LULC, Atlantic County Office of GIS




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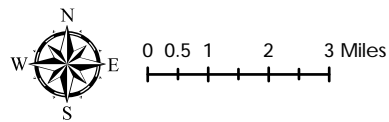
The geodetic accuracy and precision of the GIS data contained in this map has not been developed nor verified by a professional licensed land surveyor and shall not be nor is intended to be used in matters requiring delineation and location of true ground horizontal and/or vertical controls.





### Sewer Service Areas

-  Existing Sewer Service Areas
-  Proposed Pinelands Center Wastewater Service Facility
-  Existing Farmland



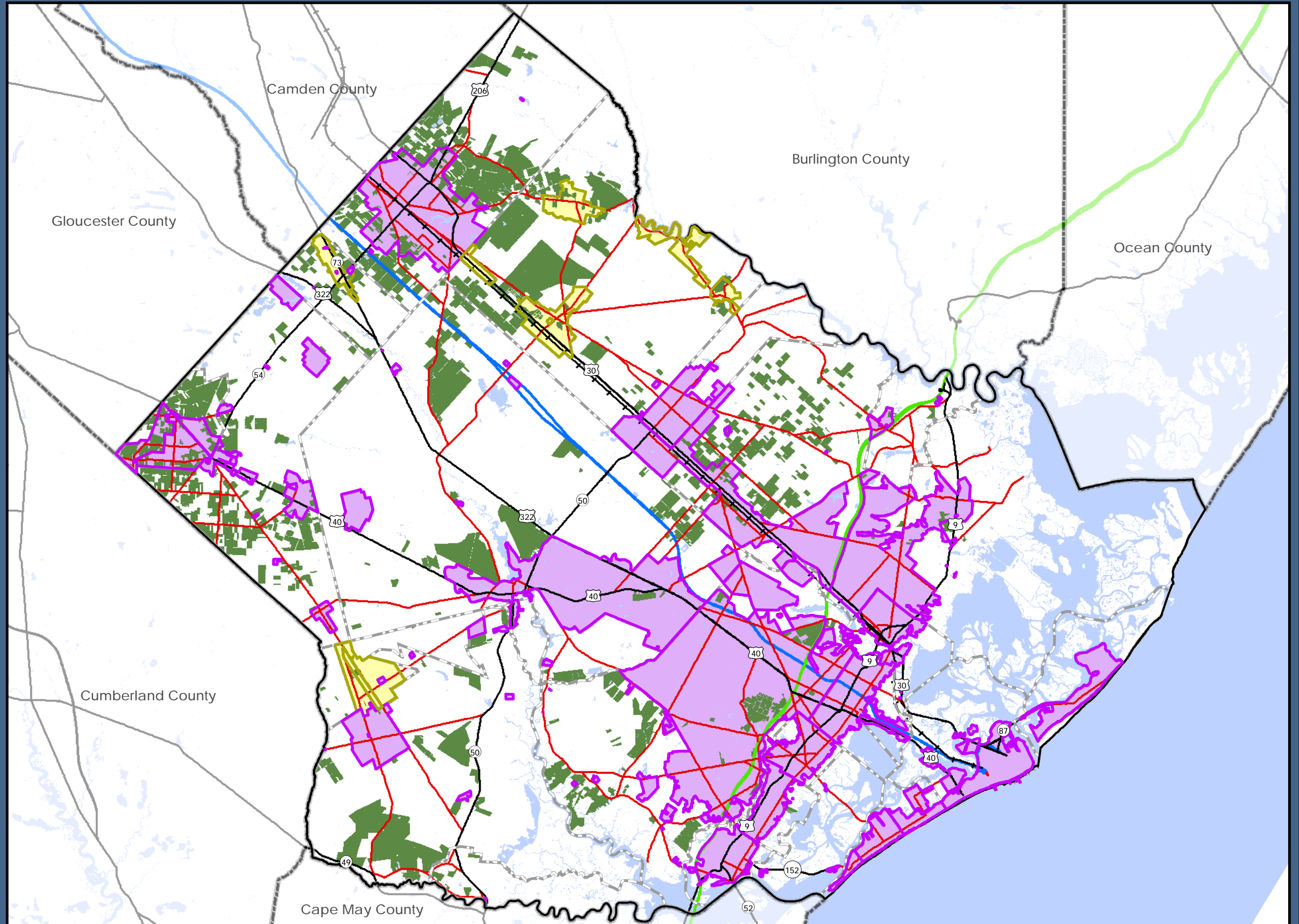
Source: NJDEP, NJGIN, NJOGIS, NJDOT, Atlantic County Office of GIS

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These Pinelands Land Use Management Areas are mapped in the Pinelands Management Areas Map and clearly shows the agricultural zones located primarily in the western portion of the County.

The municipal zoning maps of every municipality within the County were reviewed by the Atlantic County Office of GIS in 2009 and updated by Heyer Gruel & Associates in 2016 to identify which zones specifically agriculture and its related uses (such as the equine and sod industries) as permitted uses. These municipal agricultural zones contain the Agricultural Production Areas, Special Agricultural Production Areas, Forest Areas, and Preservation Areas of the Pinelands. These agricultural uses are permitted uses throughout most of the County's municipalities' zoning ordinances. The acreage for each of these zones within the corresponding municipalities is compiled and shown in Table 1.19. The Zoning Analysis Map also shows the locations of these zones in relationship to the County and existing farmland.

### *Municipal Zoning and Master Plan Summary*

A majority of Atlantic County's farmland is located within the Pinelands boundaries mostly within the Pinelands Agricultural Production Areas, Special Agricultural Production Areas, Forest Areas, and Preservation Areas. Essentially all of the County's farmland is located to the west of the Garden State Parkway.

### *Innovative Planning Techniques*

There are several innovative planning techniques that can be utilized to assist counties and municipalities with the preservation of agricultural lands. These techniques are allowed under a municipality's right to zone and must be adopted into a municipality's master plan and land development ordinance.

#### *Cluster Zoning*

Cluster Zoning allows development at a higher density than normally permitted on a concentrated portion of a tract while the remainder is undeveloped and can be utilized for open space, recreation, forestry, or agriculture. Since the overall density of the development is the same as that of a conventional subdivision, clustering accommodates growth while at the same time allows for the protection of agricultural land. Cluster zoning allows for smaller lot sizes which allows development to be directed toward appropriate locations on a property, such as areas close to roads and other infrastructure, while the remaining portions of the property, which may contain farmland, can be preserved.

The Pinelands Comprehensive Management Plan requires that all residential development of two or more units in the Forest and Rural Development Areas be clustered on one acre lots, with the remainder of the parcel permanently dedicated as open space. The open space may contain active agriculture, which is allowed to continue, and in some instances, expand.

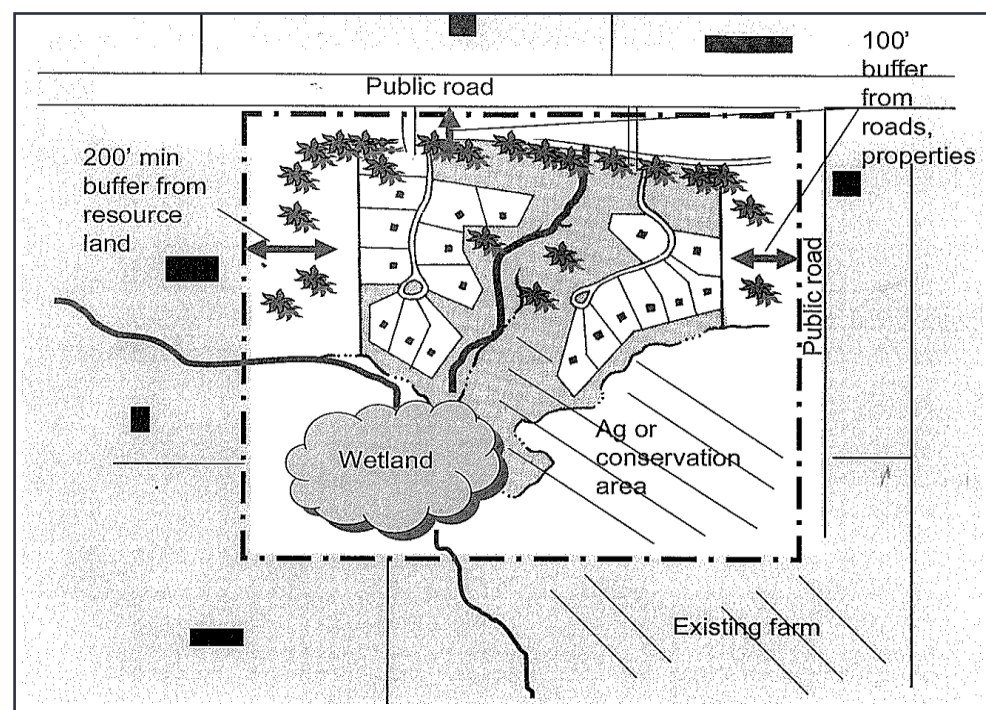
Under cluster zoning, sections of private property are preserved through the municipal land development process which could reduce the need for public funds to purchase open space or development rights.

#### *Noncontiguous Cluster Zoning*

Noncontiguous Cluster Zoning is the same concept as cluster zoning except noncontiguous lands that are under common ownership, can be utilized. Residential development can be concentrated on one parcel while a noncontiguous parcel located somewhere else in the municipality can be preserved. The overall development potential is applied to the receiving parcel while the sending parcel is permanently protected from future development. Noncontiguous clustering allows for development to be moved out of prime agricultural areas and concentrated into more desirable locations for development. This expands the cluster option to the entire municipality instead of being limited to a single property.

#### *Lot Size Averaging*

Lot Size Averaging enables municipalities to provide design flexibility when approving subdivision layouts to allow larger lots sizes in sensitive areas while allowing smaller lots in areas better suited for development. The concept allows the planning board to approve some lots in a subdivision to be less than the minimum lot size, provided that other lots are larger than the minimum and conform to the overall intent of the zoning. Lot size averaging works together with the cluster zoning identified above.



*Example of Cluster Zoning*

*Source: Thurston County Long Range Planning, Cluster Development Long Range Planning, June 20, 2006*



Table 1.19 Municipal Zoning Analysis of Agriculture as a Permitted Use

Municipality	Zone	Acreage
Buena Borough	A-1 Agriculture	325.5
	P-A Pinelands Agriculture	1,775.1
	P-I Pinelands Industrial	77.6
	PR-3 Pinelands Residential Town	137.4
	PR-4 Pinelands Residential Town	274.9
	R-4 Lower Density Residential	1,275.0
	R-5 Lowest Density Residential	179.3
Buena Vista	AP Agricultural Production	2,608.1
	APC Agriculture Commerce	56.3
	API Agricultural Industrial	155.3
	FA1 Forest Area	4,758.4
	FA2 Forest Area	1,720.5
	FA3 Forest Area	1,035.2
	RA Residence Agricultural	1,969.7
	RDI Rural Development Exclusive Industry	658.4
	RDR1 Rural Development Residence	9,499.3
	RDR1I Rural Development Residence/Industry	340.9
	RDR2 Rural Development Residence	849.9
Corbin City	A Agriculture	749.3
	P Pinelands Forest Area	65.6
Egg Harbor City	CRR Commercial Zone	89.9
	PA Preservation Area	2,535.9
	R-20F Forest Residential 20 Acre	2,628.1
Egg Harbor Township	CRW Conservational Recreational Wetlands	6,274.4
	M-1 Light Industrial	5,736.1
	R-1 Residential	4,011.6
	R-2 Residential	1,297.2
	R-3 Residential	1,492.8
	RA Rural Agriculture	6,328.7
	RG-1 Residential	4,977.3
	RG-2 Residential	4,322.8

Table 1.19 Continued

Estell Manor	AP Agricultural Production Zone	908.3
	C Conservation Zone	10,998.0
	R-10 Residence Zone	1,322.2
	R-25 Rural Residence Zone	16,439.8
	R-5 Residence Zone	2,692.9
	RV Village Residence Zone	1,806.3
Folsom	AG Agricultural Production	347.6
	F-20 Forest	2,070.9
	F-30 Forest	1,491.6
	FC Forest Commercial	111.5
	RD Rural Development	786.6
	VI Village Industrial	112.9
VR Village Residential	524.9	
Galloway	AG Agricultural Production District	3,833.9
	FA-WET Forest Area	1,234.6
	FA20 Forest Area	1,850.6
	FA5 Forest Area	233.0
	IRD Industrial Residential Development	363.9
	NR Neighborhood Residential	7,122.4
	PA Preservation Area District	2,680.2
	R Residential	275.5
	R1 Residential	695.1
	R5 Residential	8,277.0
	R5C Residential	218.4
	RC Residential Compatibility District	3,260.7
Hamilton	AG Agricultural	3,006.0
	FA-10 Forest Area	6,760.6
	FA-25 Forest Area	2,263.3
	FA-70 Forest Area	29,400.8
	GA-L Growth Area Lot	3,245.1
	GA-M Growth Area Moderate	2,390.6
	R-22 Residential	314.2
	RD-20 Rural Development	867.3
	RD-4 Rural Development	1,540.8
	RD-5 Rural Development	14,878.3



Table 1.19 Continued

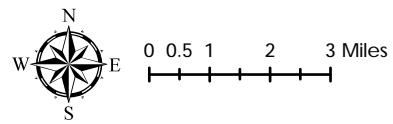
Hammonton	AP Agricultural Production	8,689.9
	AP/CLI Agricultural Production/Compatible Light Industry	168.4
	FA Forest Area	1,386.5
	PA Preservation Area	8,768.6
	R-3 Residential-3	1,320.7
	RR Rural Residential	1,637.7
	SAP Special Agricultural Production	460.5
Mullica	AP Agricultural Production	3,425.9
	DV Devonshire Village	394.5
	EV Elwood Village	1,287.1
	EV Elwood Village Center	447.6
	FAR Forest Area Residential	18,434.1
	FARR Forest Area Residential Receiving	2,889.5
	NV Nesco Village	524.1
	NVC Nesco Village Center	418.0
	PA Preservation Area	4,701.0
	SV Sweetwater Village	1,074.4
	WV Weekstown Village	371.0
Northfield	R-1 Residential	831.3
	R-1A Residential	117.3
	R-2 Residential	380.3
	R-3 Residential	101.1
	R-4 Residential	18.6
Port Republic	AR Agricultural-Residential	514.3
	PPA Pinelands Preservation Area	1,432.4
	PVA Pinelands Village Agricultural	145.3
	PVR Pinelands Village Residential	63.8
Weymouth	PFA-10 Pinelands Forest Area	1,956.7
	PFA-20 Pinelands Forest Area	1,990.3
	PFA-25 Pinelands Forest Area	346.4
	PVR Pinelands Village Residential	1,637.0
	R-R Rural Residential	1,170.2
<b>TOTAL</b>		<b>264,382.8</b>

All acreages of zones were calculated in GIS.



# Municipal Zoning Analysis Relating to Agriculture as a Permitted Use

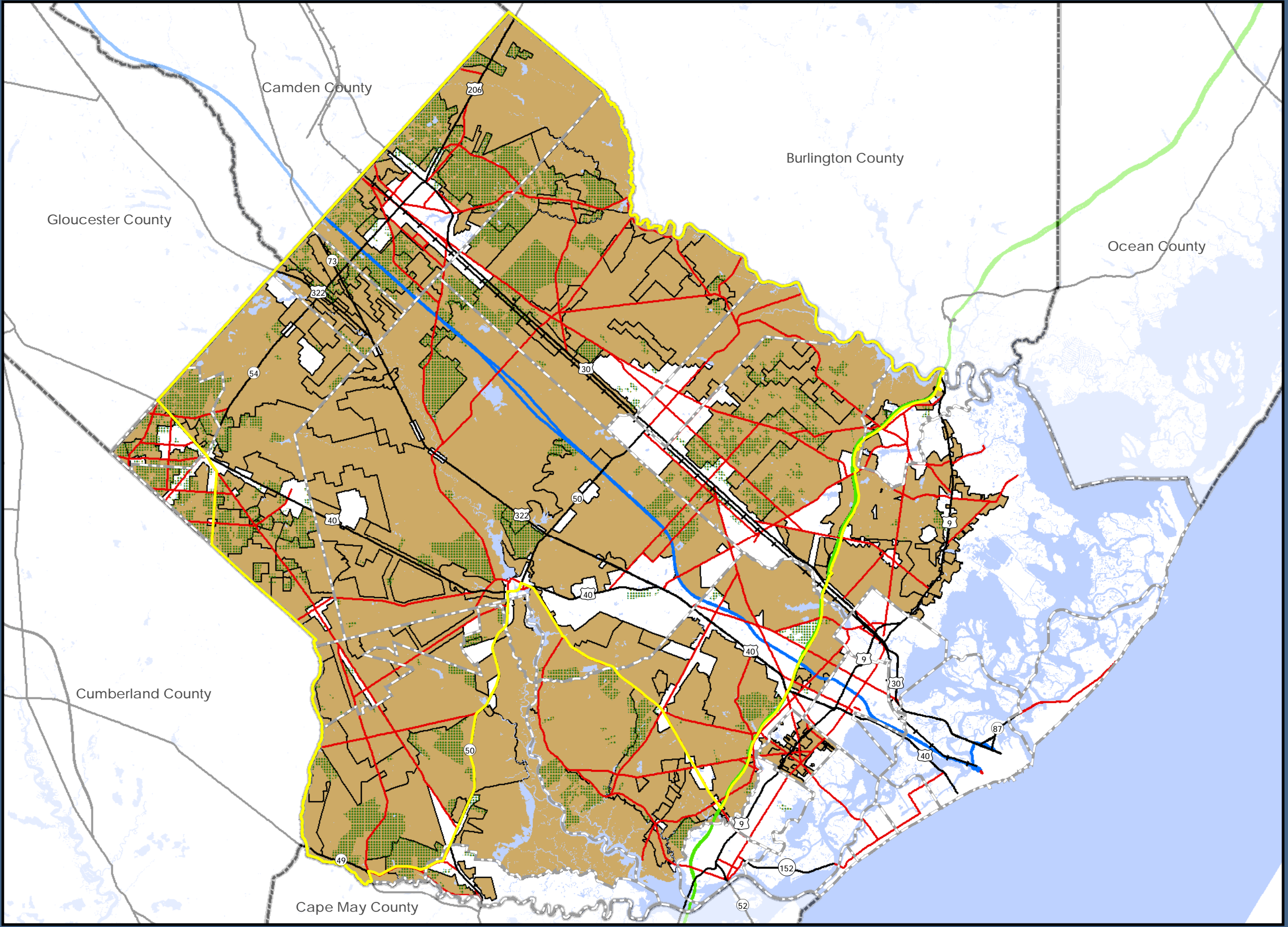
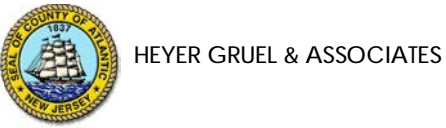
-  Existing Farmland
-  Municipal Zoning Permitting Agriculture



Source: NJDEP, NJGIN, NJOGIS, NJDOT, Atlantic County Office of GIS

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## Development Pressures and Land Values

### Development Pressures

Between 2000 and 2015 a total of 19,543 residential building permits were authorized in the County (see Chart 1.5). While this equates to approximately 1,300 annually, the average number of residential building permits issued saw a steep decline between 2008 and 2015 when only 490 permits were issued per year. The peak number of building permits issued occurred in 2003 when a total of 2,382 permits were issued (see Chart 1.6). The sharp decline shown from 2008 to 2015 reflects the collapse of the housing market and global economic recession.

In addition to development growth, the County has also worked to preserve farmland throughout the area. Since 1989 Atlantic County has preserved nearly 3,000 acres of farmland (see Chart 1.7). The majority of which (2,675.4 acres) was preserved between 2005 and 2009. Due to limitations on funding and lack of interest, however, no farms were preserved between 2010 and 2013. Since 2014, an additional 94.3 acres were preserved.

Prior to 2008, the County experienced steady and dependable development. During this time, the County was also actively

preserving farmland. With the global economic recession, however, development pressures declined along with the need and interest to preserve farmland. In 2014, the County began to see both development and preservation again. Building permits increased for the first time since 2003, and the interest to preserve farmland rose with the preservation of two additional farms: one in 2014, and one in 2015.

### Land Values

The cost of preserving land has drastically fluctuated. Since 2000, the County has spent approximately \$3.8 million on farmland preservation easements. In many instances, the State Agricultural Development Committee provided cost-share resources, resulting in an additional \$6.3 million of funding.

The first easement purchased for farmland preservation was in 1989. The 1989 per-acre-value was \$1,085. The next farm wasn't preserved until 2005, with a per-acre-value of \$1,700. The per-acre-value increased to \$8,005 per acre in 2007, and again it increased significantly in 2008 to \$12,500. Excluding the outlier of \$12,500 per-acre, the average per-acre-value since 2005 is approximately \$5,320 per acre (see Table 1.20).

Table 1.20 Farmland Preservation Since 1989

Year	Municipality	Easement Acreage	Per-Ace Value	Easement Purchase Price	SADC Cost Share		County Cost Share	
					Cost	Percent	Cost	Percent
1989	Hammonton	189.6	\$1,085.00	\$205,838.12	\$164,671	80%	\$41,168	20.0%
2005	Hamilton Township	1,450.0	\$1,700.00	\$2,465,521.91	\$1,870,870	76%	\$594,652	24.1%
2006	Hammonton/Mullica	38.3	\$3,771.00	\$144,546.77	\$102,059	71%	\$42,487	29.4%
2007	Hammonton	218.8	\$6,700.00	\$1,465,654.10	\$928,128	63%	\$537,526	36.7%
2007	Buena Borough	31.1	\$8,005.00	\$248,800.00	\$0	0%	\$248,800	100.0%
2007	Mullica Township	407.4	\$5,356.00	\$2,181,996.91	\$1,457,652	67%	\$724,345	33.2%
2008	Mullica Township	65.4	\$5,850.00	\$382,677.75	\$250,212	65%	\$132,465	34.6%
2008	Mullica Township	107.1	\$6,159.00	\$659,715.13	\$426,260	65%	\$233,455	35.4%
2008	Mullica Township	62.9	\$2,500.00	\$157,195.00	\$115,581	74%	\$41,614	26.5%
2008	Hammonton	119.2	\$5,846.00	\$696,702.90	\$455,610	65%	\$241,093	34.6%
2008	Hammonton	63.2	\$5,850.00	\$369,831.15	\$241,813	65%	\$128,018	34.6%
2009	Hamilton Township	20.0	\$12,500.00	\$250,475.00	\$0	0%	\$250,475	100.0%
2009	Hammonton	19.0	\$6,421.00	\$121,743.11	\$76,431	63%	\$45,312	37.2%
2009	Hammonton	73.2	\$6,354.00	\$469,706.23	\$295,366	63%	\$174,340	37.1%
2014	Mullica Township	58.4	\$3,888.00	\$227,059.20	\$0	0%	\$227,059	100.0%
2015	Hamilton Township	35.9	\$6,100.00	\$218,813.10	\$0	0%	\$218,813	100.0%
<b>TOTALS</b>		<b>2,959.4</b>	-	<b>\$10,266,276.38</b>	<b>\$6,384,652.47</b>	<b>62%</b>	<b>\$3,881,623.91</b>	<b>37.8%</b>

Source: Atlantic County Department of Planning

Please note: The table above represents only the County preserved easements and does not represent all the preserved farmland in the County.

Chart 1.5 New Privately Owned Residential Housing Units Authorized by Permit- Cumulative

Source: NJ Department of Workforce and Labor

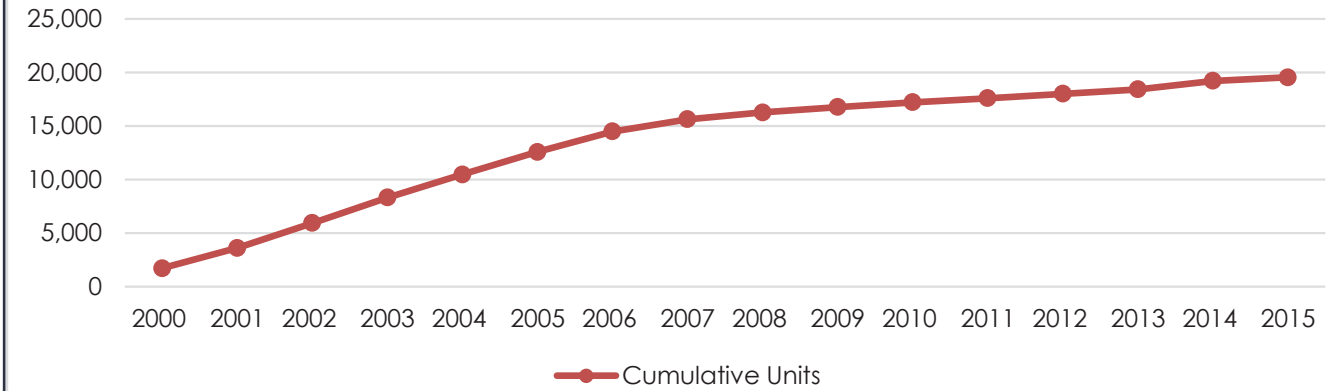


Chart 1.6 New Privately Owned Residential Housing Units Authorized by Permit- Annual

Source: NJ Department of Workforce and Labor

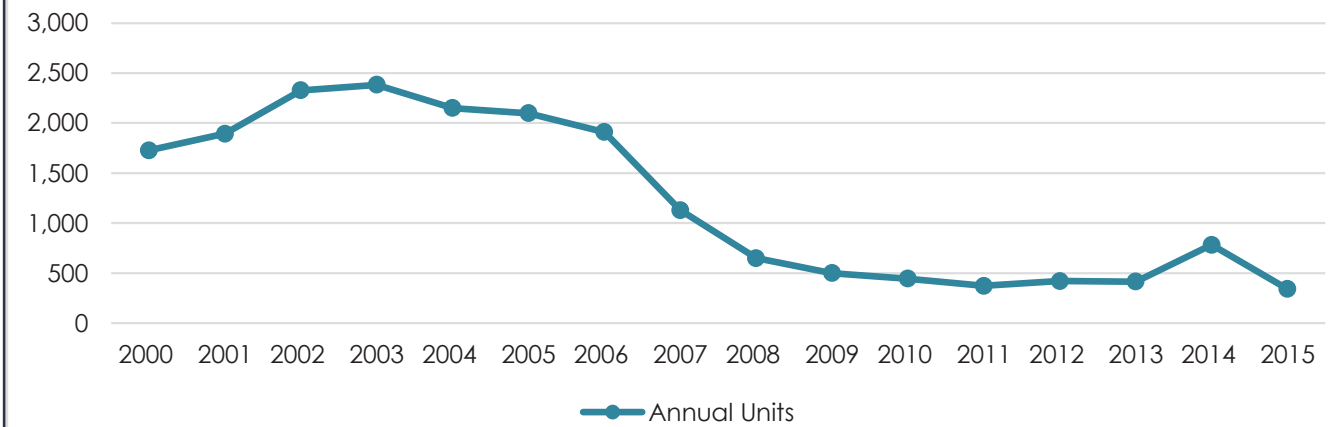
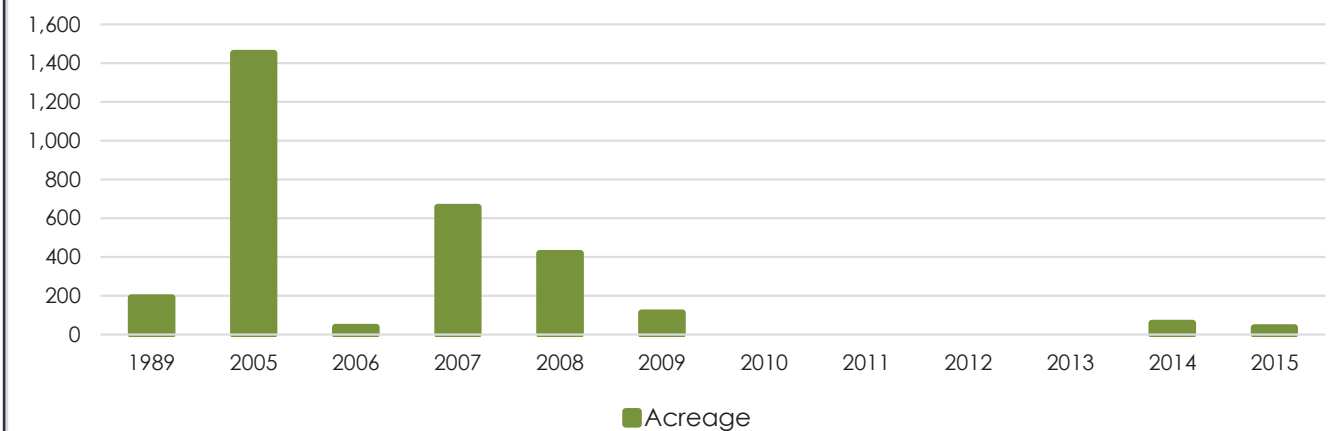


Chart 1.7 Farmland Preserved in Acres

Source: Atlantic County Department of Planning





### *Transfer of Development Rights*

Transfer of Development Rights (TDR) is a planning program which involves directing development into a desired location, referred to as “receiving area”, and restricting development in another area, referred to as the “sending area”. TDR is designed to allow density bonuses in the receiving area by using the development rights purchased from property owners in the sending zone. Thus a developer may build at a greater density than is normally allowed in a zoning district. In return the property owner in the sending district is compensated for development rights, and is prohibited from developing his land by an easement. The landowner retains ownership, including the right to use the land for purposes such as farming and forestry.

This technique is authorized under the Municipal Land Use Law (MLUL) under State Transfer of Development Rights (40:55D-137 et seq.). The MLUL identifies the necessary elements of a Development Transfer Plan.

In addition, the Pinelands Comprehensive Management Plan (CMP) requires municipalities to include provisions that implement the Pinelands Development Credit Program. This is similar to a TDR program where Pinelands Development Credits (PDCs), or density credits, are purchased from the Preservation Area, and the Agricultural Production Area and Special Agricultural Production Area to secure a density bonus in Regional Growth Areas. The owner of the Land from which the credit has been purchased deed restricts the use of their land in perpetuity and the density bonus on the land where the Pinelands Development Credits will be used does not exceed the upper limits of the density range identified in the CMP. Agricultural land owners within the County should take advantage of this program. The agricultural land is ultimately preserved while the PDCs are transferred to the sending area/ Regional Growth Areas. Within Atlantic County, these growth areas are located in Hamilton Township, Egg Harbor Township, and Galloway.

Beyond the PDC program, there are limited opportunities for TDR within the County due to the County’s regulatory framework. The majority of the County is dominated by land use regulations from both Pinelands and CAFRA. However, TDR areas to be considered as sending areas can include Buena Borough, Buena Vista Township, Port Republic, Estell Manor, and environmentally sensitive/rural portions of Egg Harbor Township. Receiving areas should include portions of Galloway Township, which has experienced and continues to experience growth, developed and developing portions of Egg Harbor Township, Egg Harbor City, in addition to the Bay Communities and Barrier Island municipalities.

Transfer of Development Rights and the Pinelands Development Credit Program are discussed in greater detail in Section 4 of this Plan.

## IV. COUNTY FARMLAND PRESERVATION PROGRAM—OVERVIEW

As populations continue to increase, agricultural lands throughout New Jersey are being lost to residential and commercial development. As new residential developments appear, businesses needed to serve those residents also enter the area. As the agricultural industry faces increased threats from development, the retention of agricultural lands has become a priority for Atlantic County and its preservation partners.

To date, approximately 100,000 acres of land have been preserved throughout Atlantic County, through Federal, State, Local and Non-Profit open space and farmland preservation endeavors. This represents approximately one-third of the County’s land mass and does not take into consideration the amount of lands that are restricted from development due to regulatory limitations. Of this amount, approximately 8,100 acres of farmland have been preserved, through County and State Farmland Preservation Programs, as well as the sale of Pinelands Development Credits. The Preserved Farmlands Map displays preserved lands throughout Atlantic County.

To ensure that the most prolific and agriculturally productive lands are permanently protected, preservation partners must identify those areas that are most suitable for sustained agricultural activity. These lands will become the primary focus of preservation efforts.

### *Agricultural Development Areas*

An Agricultural Development Area (ADA) is an area that has been identified as having the potential for long-term agricultural viability. Within these areas, identified by County Agricultural Development Boards (CADBs) and certified by the State Agricultural Development Commission (SADC), agriculture shall be the preferred, but not necessarily exclusive, use of that land.

### *ADA Designation Criteria*

Statutory criteria, per N.J.S.A. 4:1C-18 and N.J.A.C. 2:76-1:

1. Lands which are currently in agricultural 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;
2. Lands must be reasonably free of suburban and conflicting commercial development
3. ADAs cannot be comprised of greater than 90 percent of the agricultural land mass of the county;
4. Incorporates any other characteristics deemed appropriate by the board.

Based upon the statutory criteria outlined above, the Atlantic County CADB recently

updated its ADA map. All municipalities with lands in agricultural production were analyzed to determine their suitability for continued agricultural activity. The Atlantic County CADB also considered various factors, including:

1. Farmland Assessment data
2. Distribution of soils
3. Local land use plans and regulations
4. Accessibility to public water and sewer systems
5. Current Management Areas of the Pinelands Comprehensive Management Plan

Areas were analyzed utilizing GIS data layers, aerial photography, and statistical data generated through various sources outlined in previous sections of this Plan. Based on these factors, Atlantic County identified the lands depicted in the Agricultural Development Areas Map.

### *Permanent Preservation to Date by Program and Municipality*

As of September 2016, approximately 8,618.6 acres of land are permanently dedicated for agricultural use. While this number represents approximately 21% of the land currently farmed in Atlantic County (based on 2014 tax assessment data), preservation efforts remain a priority.

Various programs have been developed to implement farmland preservation efforts. The most popular method of farmland preservation in Atlantic County has been through the acquisition of development easements by both the County and the SADC. A brief summary of all available programs follows.






### *County Easement Purchase*

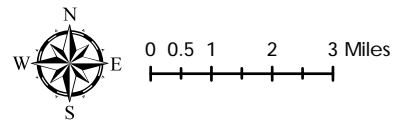
Under this program, landowners apply to sell the development rights to their farmland to the County. The landowner retains ownership of the land, and it is still farmed, but a Deed of Easement is recorded at settlement that restricts use of the land to agricultural purposes, preventing any future non-agricultural development. The deed restriction runs with title to the land, binding all future property owners to its provisions. To date, all permanent farmland preservation initiatives undertaken by Atlantic County fall under this program.

From 1992 to 2015, Atlantic County preserved 16 farms totaling 2,959.4 acres. Table 1.21 presents a list of farms preserved through the County Easement Purchase Program to date. Prior to the implementation of the SADC’s Planning Incentive Grant (PIG) Program, discussed below, Atlantic County was eligible for and received cost-share



### Preserved Farmland

-  SADC Easement Purchase
-  County Farmland Easement Purchase
-  PDC Restricted
-  8-Year Program
-  Existing Farmland



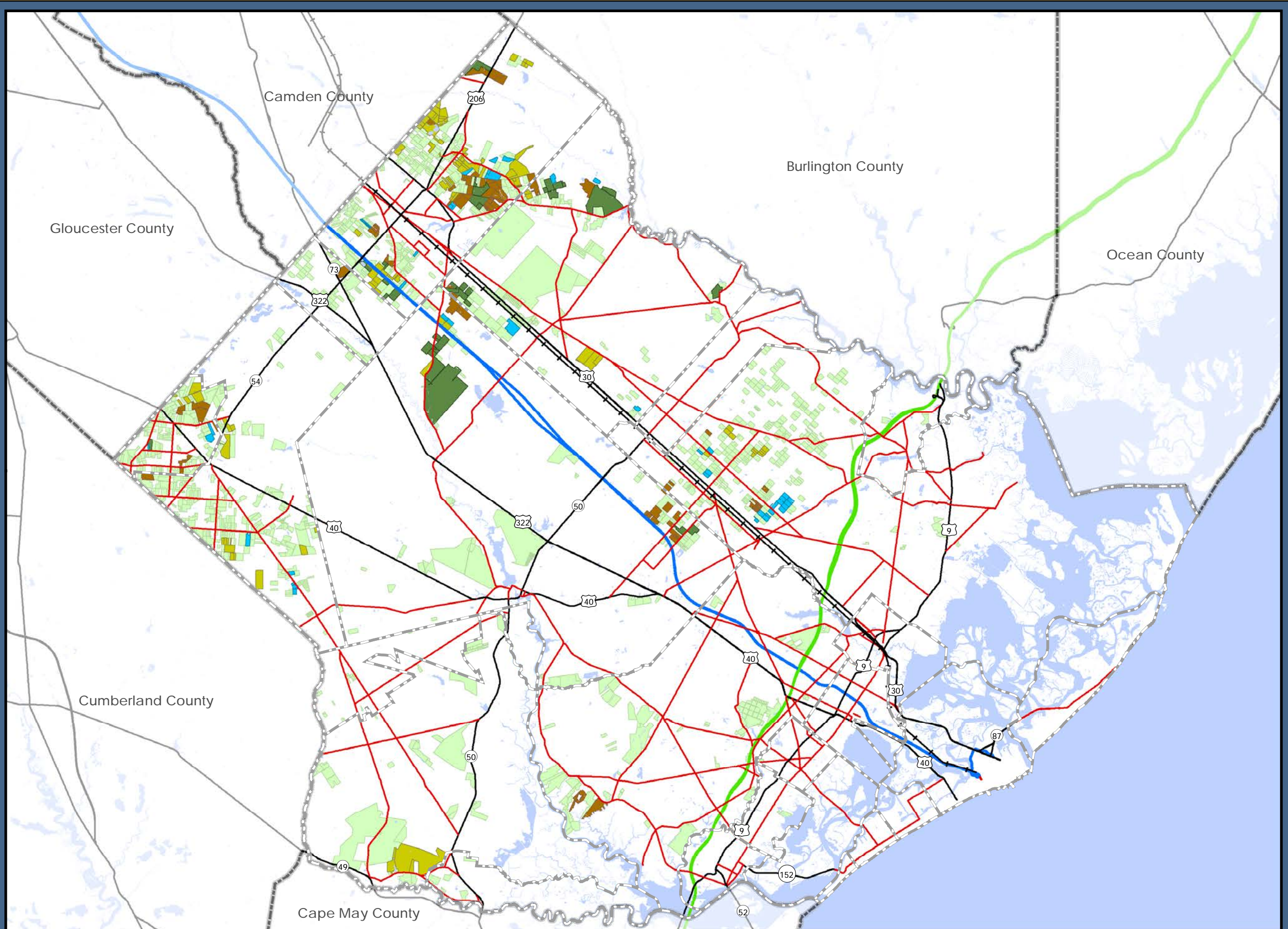
Source: NJDEP, NJGIN, NJOGIS, NJDOT, Atlantic County Office of GIS, SADC

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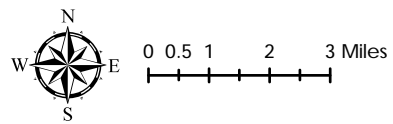
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# Agricultural Development Areas

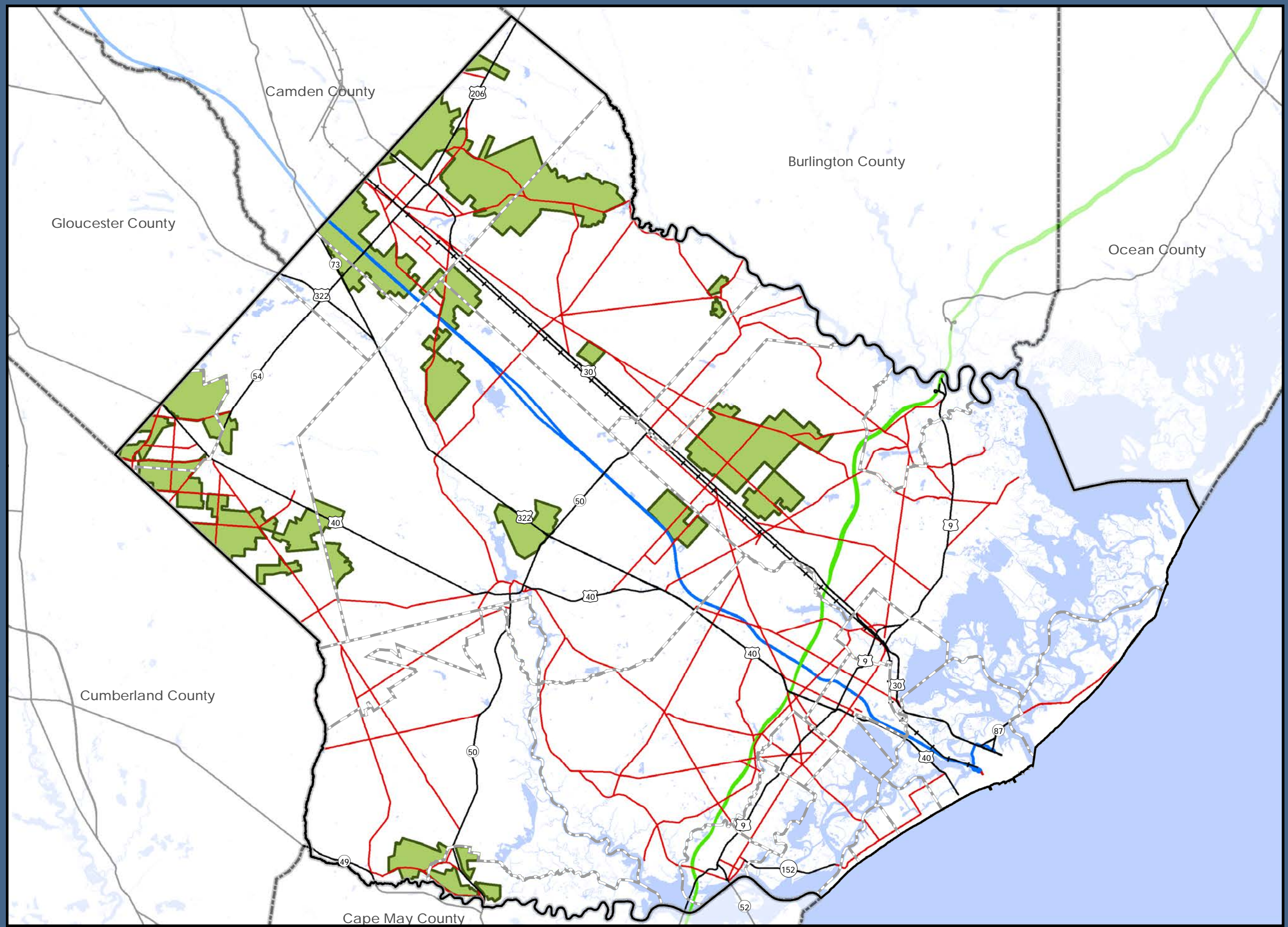
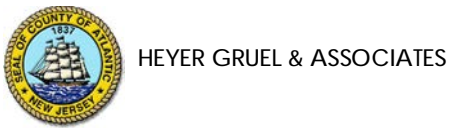
 Agricultural Development Areas



Source: NJDEP, NJGIN, NJOGIS, NJDOT, Atlantic County Office of GIS

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grants from the SADC for a significant portion of the costs associated with County easement purchases, averaging roughly 58% of the purchase price.

**County Planning Incentive Grants**

This program was developed by the State to encourage comprehensive, long-term farmland preservation planning at the county level. In 2007, the SADC adopted new rules that require counties seeking grant funds to develop comprehensive farmland preservation plans in an effort to promote strategic preservation planning. These plans result in county preservation initiatives that complement surrounding land uses and resource conservation.

Within designated Agriculture Development Areas, counties identify Project Areas, within which preservation efforts will be concentrated. Within these Project Areas, individual Target Farms are identified for preservation. In previous years, preservation efforts were undertaken on more of an individual farm basis, whereas the PIG program takes a long-term, strategic approach.

In order for the county to be remain eligible for matching SADC funds, the County will file an annual application to the State which will include the project areas, targeted farms, and preserved farms. An analysis of the soil productivity, funding information, cost share requirements, and County policies are also part of the annual application process.

This Comprehensive Farmland Preservation Plan is being developed in accordance with the SADC’s guidelines, as a requirement for future funding eligibility for Planning Incentive Grant funding.

**Municipal Planning Incentive Grants**

This program is similar to County PIGs, but at the municipal level. Grants are provided by the SADC to municipalities that undertake long-term preservation planning. Municipal PIGs require the adoption of a Farmland Preservation Plan, creation of an Agricultural Advisory Board, and a financial commitment for preserving farmland. In addition, participating municipalities must adopt Right to Farm Ordinances that are consistent with the SADC model ordinance. Currently, no municipalities in Atlantic County have begun farmland preservation initiatives at the local level, and none has developed a Comprehensive Farmland Preservation Plan.

**State Agriculture Development Committee Direct Easement Purchase**

In this program, SADC directly purchases development rights from landowners. This program seeks to preserve priority farms that are strategically located in each County. In Atlantic County, a farm must have a minimum acreage of 50 acres to be considered a priority farm. The farm is then ranked based upon a number of factors including soil quality, proportion of tillable acres, proximity to other preserved farms, and local support for agriculture.

As of September 2016, 40 farms totaling 2,291.449 acres have been preserved directly through the State. Table 1.22 and the Preserved Farmland Map presents a list of farms preserved directly through the SADC to date.

**State Agriculture Development Committee Fee Simple Purchase**

Through this program, SADC purchases farms outright from willing sellers. The SADC then deed-restricts the farms for agricultural use and resells them at auction to the highest bidder. As with all farmland preservation programs, this option allows farmers the opportunity to acquire land for a considerable value, as the prices reflect only the value of the agricultural land, not development potential. To date, no farms in Atlantic County have been acquired in fee simple by the SADC.

**Non-Profit Purchase**

Typically, non-profit preservation efforts are focused on the conservation of natural resources and open space, but grants are available to assist non-profit organizations that pursue farmland preservation. The SADC offers grants to non-profit organizations to fund up to 50% of the fee simple or development easement value of farmland. Currently, there are no non-profit organizations that have undertaken farmland preservation efforts in Atlantic County

**Agricultural Conservation Easement Program**

The Agricultural Conservation Easement Program (ACEP) is a voluntary program of the Natural Resources Conservation Service (NRCS) whose purpose is to provide financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits. It provides matching funds to help purchase development rights to keep productive farm and rangeland in agricultural uses. NRCS provides up to 50 percent of the fair market value of the conservation easement. Eligible partners include state and local governments, non-governmental organizations, and American Indian tribes that have farmland, rangeland or grassland protection programs. The program is designed to limit non-agricultural uses of the land.

For further information, visit: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/acep/>

**Transfer of Development Rights (TDR)**

Transfer of Development Rights is a planning tool that allows the transfer of development potential from areas deemed critical for preservation to areas designated for growth. Development rights can be purchased from lands within designated preservation areas, called ‘sending areas.’ These rights, or credits, are then utilized to increase density in areas slated for development, called ‘receiving areas.’

Table 1.21 Preserved Farmland – County Easements

Property	Block	Lot	Municipality	Acreage Preserved	Year Acquired
DaCosta Fruit Farm	3514 / 3602 / 3801	11, 12, 15 / 6, 8, 10, 12, 13, 15 / 4	Mullica Twp	189.6	1992
Atlantic Blueberry	62 / 63 / 74 / 75 / 225 / 226	4-6 / 1.01-1.03 / 3 / 3, 4, 7 / 1, 6 / 1	Hamilton Township	1450.0	2005
Martinelli/Columbia Properties	1501 / 5803	5, 6 / 6, 7	Hammonton/ Mullica Twp	38.3	2006
Trust of John Bertino	5302 / 4901 / 5402	7 / 25, 26 / 1	Hammonton	218.8	2007
Arpino / Marolda	126	34	Buena Borough	31.1	2007
Variety Farms	501 / 601	1, 2 / 6, 7	Mullica Twp	407.4	2007
Anthony and Edith Merlino	903 / 1001	2 / 37	Mullica Twp	65.4	2008
Carmen & Mary Jane Merlino	905 / 904 / 502	1 / 2 / 6	Mullica Twp	107.1	2008
Robert and Pearl Hagaman	5301	11 / 13	Mullica Twp	62.9	2008
Macrie/County Line Blueberry	5901 / 5605	2 / 3.01	Hammonton	119.2	2008
Anthony Berenato	502 / 401	5, 3.01 / 3, 5	Hammonton	63.2	2008
Edward and August Wuillermin	601	5	Hammonton	19.0	2009
Mildred Wuillermin	601 / 701	7 / 3	Hammonton	73.2	2009
Arnold Glen Liepe	1168	4.01	Hamilton Township	20.0	2009
Frank L. Burke III LLC	903	4 / 5 / 6/	Mullica Twp	58.4	2014
Alwyn (Bud) & Joan Liepe	1141	6	Hamilton Township	35.9	2015



In Atlantic County, TDR was first authorized in 1985 with the creation of the Pinelands Development Credit (PDC) Program. The Pinelands Comprehensive Management Plan (CMP) was developed to control growth within the Pinelands region. As certain lands were targeted for preservation, the value of those lands decreased due to the loss of their development potential. As a way to compensate landowners for the loss of land values, the PDC Program was established.

Landowners within Pinelands designated Preservation Areas, Agriculture Production Areas, and Special Agriculture Production Areas can apply to the Pinelands Commission for a Letter of Interpretation, which certifies the number of PDCs assigned to their lands. The Credits can then be sold through the Pinelands Development Credit Bank, which tracks the sale and purchase of PDCs, to increase density in receiving areas. Each quarter-credit is equal to one right. Therefore, one PDC can be used to construct four houses in designated Regional Growth Areas.

According to the Pinelands Development Credit Bank's 2016 Annual Report, Table 1.23 represents the acres preserved through the sale of PDCs in sending areas, by municipality in Atlantic County, as of June 2016.

Approximately 3,462 acres of farmland have been preserved within the County in the Agricultural Production Area, Special Agricultural Production Area, and Forest Area.

Based on information provided in the Pinelands Development Credit Bank 2016 Annual Report, the average sale price per right, statewide, from July 1, 2015 to June 30, 2016 was \$8,326. Because a large portion of Atlantic County is located within the Pinelands, the PDC program plays a significant role in farmland preservation. Appraisers valuing farmland located in Preservation Areas, Agricultural Production and Special Agricultural Production Areas must consider the current value of PDCs. At the height of the real estate market, the value of PDCs increased greatly, which proved beneficial to local preservation efforts. However, as land values throughout the region have witnessed a marked decrease in recent years, PDC values have also fallen. Landowners now are more reluctant to enter the program, knowing that PDC values are significantly lower than in previous years.

In an effort to make preservation a more attractive option for landowners within these areas, the SADC developed a formula that considers various factors relevant to individual farm properties in determining an easement value. The valuation process first recognizes only the portion of the property by which Pinelands Development Credits allocated have not been severed and on which Pinelands restrictions have not been placed. The next step is to determine the base value of the qualifying property by identifying whether the property consists of uplands, wetlands or a combination of both. Table 1.24 on the following page breaks down the base value of a property based upon the type of restriction placed on the land.

*Table 1.23 Total Acres Preserved by PDCs*

Municipality	Total Acres Preserved	By Pinelands Area		
		PAD	APA	SAPA
Buena Borough	272	0	272	0
Buena Vista Twp	453	0	453	0
Estell Manor City	709	0	709	0
Folsom Borough	6	0	6	0
Galloway Township	581	223	359	0
Hamilton Township	297	0	297	0
Hammonton Town	1,840	0	1,696	144
Mullica Township	569	197	372	0
<b>Totals</b>	<b>4,727</b>	<b>420</b>	<b>4,164</b>	<b>144</b>

*Source: 2016 Pinelands Development Credit Bank 2016 Annual Report*

LEGEND:  
 PAD = Preservation Area District  
 APA = Agricultural Production Area  
 SAPA = Special Agricultural Production Area

*Table 1.22 Farmland Preserved by SADC through Direct Purchase*

Municipality	Farm Name/Original Owner	Acreage	Year Acquired
Buena Borough	Castellari, Doug & Maria	34.87	11/14/2002
Buena Borough	Castellari, Edward G. & Lucy R.	18.132	3/26/2002
Buena Borough	Consalo Farms Inc. II	33.506	2/19/2009
Buena Borough	Consalo, Vincent Jr. I	66.385	2/19/2009
Buena Borough	John, Jack Baylis	19.021	5/26/2004
Buena Borough	Ralph Donato	88.5	3/24/2003
Buena Vista Twp.	Galbiati, Arnold	57.771	6/30/2009
Egg Harbor Twp.	(Erickson) Fleming, George & Cynthia	62.351	7/21/2011
Egg Harbor Twp.	(Erickson) Fleming, George & Cynthia	131.625	11/30/2010
Folsom Borough	Eckhardt, George J.	65.913	5/26/2004
Galloway Twp.	Anthony J. Vaccarella	15.001	6/11/2004
Galloway Twp.	Brown, Arthur R. & Carolyn	18.715	12/17/2010
Galloway Twp.	Mealo, Frank & Julie/Glick, Joan	58.432	2/3/2009
Galloway Twp.	Morrongiello, Paul	37.279	8/13/2008
Hamilton Twp.	Liepe Brothers, Inc	79.155	5/2/2003
Hamilton Twp.	Liepe Brothers, Inc.	142.235	5/2/2003
Hamilton Twp.	Liepe, Matthew & Lisa	39.851	5/2/2003
Hamilton Twp.	Macrie, Paul and Joan (PN)	124.957	5/30/2003
Hamilton Twp.	Morrongiello, Paul	13.142	8/13/2008
Hammonton Town	Bertino Brothers	123.25	5/2/2003
Hammonton Town	Betts & Betts LLC	24.146	6/15/2004
Hammonton Town	Caruso, Emma	1.265	10/7/2003
Hammonton Town	Clark, Russell P. & Patricia	61.392	2/27/2008
Hammonton Town	Del Rossi	116.95	2/6/2003
Hammonton Town	Del Rossi, Jr., Thomas C. & William	177.26	2/6/2003
Hammonton Town	Franchetti, Daniel & Evelyn	34.048	11/9/2004
Hammonton Town	Glossy Fruit Farm (D. Rizzotte, Corpora	34.917	6/19/2003
Hammonton Town	Helen & George Bartmer	72.69	9/11/2003
Hammonton Town	LaManna, William G.	99.093	4/17/2003
Hammonton Town	Lee Parisi	14.837	3/24/2010
Hammonton Town	Macrie, Paul, Jr. & Michael\DaCosta Blu	79.232	5/30/2003
Hammonton Town	Macrie, Paul, Nick & Michael (PN)	58.829	4/14/2004
Hammonton Town	Martinelli, Gene & Kelly (Columbia Cran	24.358	11/6/2003
Hammonton Town	Merlino, Anthony Jr., Anthony Sr., Edit	35.458	4/30/2009
Hammonton Town	Siligato, Joseph	28.36	5/21/2003
Mullica Twp.	Bertino Brothers	101.36	5/2/2003
Mullica Twp.	Caruso, Emma	60.387	10/7/2003
Mullica Twp.	Franchetti, Daniel L., Sr., Evelyn & Dan	12.415	11/9/2004
Mullica Twp.	Macrie, Paul and Joan (PN)	19.413	5/30/2003
Mullica Twp.	Merlino, Anthony Jr., Anthony Sr., Edit	4.948	4/30/2009



Table 1.24 Determining Base Value of Development Easement in Pinelands Area

Development Easements			Deed Restriction Limiting Impervious Coverage		
Eligible PDCs	Acres	Base Value	Eligible PDCs	Acres	Base Value
2	39	\$1,600/acre	2	39	\$1,800/acre
0.2	39	\$160/acre	0.2	39	\$180/acre
1	39	\$800/acre	1	39	\$900/acre

Note: If a property contains both uplands and wetlands, a weighted formula shall be utilized based upon the percentage of uplands and wetlands.  
Source: NJAC 2:76-19.4

The base value of a property can also be adjusted based upon several factors including but not limited to:

- Regional Environmental Quality Areas
- Site-Specific Environmental Quality Factors
- Scenic Corridors and Access to Markets
- On-Site Septic Suitability
- Agriculture Viability
- Special Importance Environmental Resource Factors
- Wetlands and Wetland Transition Areas

While increasing the base value of a property will allow the landowner to receive a larger sum, in no instance will the adjusted base value of a development easement exceed 80% of the fee simple value of the property as determined by the State Agriculture Development Committee. For additional information regarding the Valuation of Development Easements in the Pinelands Area, please refer to §2:76-19 in the New Jersey Administrative Code.

### SADC Strategic Targeting Project

The SADC Strategic Targeting Project utilizes specific criteria to identify areas to be targeted for farmland preservation. The program has three primary goals:

1. To coordinate farmland preservation/agricultural retention efforts with proactive planning initiatives,
2. To update/create maps used to target preservation efforts, and
3. To coordinate farmland preservation efforts with open space, recreation and historic preservation investments.

When developing this Comprehensive Farmland Preservation Plan, Atlantic County utilized many of the same criteria that are outlined within the Strategic Targeting Project. Distribution of soils, location of sewer service areas, and proximity to other preserved lands - among other factors - were considered when updating Atlantic County's ADAs as well as creating Project Areas for this Plan. Moving into the future, this data will be revisited for future updates to this Comprehensive Preservation Plan.

### Eight Year Program

Another successful farmland preservation initiative within Atlantic County is the Eight Year Program. Participants can apply to the CADB to enroll in this program for a period of eight years, during which time the land is restricted to agricultural use. In return, the farmer becomes eligible for State cost-sharing grants for the installation of soil and water conservation practices as well as protection from nuisance suits, water and fuel rationing and various aspects of eminent domain. The more acres enrolled, the more dollars become available to the farmer for such activities.

Currently, Atlantic County has 38 farms, totaling approximately 1,670 acres actively participating in this program. Additional information can be found in the Appendix. The farms are located in six municipalities: Buena Borough, Buena Vista Township, Galloway Township, Hammonton, Mullica, and Port Republic.

Historically, the Eight Year Program has been a popular program for Atlantic County farmers. In early years, this program was more appealing than permanent preservation due to the fact that the values of farmland in the Pinelands Region of Atlantic County were so low that the farm community did not believe it was worth selling permanent easements for such low values.

### Coordination with Open Space Initiatives

Atlantic County's unique geography has not only helped shape the local agricultural landscape, but also continues to provide crucial habitat for local flora and fauna as well as migratory bird populations. Efforts to preserve the County's natural resources have successfully prevented the loss of many of these critical habitats to development pressures. As local agencies struggle to find a balance between growth and resource conservation, efforts to preserve agricultural lands and natural lands must be coordinated to maximize results.

In Atlantic County, open space and farmland preservation initiatives are coordinated in one office, within the Department of Regional Planning and Development, which helps to maximize preservation efforts. Through cooperation with state, local and nonprofit agencies, Atlantic County has developed a comprehensive land preservation program that balances agricultural sustainability and natural resource conservation with growth and development. Completion of this Farmland Preservation Plan will help to advance these efforts into the future.

In 1990, Atlantic County voters approved an Open Space, Recreation, Farmland and Historic Preservation Trust Fund, to provide a steady source of funding for preservation initiatives. The tax is utilized for the acquisition of land for open space and outdoor recreation, historic preservation, parks development, grant funding to local municipalities for preservation efforts, farmland preservation, and payment of debt service.

### Program Funding Expended to Date by Source

To date, funding for the County's Farmland Preservation Program has come from the Atlantic County Open Space Trust and the State Agriculture Development Committee. Prior to the creation of the current Planning Incentive Grant Program, Atlantic County received, on average, 58% of the purchase price of the easements from the State for County acquisitions. Currently, no municipalities provide financial contributions to this program. Farms preserved through the County Easement Purchase Program and the SADC Direct Easement Purchase Program, along with a breakdown of funding can be found in the appendix.

### Monitoring of Preserved Farms

Once farmland has been permanently preserved, it is important to verify continued compliance with the terms and conditions of the easement. Yearly monitoring of preserved farmland is an ongoing function of the agency holding the easement. Present conditions and violations are summarized in a report that is kept on file with the County and also forwarded to the SADC for action if necessary. Routine visits with landowners help to avoid future conflicts before they occur. They also provide a good opportunity to remain in touch with local farmers and to discuss current issues and concerns regarding interpretation of the easement terms.

### Coordination with TDR Programs

As stated earlier in this Plan, the PDC Program has resulted in the preservation of locally important agricultural and ecologically sensitive lands. PDCs allocated to farmlands that are preserved through easement purchases are retired at settlement, thereby severing any future development potential associated with the lands. Private sales of PDCs and sales through the Pinelands Development Credit Bank directly from landowners also result in these sensitive lands being preserved. However, there is currently no local coordination between farmland preservation initiatives and the sale of PDCs by landowners. Such an endeavor would be difficult, as landowners are free to sell their lands and/or their PDCs to whomever they choose, and such activity cannot be predicted or controlled.

Only those lands designated Agricultural Production, Special Agricultural Production, or Preservation Areas are eligible for PDCs. Therefore, these lands have already been singled out within the Pinelands CMP for their agricultural and ecological values, and future development opportunities are limited.



## V. FUTURE FARMLAND PRESERVATION

As evidenced throughout this document, farmland preservation is an essential tool in Atlantic County's efforts to retain agriculture. Although efforts have been successful to date, targeted preservation initiatives will continue to ensure that the most desirable, agriculturally viable lands will continue to flourish. To accomplish this goal, Atlantic County has developed minimum eligibility criteria for participation, as well as policies regarding allowable activities on preserved farms.

### *Preservation Goals (1, 5 and 10 year acreage targets)*

With approximately 21% of Atlantic County's farmland permanently preserved, efforts to sustain our agricultural viability remain a priority. The majority of the County's acquisitions of permanent easements have occurred since 2005. Development of this Comprehensive Farmland Preservation Plan will help to continue this momentum. Based on historic data and present interest, Atlantic County has developed the following acreage goals moving forward:

- Year One: 335 acres
- Year Five: 1500 acres
- Year Ten: 2500 acres

### *Project Area Summaries*

Within the designated Agriculture Development Areas (ADAs), Atlantic County has identified specific Project Areas, in which preservation efforts will be focused. These areas are targeted due to their suitability for continued agriculture use as well as their proximity to other preserved lands. The following map depicts the Project Areas identified by the ACADB. The ACADB has identified 15 Project Areas within the designated ADAs. The total combined acreage, based on Atlantic County GIS parcel data, is 27,724.8 acres. Individual maps for each area will be submitted yearly as part of the funding application process for the PIG Program, to reflect updated information regarding preservation statistics.

### *Minimum Eligibility Criteria*

To remain consistent in its preservation efforts, and to ensure the quality and continued viability of preserved farmland, the Atlantic CADB has approved specific criteria that must be met for inclusion in the County Farmland Preservation Program. Farmers who wish to enter the program are subject to determination of eligibility based on these criteria. The CADB has adopted the SADC's minimum eligibility criteria, per NJAC 2:76-6.20:

- For farms greater than 10 acres:
  - At least 50 percent or a minimum of 25 acres, whichever is less, is tillable;
  - At least 50 percent or a minimum of 25 acres, whichever is less, consists

of soils that are capable of supporting agricultural or horticultural production;

- Exhibit development potential based on municipal zoning, with certain conditions, or it must be eligible for allocation of Pinelands Development Credits;

For farms less than or equal to 10 acres, the land must:

- Produce agricultural or horticultural products of at least \$2,500 annually;
- At least 75 percent or a minimum of 5 acres, whichever is less, is tillable;
- At least 75 percent or a minimum of 5 acres, whichever is less, consists of soils that are capable of supporting agricultural or horticultural production;
- Exhibit development potential based on municipal zoning, with certain conditions, or it must be eligible for allocation of Pinelands Development Credits

In addition to the above, the ACADB has set the following additional criteria for inclusion in the Easement Purchase Program:

- Farms must be a minimum of 5 acres, unless all surrounding lands have been preserved through the program;
- Property must be eligible for inclusion in the Eight Year Program;
- Property must be surrounded by farmland, open lands or woodlands;
- Farm cannot be located in a sewer or water service area;
- Land must be eligible for Farmland Assessment;
- No preliminary or final approvals for nonagricultural development

### *County Ranking Criteria*

Historically, the Atlantic CADB has not utilized an adopted ranking system for applicants wishing to enter the County Easement Purchase Program, as the number of applications at any given time has been manageable. The County's Ranking Criteria is based upon the types of soils, percentage of tillable acres, boundaries and buffers, exceptions, local commitments, and the size and density of the farm. Criteria gives the farm points and will be ranked accordingly. This system may be utilized in future years to determine funding priorities when multiple applications may be considered at once. The ACADB adopted ranking criteria is found in the Appendix.

### *County Policies Related to Farmland Preservation Applications*

Once a farm is preserved, landowners are bound to the restrictions set forth in the Deed of Easement recorded at settlement. Therefore, at the time of application to the program, landowners must consider such topics as future housing opportunities, exception areas, and the potential for future division of the property. Open dialogue

with landowners early in the application process is crucial, to minimize future conflicts. The ACADB generally follows the policies set forth by the SADC regarding the use of preserved farmland:

- Agricultural labor housing can be for seasonal or year-round use, but laborers must be employed on the farm. The number of ag labor units must be related to the labor needs of the agricultural operation. Agricultural labor housing require approval by both the CADB and the SADC.
- Replacement of existing houses is allowable but requires approval by both the CADB and the SADC. Any new location cannot interfere with the agricultural operation or take land out of production.
- Any potential division of preserved land is subject to review and approval by both the CADB and the SADC. Landowners must demonstrate how the proposed action is for an agricultural purpose and will result in agriculturally viable parcels.
- Exception Areas are areas of the farm that are excluded from the Deed of Easement restrictions. A Severable Exception Area is one that can be subdivided and sold separately from the farm, provided it meets local requirements. A Non-Severable Exception Area is excepted from the easement but cannot be subdivided or conveyed separately. The ACADB reviews requests for Severable and Non-Severable Exception Areas thoroughly at the time of application for potential future impacts to the agricultural operations on site. The number and type of Exception Areas are considered in the Ranking System.

### *Funding Plan*

Atlantic County's Open Space, Recreation, Farmland and Historic Preservation Trust provides a stable source of funding for County preservation initiatives. However, the County's open space tax has been significantly reduced over the past decade. Between the years 2000 and 2008, 2 cents per \$100 assessed value was collected in the County, reaching a maximum amount of \$11 million in 2008. In 2009, the tax rate was significantly reduced to ½ cent raising approximately \$2-2.5 million annually. In 2015, the tax rate was reduced even more so to 1/8 cent, resulting in approximately \$460,000 collected. County funding will be the limiting factor when it comes to open space, recreation, farmland and historic preservation.

In years past, Atlantic County received a significant portion of easement purchase costs from the SADC in the form of cost-sharing grants. However, without an approved Farmland Preservation Plan as required with the SADC's recently developed Planning Incentive Grant Program, Atlantic County has not been eligible for State funding. As a result of its continued commitment to this program, Atlantic County has and will continue to fully fund easement purchases as it completes development of this Plan and pursues approval from the SADC for future funding eligibility.



Traditionally, the County has not required financial participation from its municipalities for farmland preservation initiatives. For each application, the County requires a resolution from the local governing body in favor of the application. However, financial contributions from municipalities are neither sought nor required. In addition, although it is a viable funding option, Atlantic County has not pursued the acquisition of easements through installment purchases.

### *Administrative Resources*

Apart from financial resources, preservation efforts require staff and legal support to implement preservation initiatives. In Atlantic County, the Farmland Preservation Program, Open Space Acquisition Program, and Municipal Open Space Financial Assistance Program are assigned to one full-time staff person, located within the Department of Regional Planning and Development. Assistance with database development and mapping is provided through the Atlantic County Office of GIS, also within the Planning Department. Assistance with legal matters, including the drafting and review of legal documents, is provided by an Assistant County Counsel from the Law Department. A second CADB Administrator, located in the County Soils Conservation Office, provides assistance with Board actions.

### *Factors Limiting Farmland Preservation Implementation*

Various factors may limit future farmland preservation efforts in the County. As mentioned above, the largest obstacle to future success is funding availability. Although preservation efforts within Atlantic County remain a priority, funding remains an unknown variable for future considerations. The Atlantic County Open Space, Farmland Preservation and Historic Preservation Fund is dedicated to these efforts; various factors affect the amount of money that is generated each year. As previously stated, municipalities do not directly contribute funds to farmland preservation efforts at this time. Also, although currently available, there is no permanently dedicated source of funding at the State level.

Landowner interest can also present limitations for future success of Atlantic County's Farmland Preservation Program, as participation is entirely voluntary. Much of the farmland in Atlantic County is regulated by the Pinelands Comprehensive Management Plan, which severely restricts land use. As a result, many landowners feel that their land has been devalued by these limitations. The PDC program allocates credits to some lands within specific Pinelands designations, which allows landowners to realize some equity in lands that cannot be heavily developed. However, just as the economy has affected the amount of revenue generated by the County's Open Space Tax, it has also resulted in a depressed real estate market and lower land values. Similarly, the value of PDC's has fallen.

## VI. ECONOMIC DEVELOPMENT

In Atlantic County, the economic value of the agricultural industry is widely recognized. The world's largest high-bush blueberry farm is located in the County. In addition, Atlantic County farmers lead the State in the production of fresh market herbs (USDA Census of Agriculture, 2012) making it one of the top production areas in the country for these specialty crops. Active participation in the Farmland Preservation Program has become a successful tool in local efforts to sustain agriculture in Atlantic County. However, the County's agricultural community, along with its supporting groups and agencies, understands that the industry requires more than just land on which to farm. Active and productive farming results in economic, environmental and educational benefits to the local community. Strategies must be implemented that support long-term viability.

The New Jersey Department of Agriculture (NJDA) Smart Growth Tool Kit provides information to support municipal governments, businesses, non-profit groups, and local citizens in their efforts to achieve the goals and objectives outlined in the Smart Growth Plan for New Jersey. The Tool Kit embraces the five components that have been identified by NJDA as critical for the future of farming: Farmland Preservation, Innovative Conservation Planning, Economic Development, Agriculture Industry Sustainability, and Natural Resource Conservation.

As part of this emphasis on the business of agriculture, the NJDA issues "Economic Development Strategies", which identifies and proposes ways to expand and strengthen various sectors of the agriculture industry in New Jersey, including nurseries and greenhouses, produce and horticulture, aquaculture, field crops, equine, organic farming, wine production, and agritourism.

Various programs and initiatives are available to Atlantic County farmers, which build upon the NJDA's economic development strategies:

### *Consistency with NJ Department of Agriculture Economic Strategies and Other Regional Plans/Initiatives*

#### *Nursery, Greenhouses, Floriculture and Sod*

Nursery, greenhouses, floriculture and sod are important agricultural commodities in Atlantic County. This agricultural sector accounted for total sales of \$15.7 million, or 12.5% of total sales in the County (2012 Agricultural Census). The County can continue to strengthen and expand this sector of the agriculture economy as opportunities arise. Some strategies to follow according to the NJ Department of Agriculture Economic Development are:

- Ensure plant health
  - o Continue inspections for harmful pests and disease and seeking ways to increase use of new methods of pest control
  - o Inspect and certify disease-free nurseries and conduct seed certification

- o to ensure high quality turf grass seed for sod growers
- o Encourage the NJ Agricultural Experiment Station to continue its research in identifying new strategies of agricultural products resistant to pests, diseases and new plant introductions
- Increase consumer awareness
  - o Strengthen the Jersey Grown brand name to enable the industry to benefit from a common trademark identifying locally produced horticultural products
- Improve State and Public contract requirements
  - o Continue to work with government agencies such as the National Resource Conservation Services, the Department of Transportation, and the Department of Environmental Protection to use New Jersey produced products whenever possible.

#### *Produce/Ornamental Horticulture Industry*

Popular ornamental horticulture crops in Atlantic County consist of the following, as defined by the Census of Agriculture: vegetables, melons, potatoes and sweet potatoes and fruits, tree nuts and berries. Vegetables, melons, potatoes and sweet potatoes accounted for nearly \$28.2 million in sales, whereas fruits, tree nuts and berries accounted for \$78.5 million in sales, combining for a total of \$106.7 million dollars or 85% of the total agricultural sales for the County.

According to the 2011 New Jersey State Agricultural Convention, the following economic strategies can be implemented and encouraged in regards to these crops:

#### *Produce:*

- Jersey Fresh
  - o Expand the Jersey Fresh Program by continuing to strengthen the appeal of Jersey Fresh brand and communicate the benefits of the state's produce food-safety program to supermarket chains and all other retailers.
  - o Improve retailer and processor coordination bringing retailers, processors and growers together
  - o Promote vertical integration by encouraging industry attendance at national produce industry trade shows, continue to work with representatives of nationally marketed produce brands, and seek new methods to better integrate New Jersey's produce into the year-round supply model. Provide funding to Rutgers University to conduct produce research and development for a New Jersey-produce agricultural commodity to meet the specific nutritional and serving requirements of the federally funded school lunch program and to integrate USDA's healthier school lunch requirements into these commodities.
- Produce Food Safety
  - o Influence the regulatory process to ensure that it is relevant to small-, medium- and large-scale producers



- o Ensure that all types of agriculture are considered in the development and implementation of food safety standards and regulations
- o Use the Jersey Fresh brand to promote food safety to supermarket chains and all other retailers

**Ornamental Horticulture:**

- Ensure Plant Health
  - o Continue inspections for harmful pests and disease
  - o Seek ways to increase use of new methods of pest control and beneficial insects
  - o Inspect and certify nurseries, enabling growers to sell certified disease-free material in and out of state
  - o Conduct seed certification and seed control testing to ensure high quality turf grass seed for New Jersey sod growers
  - o Encourage the New Jersey Agricultural Experiment Station to continue its research in identifying new varieties of agricultural products resistant to pests, diseases, and new plant introductions
- Increase Consumer Awareness
  - o Work with growers and independent garden centers and nurseries to strengthen their efforts to promote Jersey Grown products with advertising tools such as point of sale materials
  - o Continue distributing the new Jersey Grown banner for use at the point of sale and also to identify growers participating in the program
  - o Continue to include horticultural crops in the County Department of Regional Planning and Development's marketing program and communicate the benefits of buying Jersey Grown products
  - o Maintain the retail nurseries and garden center listings on the Jersey Grown website. Continue efforts with major area retailers to coordinate the promotion of locally produced Jersey Grown products
  - o Publish the list of Jersey Grown growers on the Department's Jersey Grown website
- Improve State and Public Contract Requirements
  - o Continue to work with government agencies such as the National Resource Conservation Services, the Department of Transportation, and the Department of Environmental Protection to use New Jersey produced products whenever possible.

**Aquaculture**

As mentioned previously, aquaculture continues to be a growing industry. Atlantic County has been recognized as a leading county in non-conventional farming practices such as aquaculture. The estimated market value for aquaculture products in the county is \$1,885,000 (or approximately 1.5% of the total agricultural sales). The following economic development strategies are provided by the 2009 and 2011 New Jersey State Agricultural Convention:

- Promote "Jersey Seafood" brand
- Develop Restaurant Promotions and Branding
- Facilitate Retail Promotion and Sale of Jersey Seafood
- Support Direct Marketing Opportunities
- Export Jersey Seafood products
- Support Aquaculture Education Programs
- Development of a Supportive Regulatory Path for Aquaculture
- Provide Health Certification to Allow Interstate Transport of Live Fish

**Field and Forage Crops**

Other field crops, such as hay, corn, and soybeans have little impact upon the total agricultural sales in Atlantic County. While these field crops represent a small portion of the total sales (less than 1%), several economic strategies have been developed and are encouraged:

- Ensure plant health through the implementation of the Mexican Bean Beetle parasite program, soybean rust monitoring surveys, and the release of beneficial insects to control tarnished plant bug and mile a minute weed, in addition to working with the National Resource Conservation Service and the Rutgers Cooperative Extension.
- Support organic field crop production to increase value of the crops and linking growers with organic food processors, retailers, animal feed suppliers, and all other handlers
- Support plans for green energy initiative such as bio-fuel plants and related bio-fuel businesses which could elevate the price of regionally produced grain or other agricultural products.

**Equine Industry**

The equine industry is a small, but growing industry. According to the 2012 New Jersey Farmland Tax Assessment Records, there were 36 acres dedicated to the equine industry with a total of 84 horses. To continue to retain the County's market and share in the State equine industry, horse owners can:

- Ensure health of horses by raising awareness of disease threats and animal safety
- Promote the "Jersey Bred" or "Jersey Equine" logo
- Promote the industry at shows and festivals, such as the annual Warren County Farmer's Fair
- Promote the equine industry through boarding and riding lessons

**Wine Production**

The Wine Industry within New Jersey is growing steadily. According to the 2011 Economic Development Report, there were approximately 40 wineries in New Jersey constituting an estimated \$33 million-a-year industry. According to the 2012 Farmland Assessment data, Atlantic County had 131 acres of grapes agriculture with at least seven vineyards/wineries within the County. To continue to retain the County's market and share in the State winery/vineyard industry, owners can:

- Increase New Jersey Grape Production, encourage support for new production research to increase the state's grape production and expand the locally grown content of New Jersey wines
- Promote product categories to continue to support the wine industry's effort to obtain licenses to distill fruit-based spirits
- Support the Wine Industry at Trade shows
- Expand retail outlets by expanding the number of eligible retail outlets and to sell wines at farmers markets
- Promote New Jersey Wine Trails



*Horses in Egg Harbor Township*



*Balic Winery in Hamilton Township*



### Organic Farming

Organic farming is becoming more popular due to consumer interest. Atlantic County has seven organic farms that produce approximately \$992,000 annually in product sales (2012 Agriculture Census). In 2007, these niche farms were accounted for differently due to changes in the USDA's qualifying standards of organic products. In 2007, Atlantic County had 17 organic farms across 129 acres. These farms accumulated approximately \$775,000. Economic development standards for the organic industry are as follows:

- Promote cost-sharing
- Promote the marketing of organic agricultural products
- Encourage technical assistance

### Agritourism

Agritourism promotes farms as tourist destinations with commercial, educational, and recreational qualities. Agricultural amenities and resources offer promotional and/or fee-based opportunities. Through activities offered on local farms, children and adults can learn about food production and the importance of protecting their local food resources. Farmers benefit by supplementing their income from these activities and may increase the sale of their farm products.

In addition, agritourism benefits local communities by attracting tourists who not only spend time at participating farms, but then visit other local businesses. With its proximity to metropolitan areas and sizeable tourism industry, Atlantic County's location offers many possibilities for local farmers looking to diversify their offerings and increase foot traffic at their operations.

Various local farms offer pick-your-own opportunities for cranberries, pumpkins, blackberries, strawberries, blueberries, and other crops. Seasonally, a few area farms offer corn mazes and hayrides around Halloween. Also, local wineries offer tasting events and tours. Many of these offerings are listed through the Jersey Fresh website. The following are a few techniques discussed by the 2011 NJ State Agricultural Convention Economic Development study:

- Expand roadside programs by working with the NJ Department of Transportation to expand Tourist Oriented Designated Signs and coordinate efforts to gain approval for a discounted agritourism rate; and
- Consumer promotion by distributing inexpensive agritourism brochures with industry websites and contact information to help promote season events and direct farm marketing opportunities in addition to expanding the promotion of the visitnjfarms.org website.

### Agricultural Industry, Retention, Expansion and Recruitment

By providing key strategies and techniques, the NJDA 2011 "Economic Development Strategies" endorses the expansion and strengthening of all areas of the agriculture industry. There are many mechanisms to promote the economic expansion, development, and solidification of Atlantic County's agricultural industry. The NJDA recommends diversifying agricultural commodities to buffer against an economic downswing in either the general economy or a specific sector of the County's agriculture industry.

### Marketing / Branding

The NJDA has undertaken various efforts to enhance sales of New Jersey grown farm products, including the implementation of its successful Jersey Fresh promotional program. The State utilizes various resources in its efforts, including the Jersey Fresh website, the distribution of printed materials, and other forms of advertisement. Atlantic County farmers benefit from this statewide effort, as is evidenced by the inclusion of numerous Atlantic County agribusinesses on the Jersey Fresh website <http://www.state.nj.us/jerseyfresh/>.

The success of this marketing strategy has led to an expansion of the NJDA's efforts. The program has been expanded to include additional agricultural products. In 2005, NJDA introduced the Jersey Grown brand to highlight horticulture products grown locally. Jersey Seafood and Jersey Organic labels further expand this idea to allow better marketing and exposure for New Jersey agriculture and aquaculture. Milk and wine produced in New Jersey also enjoy the same benefits as they may now be labeled Jersey Fresh.

Through its marketing and educational efforts, the NJDA will continue to promote New Jersey grown organic products as distinct from, and of higher value than competing organic products from other regions. Atlantic County farmers reap the benefits of these efforts as local products are marketed more directly and therefore earn more interest from buyers looking for Jersey Fresh products.

### Value-Added Products

To remain competitive and profitable in an ever-changing market, farmers continuously seek out new uses for their products as well as ways in which to build upon existing uses. With increasing competition from global producers, local farmers can increase profitability through the sale of value-added products, which can include jams, jellies, pies, breads, pickles, and ciders, among others. However, farmers are faced with many limitations on these endeavors, including layers of regulation that can prevent the successful marketing of these secondary products. Unfortunately, regulations at the state, county and local levels may prevent small farmers from pursuing these opportunities. Efforts to revisit regulations at the state and local level should be advanced, to make it easier for small local farmers to take advantage of these opportunities.



*Farm Market on White Horse Pike in Egg Harbor City*

### 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. The NJDA provides assistance for setting up farmers markets and maintains an online guide to their locations. Presently, there are three existing Community Farmers Market in Atlantic County, located in Atlantic City, Hammonton, and Margate. All are open seasonally and offer a variety of fruits and vegetables, as well as other goods. Information about these community farmers markets can be found at <http://www.state.nj.us/jerseyfresh/searches/urban.htm>.

### Community Supported Agriculture

Community Supported Agriculture (CSA) allows a consumer to buy a share, or prepay, to receive a weekly or biweekly supply of produce from a local farm. Because CSA customers come to the farm to pick up weekly or biweekly shares of food, farmers can enjoy some of the benefits experienced by those participating in a farmers market - such as interacting with customers and higher profits from direct marketing - without losing money to transportation and spoiled and bruised produce. Moreover, a small amount of land can yield many customer shares.

A CSA is a business model which generally is a method for small scale farmers and gardeners to market their goods. This type of business commonly attracts organic farmers. This type of farming and marketing operates with consumers as stakeholders taking an active role in the success of the operation. This helps to ensure a quality product for all those that contribute. Each stakeholder receives a portion of the products available during the course of the growing season.

Although CSAs can be successful business, there are only a handful of them in Atlantic County. They are located in Egg Harbor Township, Galloway Township and Smithville. Information about joining these co-ops are available at [www.localharvest.org](http://www.localharvest.org)



### *Agriculture Education and Market Research Coordination*

New and emerging trends in agricultural markets and technologies require continual research and education as local farmers respond to ever changing opportunities. For example, evolving demographics in the State have created a demand for crops common in various ethnic cuisines such as Asian, African and Hispanic vegetables. Local farmers can capitalize on these niche markets.

Education and market research are critical to not only maintain a healthy industry, but to ensure its growth into the future. In an increasingly competitive business climate, local farmers must remain educated on the latest technologies and trends.

### *NJ Agriculture Experiment Station and Rutgers Cooperative Extensions*

The NJ Agriculture Experiment Station (NJAES) is a Rutgers institute dedicated to research and outreach initiatives. NJAES serves not only commercial farmers, but also provides educational programs for youth and local communities as well as resources and assistance to businesses, government agencies and residents. Based on continued research and technological advances, NJAES Cooperative Extensions are located throughout the state and provide invaluable services to local communities. The local Cooperative Extension office is located at 6260 Old Harding Highway in Mays Landing.

Local Cooperative Extension agents work closely with farmers, providing education and tools to assist in their operations. Through continued field and technical research initiatives the NJAES shares its knowledge and experiences of issues and emerging trends related to production, marketing, environment and land use. As a result, farmers are educated about the latest technological advances and innovative techniques that can assist them in developing the best management practices for their individual operations.

As new technologies become more integrated into our daily lives, businesses must utilize those technologies to maximize exposure in the market. One way in which the Atlantic County Cooperative Extension has capitalized on new technologies is through the development of a marketing tool for consumers to locate Jersey Fresh farm products. A custom GPS Points of Interest file is under development, which will alert consumers to the location of nearby farm markets. More information on this project can be found online at [http://rutgers-atlantic.org/ag/finding\\_fresh.asp](http://rutgers-atlantic.org/ag/finding_fresh.asp).

The Rutgers Cooperative Extension of Salem County created an online resource called the “Green Pages”, which is an agricultural resource guide. The Green Pages offers farmers a comprehensive guide to services and programs that are available to farmers and other industry participants. The guide is found online at <http://salem.rutgers.edu/greenpages/index.html>.

The Rutgers Food Innovation Center is located in Cumberland County and is a part of the Rutgers Agricultural Experiment Station. The Food Innovation Center has played an important role in assisting food-based companies with business planning as well as product development and processing. See <http://www.foodinnovation.rutgers.edu/>.

### *Farm Link Program / Estate Planning*

The Farm Link Program is coordinated through the SADC, and is available to farmers and landowners whose needs and desires intersect. Landowners may be seeking farmers to purchase or lease available property. Farmers may be seeking land on which to initiate or expand agricultural activities, they may be looking to fill positions on their farms or individuals may be seeking experience in the field. Interested parties sign up with the program and are matched with those who can meet their needs. The service also assists farmers who are close to retirement and may need assistance with estate planning. Those interested in the program’s offerings can sign up online at: <http://www.nj.gov/agriculture/sadc/farmlink/>

### *Agriculture Facilities and Infrastructure*

Facilities and infrastructure are critical to the agriculture industry. Investments in new technologies help to ensure future viability and increase market share in a competitive market. These advancements improve the production and processing of agricultural products, thereby increasing their marketability and shelf-life.

Just as these advancements assist local farmers, they also provide opportunities for competitors entering the market. New technologies allow farming in areas that were previously unfavorable or incapable of producing certain crops. Local farmers must be mindful of these increased threats from competition, and ensure that their operations continue to keep pace with growth and advancements in technology. By improving the efficiency and quality of their own farming operations, farmers can increase their exposure to the market and become more profitable. As profits are increased and businesses grow, jobs are created and communities are strengthened.

Previous sections of this plan have discussed some of the opportunities available to Atlantic County farmers due to geographical location and the availability of natural resources that support agricultural production. These factors, when combined with advancements at all levels of production, allow local farmers to serve new and emerging markets and better meet the needs of consumers.

### *Anticipated Trends in Agriculture*

Geography and product demand create unique opportunities for Atlantic County’s agriculture industry. The growing season coincides with the seasonal influx of tourists, which creates a high demand for fresh local produce. In addition to agritourism opportunities, marketing exposure through participation in community farmers’ markets and successful branding of the Jersey Fresh label, farmers can increase

visibility in the market. As society becomes increasingly aware of the effects of human consumption on our environment, and more people turn to environmentally friendly alternatives and healthier lifestyles, local establishments tout the use of locally grown products as a marketing tool for their own businesses. Farmers can take advantage of this demand and sell directly to local restaurants and food establishments. Consumers also buy locally to support the local economy.

As mentioned in Section II- County’s Agricultural Land Base—Overview, the United States Department of Agriculture’s 2012 census indicated that the market value of agricultural products sold in Atlantic County in 2012 was \$125,440,000 compared to \$78,508,000 in 2002. This represents a 62% increase. During the same period, however, the number of farms declined from 456 to 402, an indication that although sales have increased, the number of farms and the amount of land farmed is decreasing. To maintain long-term viability in an increasingly competitive market, Atlantic County and its farming community must consider economic development strategies that will foster responsible growth.

It is also extremely important to remember that agriculture is a business and should continue to be treated as such. Through partnerships with restaurants and casinos, area farmers can increase exposure to area consumers and highlight the use of fresh, locally grown products. By selling their products in close proximity to the agricultural operations, farmers can reduce the costs of transporting these goods and reduce their overhead, while the consumer is assured that the product is fresh and has been exposed to minimal processing and handling.





## VII. NATURAL RESOURCE CONSERVATION

Increasingly, we must consider the effects of human activity on the Earth. Only fairly recently in human history has there been a shift toward conservation and sustainability, as the potential effects of human consumption on wildlife, water, air, and earth is more understood. Today, there is an increased awareness of the need to balance the demands of the human population with the Earth's natural resources.

As development pressures increase locally, land preservation has become a priority for Atlantic County and its preservation partners. A loss of green space not only impacts the quality of life for human residents, it also significantly affects wildlife habitat, air quality, water quality and the area's ecosystem, which can have long-lasting, irreversible impacts. However, acquisition opportunities are becoming increasingly expensive – and less available – with each passing year. Given an ever-increasing loss of natural resources to industrial, commercial and residential expansion, the need to implement natural resource conservation practices is crucial.

As population increases, so does the responsibility to manage growth wisely. Land preservation initiatives, although an important tool in conservation efforts, do not fully protect our natural resources from an increasing human population. Conservation and land management practices must be incorporated into the development and utilization of land. This section will explore conservation planning strategies.

### *Natural Resource Protection Coordination*

Various public and private organizations provide financial and technical guidance to farmers and communities for natural resource conservation efforts. These programs and organizations assist farmers in implementing the best resource management practices, which helps to ensure a healthy, environmentally responsible agricultural industry in the long-term. Some of the resources available to Atlantic County farmers are described below.

#### *Rutgers Cooperative Extension*

In Atlantic County, the Rutgers Cooperative Extension (RCE) works directly with farmers and provides both field and technical research. Through nonbiased, research-based educational programs the RCE educates farmers on best management practices to balance land use practices with natural resource protection. Services offered by extension personnel also include soil testing, insect identification, plant disease diagnosis, and pest management recommendations for agricultural operations, as well as educational publications covering a wide range of agricultural topics.

#### *Cape Atlantic Conservation District*

In 1937, soil conservation districts were instituted in New Jersey with the adoption of the New Jersey Soil Conservation Act. Subsequently, the Cape Atlantic Conservation District was established in southern New Jersey. While soils remain a core focus, the programs and activities of the District address a wide array of natural resource conservation issues.

The Cape-Atlantic Conservation District (SCD) oversees a range of soil conservation and water quality strategies and programs. The office implements the State Soil Erosion and Sediment Act on behalf of the NJDA. Projects that are regulated under the Act must obtain a Soil Erosion and Sediment Control Plan Certification from the Soil Conservation District prior to the initiation of land disturbance activities. The District performs routine inspections at construction sites to monitor compliance with the submitted plan. Upon completion of the construction project, the District conducts the final inspection before issuing a certificate of occupancy. In addition, the District continues to assist farmers with conservation practices that help prevent soil erosion and offsite sedimentation and conserve natural resources.

#### *SADC Soil and Water Conservation Grant Program*

Soil and water conservation grant funds are available through the SADC for soil and water conservation projects approved by the Cape Atlantic Conservation District. The grants are administered by both the District and the local Natural Resource Conservation Service (NRCS) office. Traditionally, the grants provide up to 50% of the costs of approved soil and water conservation projects, but up to 75% has also been approved in the past. Farms are eligible if they are enrolled in a permanent easement or eight-year program.

Once the District deems a conservation project necessary and feasible, applications are forwarded to the N.J. State Soil Conservation Committee for recommendation to the SADC for approval and funding. The types of soil and water conservation projects funded by SADC include soil erosion and sediment control systems (terrace systems), control of farmland pollution (stream protection; sediment retention, erosion or water control systems; animal waste control facilities; and agri-chemical handling facilities), the impoundment, storage and management of water for agricultural purposes (diversions; water impoundment reservoirs; irrigation systems; and, drainage systems), and management of land to achieve maximum agricultural productivity (land shaping or grading). For more information visit: [www.state.nj.us/agriculture.sadc/sadc.htm](http://www.state.nj.us/agriculture.sadc/sadc.htm).

### *Federal Farm Conservation Programs*

#### *Natural Resource Conservation Service (NRCS)*

The USDA's Natural Resource Conservation Service (NRCS) provides assistance to landowners and farmers in their efforts to implement the best land conservation techniques. The NRCS strives for balance between abundant, quality food supplies and a healthy environment.

For farmers, NRCS plays a major role in the development of farm conservation plans. The purpose of these plans is to help landowners establish and apply the best management practices on their farms, in an effort to sustain limited natural resources. Assistance with plan development is free, and NRCS strives to ensure that all plans contain key elements including: soil productivity enrichment, improvements to soil

fertility and protection, improved soil moisture management, and improved local water quality.

The NRCS carries out its roles through a cooperative partnership with local and state agencies, utilizing the knowledge and experience of diverse professional technical experts in – animal husbandry, ecological sciences, engineering, resource economics, soil science and social sciences. Once NRCS is contacted by an interested landowner, a professional soil conservationist is assigned to work with the landowner to develop a plan suitable for their location and situation. This cooperative effort helps farmers to identify their land conservation goals and assists them in formulation of conservation plans that meet their objectives.

In addition to the assistance provided for development of soil and water conservation plans, the goals of the NRCS also extend to conservation practices for flora, fauna and clean air. If a farm conservation plan incorporates all five of these elements, it is considered a Resource Management Plan. The local NRCS field office, serving Atlantic, Cape May, and Cumberland Counties, is located in Vineland.

The primary Federal Conservation Programs administered locally by NRCS and the USDA's Farm Service Agency (FSA) through the conservation provisions in the Agricultural Act of 2014 (2014 Farm Bill) include:

- Agricultural Management Assistance Program (AMA)
- Conservation Reserve Enhancement Program (CREP)
- Conservation Stewardship Program (CSP)
- Environmental Quality Incentives Program (EQIP)
- Conservation Innovation Grant program (CIG)
- Agricultural Conservation Easement Program (ACEP)

A few of these programs are summarized below. Information on all of these programs can be found at: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/farmland>

#### *Conservation Reserve Enhancement Program (CREP)*

The CREP is a voluntary land retirement program whose purpose is to enable agricultural producers to protect environmentally sensitive land, decrease erosion, restore wildlife habitat, and safeguard ground and surface water. It addresses high-priority conservation issues of both local and national significance, such as impacts to water supplies, loss of critical habitat for threatened and endangered wildlife species, soil erosion, and reduced habitat for fish populations such as salmon.

A CREP project begins when the state, local government or nongovernmental agency identifies an agriculture-related environmental issue of state or national significance. In coordination with FSA, these parties will develop a project proposal that will



address the particular environmental issues and goals. CREP contracts require a 10 to 15 years commitment to keep lands out of agricultural production. The program will pay landowners annual rental and incentive payments for participating in the program, as well as 100% of the cost to establish approved practices. FSA uses CRP funding to pay for certain percentages of the program, while state or other non-federal sources provide the balance of the funds.

**Conservation Stewardship Program (CSP)**

The 2014 Farm Bill continues to authorize the Conservation Stewardship Program. It is a voluntary conservation program that encourages agricultural and forestry producers to address resource concerns in a comprehensive manner by undertaking additional conservation activities and improving, maintaining, and managing existing conservation activities.

The State Conservationist, in consultation with the State Technical Committee and local work groups, will focus program impacts on natural resources that are of specific concern for a State, or the specific geographic areas within a State. Applications are evaluated relative to other applications addressing similar priority resource concerns to facilitate a competitive ranking process among applicants who face similar resource challenges. The entire operation must be enrolled and must include all eligible land operated under the applicant’s control for the term of the proposed contract.

CSP offers two possible types of payments—annual and supplemental. The annual payment is established using the conservation performance estimated by the conservation measurement tool used by NRCS and calculated by land use type for enrolled eligible land. A supplemental payment is also available to participants who also adopt a resource-conserving crop rotation. Both are through five-year contracts. Further information can be found at: <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/csp/?cid=stelprdb1242683>.

**Environmental Quality Incentive Program (EQIP)**

The EQIP program is a voluntary program developed to assist farmers, ranchers, and owners of private, non-industrial forest lands in identifying specific natural resource concerns and the measures that are necessary to address them. The program also offers financial assistance to implement those measures. Payment is provided for a variety of practices to maintain or improve resource concerns such as water quality, grazing land health and productivity, soil erosion and soil quality, and wildlife habitat development.

EQIP offers contracts with a minimum term that ends one year after the implementation of the last scheduled practice(s), with a maximum term of ten years. These contracts provide financial assistance to help develop conservation plans and implement conservation practices. Owners of land in agricultural production or persons who are engaged in livestock or agricultural production on eligible land may participate in the program. Program practices and activities are carried out according to an EQIP

plan of operations developed in conjunction with the producer that identifies the appropriate conservation practice or measures needed to address identified natural resource concerns. The practices are subject to NRCS technical standards adopted for local conditions. For more information, visit: [www.nrcs.usda.gov/programs/eqip](http://www.nrcs.usda.gov/programs/eqip).

**Conservation Innovation Grant program (CIG)**

The Conservation Innovation Grant program (CIG) is a voluntary program administered by NRCS to stimulate the development and adoption of innovative conservation approaches and technologies. The CIG uses Environmental Quality Incentives Program (EQIP) funds to award competitive grants to non-Federal governmental or non-governmental organizations, tribes, or individuals. The grants require a 50-50 match between the agency and the applicant.

New Jersey announces funding opportunities for the state component of CIG once a year following the national CIG. The CIG State Component offers eligible entities the opportunity to apply for grants up to \$75,000 for eligible projects within the state.

Applicants must include a description of the potential environmental and social impacts, plus potential beneficial and adverse impacts of the proposed action. A description of the potential impacts to all environmental resources must be disclosed. Environmental resources include soil, water, air, plants, and animals, as well as other specific resources protected by law, Executive Order, and Agency policy. In addition to describing impacts, applicants are required to assess the significance or degree of potential environmental impact of the proposed project on environmental resources. For more information visit: <http://www.nrcs.usda.gov/technical/cig/index.html>.

**Water Resources**

Water resources, the supply of groundwater and surface water in a given area, are critical to sustained human activity. The maximum rate that water is potentially available for human use and management is often considered the best measure of the total water resources of a given region. The protection of water resources is a critical tool in land management techniques that seek to sustain agriculture in the long-term, as farms are dependent upon an abundant, uncontaminated and sustainable water source.

Careful consideration should be given to the existing water supply and future water demand, with the understanding that water supply management is critical, and requires a proactive approach. To ensure a healthy water supply into the future, sound farmland management measures are essential:

- Advocate for the responsible use of synthetic chemicals, such as fertilizers, herbicides, pesticides, and fungicides, as to lessen their impact to the ground water. While the application and use of these products increases yield and can enhance the quality of agricultural output, they can have significant negative effects on water resources. Proper timing as well as application rates must be

considered as to minimize any harmful effects to water sources.

- Riparian buffers should be provided by planting rows of trees and shrubs, including strips of native grasses, along regions of surface water bodies, as to ensure adequate protection from synthetic chemicals, organic byproducts, and soil erosion.
- Emphasize the importance of water conservation techniques, such as drip irrigation and water recycling. Excess irrigation and water use can increase runoff as well as reduce efficiency.

The United States Department of Agriculture, National Resource Conservation Service (USDA-NRCS), assists farmers in irrigation and water quality enhancement projects. As previously mentioned, NRCS assists in the development of conservation plans for both preserved and non-preserved farm owners. These plans take into consideration water sources, use and delivery methods. Also, the NJDEP Division of Water Supply allocates water permits to farmers who extract more than 100,000 gallons per day, above 30 days in a year.

**Water Supply Status**

The 1996 New Jersey Statewide Water Supply Master Plan assumed that ten percent of total groundwater recharge, referred to as the “planning yield,” could be available for water supply use without causing unacceptable regional impacts such as progressive water table decline, saltwater intrusion, well loss and stream flow depletion.

The NJDEP Division of Watershed Management draft report, which was released on September 25, 2003 titled “Status of Water Supply of Southeastern New Jersey”, assessed the adequacy of water supply in relation to approved and projected development. As outlined in Table 1.25, the available planning yield for each watershed in this area is: Great Egg Harbor River 31.1 million gallons per day (MGD), Atlantic Coastal (Southern Barnegat Bay) 25 MGD, Mullica River 63.5 MGD and Cape May Coastal 29 MGD. The total amount of groundwater available in the County study area is 148.6 MGD.

In addition to available groundwater, the Atlantic City Municipal Utilities Authority operates two small reservoirs located on Absecon Creek, Kuehne Pond and Doughty Pond. Together these two reservoirs have an estimated safe yield of 9.3 MGD.

*Table 1.25 Comparison of Planning Yields to Water Demand in the Southeastern New Jersey Study Area (Million Gallons/Day)*

Watershed	Total Recharge	Planning Yield	Current Use
Mullica	634.5	63.5	95.3
Cape May	289.8	29	24.1
Great Egg	311.4	31.1	55.8
Atlantic Coastal	249.6	25	19.4

*Source: Status of the water supply of Southeastern New Jersey, 2003*



The Atlantic City 800-foot Sand Aquifer is confined beneath eastern Atlantic County, but merges with the Kirkwood-Cohansey Aquifer in the western part of the County. The Atlantic City 800-foot Sand Aquifer receives its recharge from the water table aquifer and is not an independent source of water. The lowering of water levels in the Atlantic City 800-foot Sand Aquifer causes more leakage from the overlying aquifers through the confining layer. Recharge to the Atlantic City 800-foot Sand Aquifer from the Kirkwood-Cohansey Aquifer is believed to have increased from 4 MGD to 15 MGD due to pumping from the confined aquifer (NJGS, 2001). Therefore, pumping from the Atlantic City 800-foot Sand Aquifer is also likely to impact surface water base flows particularly over the long term in the western portion of the county. However, due to its depth the effect is spread out over the entire region, making a direct assessment of impact on any one stream difficult to quantify.

The water supply concerns facing the Atlantic County region are not new. The 1982 NJ Statewide Water Supply Master Plan identified Atlantic City and 13 nearby coastal communities as an area with potential water supply problems as a result of the substantial growth in this area. The primary concerns identified in the 1982 Plan were the potential for: a) saltwater intrusion that could impair barrier island and near-shore wells in the Atlantic City 800-foot Sand Aquifer; b) ground water contamination of the water table aquifer; and c) reductions in stream flow as a result of pump-age from the Kirkwood-Cohansey water table aquifer.

Due to a water supply deficit, the area will experience stream flow depletion in the short term and salt-water intrusion in Cape May and perhaps Ocean County in the long term. The report added that additional or increasing development in the region will exacerbate these issues with increased risk to water quality. The Report recommends that a comprehensive water plan be developed for the Region with participation of the stakeholders.

An interim strategy plan (Interim Plan) was recommended for the Region while the Comprehensive Plan, which is expected to take several years to develop, is in the works. The following are the key elements of the Interim Plan:

1. DEP will issue no new or expanded water allocation permits for non-potable or non-essential uses where alternative sources are available. Alternative sources include beneficial reuse of wastewater. If an assessment concludes that reuse is not possible a reduction in demand equal to that being requested must be achieved. The applicant could trade with another user who is better able to reduce demand from the same source.
2. DEP will require mandatory water conservation.
3. Most new wells and expansions of existing withdrawals in the Kirkwood-Cohansey Aquifer will be prohibited. Until the Comprehensive Plan is completed new withdrawals will be required to use the Sands or other confined aquifer. This policy may have exceptions when it is determined that new wells in the Sands would accelerate saltwater intrusion.

### *Conservation and Allocation Strategies*

In 2005, the Atlantic County Utilities Authority (ACUA) embarked on a campaign implementing water conservation with an NJDEP grant and the nationally known “Water-Use It Wisely” water conservation campaign. The goal was to reduce Atlantic County water use by 10 percent. The campaign implementation focused on five specific strategic water use stages in landscaping, plumbing, agriculture and the hospitality industries with an educational component in the schools. The program was kicked off on March 22, 2005, which is World Water Day.

### *Ground Water Advisory Committee*

In 2003, the ACUA was designated by Atlantic County as the lead agency in establishing an Atlantic County Groundwater Advisory Committee (ACGAC) to monitor, review and report on groundwater issues. The ACGAC is made up of residents, municipal and county officials, environmentalists, water purveyor, landscapers and others. The ACGAC in 2004 generated a report which recommended increased water conservation efforts, water reuse, improved storm water management and the necessity for more comprehensive study.

The ACGAC agreed that immediate steps are necessary to ensure that the water resources of the region remain sustainable for future generations. In summary, the following steps should be addressed in the short term:

1. Water Conservation practices should be implemented immediately. The NJDEP should support and fund an aggressive water conservation education program that would be implemented by ACUA on behalf of the Committee.
2. The NJDEP should provide financial support for beneficial reuse of wastewater pilot projects.
3. Storm-water management should be coordinated with the oversight of a regional institutional entity in order to standardize maintenance practices and maximize aquifer recharge.
4. Update all the water use and water demand projections with current data.
5. Initiate a comprehensive water supply study for the region, taking into consideration both ongoing studies in surrounding areas and available historical data. Only after the comprehensive study is completed would long-term recommendations be proposed.

### *Reclaimed Water for Beneficial Reuse*

New Jersey has recently implemented Reclaimed Water for Beneficial Reuse (RWBR) programs. The term “reclaimed water for beneficial reuse” is defined in the New Jersey Administrative Code to mean “water that meets restricted access or public access reuse requirements specified in a NJ Pollutant Discharge Elimination System (NJPDES) permit that authorizes that water to be directly reused for non potable applications in place of potable water, diverted surface water, or diverted groundwater”. N.J.A.C. 7:14A-1.2.

In an effort to encourage the beneficial reuse of wastewater, the NJDEP has issued a document entitled “Technical Manual for Reclaimed Water for Beneficial Reuse”. To assure that public health is not compromised through the use of reclaimed water the required quality of the RWBR is determined by its intended end use.

The four (4) primary categories of reuse applications identified within the manual include:

- Category I:** Public Access Systems: Intended to provide reclaimed water to locations where it is probable that the public may be exposed. Examples include spray irrigation for golf courses, athletic fields, landscaped areas for residential, commercial or industrial properties, and filling of decorative fountains. Category I systems require the highest level of treatment.
- Category II:** Restricted Access and Non Edible Crop Systems: Intended to provide reclaimed water to areas where non-edible crops are produced such as sod farms, pasture lands or tree farms. In all cases, public access is limited.
- Category III:** Agricultural and Edible Crop Systems: Category III systems would provide irrigation to edible crops that are peeled, skinned, cooked or thermally processed before consumption.
- Category IV:** Industrial Systems, Maintenance Operations and Construction: Intended to provide reclaimed water for industrial uses such as non-contact cooling water, maintenance/construction operations such as sewer jetting, wash-down stations for vehicles and street sweeping, dust control, fire protection and road milling. These systems are reviewed by NJDEP on a case-by-case basis in order to determine the appropriate level of treatment required.

More information can be found at <http://www.state.nj.us/dep/dwq/reuseff.htm>

The ACUA recently initiated the ACUA Smithville Beneficial Reuse Project. In partnership with the DEP and a developer, the program will use reclaimed water to irrigate a residential development in the Smithville section of Galloway Township. The RWBR will meet NJDEP Category I Standards for use as residential spray irrigation purposes.

In addition, the ACUA Atlantic City Beneficial Reuse Project has been proposed, and will allow for the beneficial reuse of wastewater from the ACUA's Wastewater Treatment Facility in Atlantic City to replace the potable water being used by the Marina Thermal Facility (MTF) as cooling tower water makeup. The MTF is an off-site utility plant serving the region's growing casino industry.



## Waste Management

Waste management is an important consideration for agricultural operations, as it impacts the quality of ground and surface waters. Left uncontrolled, animal waste can cause serious water-quality problems by spreading harmful microorganisms into water sources. In an unmanaged environment, farm animals can be exposed to diverse disease outbreaks. Thus, responsible waste management and recycling of animal by-products is crucial.

Animal Feeding Operations (AFO) and Concentrated Animal Feeding Operations (CAFO) must incorporate waste management practices into their operations. AFOs include all facilities where animals are confined for a total of 45 days in a twelve month period, where no grass or other vegetation exists during the normal growing season. Operations are confined within a small area. Therefore, animals congregate and are fed in proximity to manure, urine, occasionally dead animals and other production operations. CAFOs are AFOs that meet certain EPA regulatory thresholds based on the number of animals confined. CAFOs are further characterized as Small, Medium or Large, based on these size thresholds.

In New Jersey, The NJDEP Division of Water Quality processes General Discharge Permits to AFOs and CAFOs. The preparation and implementation of a Comprehensive Waste Management Plan is required to obtain a permit. The plan must include a Comprehensive Nutrient Management Plan prepared and developed in accordance with NRCS's Comprehensive Nutrient Management Planning Technical Guidance. Failures to properly manage manure and wastewater from CAFOs can negatively impact the environment and public health. Manure and wastewater have the potential to contribute pollutants, such as nitrogen and phosphorus, organic matter, sediments, pathogens, heavy metals, hormones and ammonia, to the environment. More information can be found at: <http://www.state.nj.us/dep/dwq/cafo.htm>

### Recycling Programs

Recycling plays a critical role in resource conservation efforts. Through the years, the practice of reuse has expanded to include both man-made and natural resources. Recycling efforts not only help to conserve natural resources, but can also provide cost-saving benefits to farmers that creatively reuse the waste generated on their farms. One example of this opportunity is the utilization of leaves and grass clippings to mulch their fields. Various recycling programs are available to area farmers:

#### Nursery and Greenhouse Film Collection

The nursery and greenhouse film recycling program is administered by the New Jersey Department of Agriculture. There are two regional collection centers in this area of New Jersey. Each center assesses different tipping fees. The Cumberland County Solid Waste Complex in Deerfield and the Occupational Training Center in Mount Holly, Burlington County accept film. For further information: <http://www.nj.gov/agriculture/divisions/md/prog/filmsites.html>

#### Agricultural Plastics – Drip Irrigation Tape

The NJDA in 2005, with a grant from the New Jersey Department of Environmental Protection, initiated a pilot program to collect and recycle other agricultural plastics generated by New Jersey farmers.

Presently the Cumberland County Improvement Authority accepts the Drip Tape Film, subject to various conditions and guidelines. Farmers utilizing this service can realize savings of almost 50% over landfill tipping fees. Also, Raff Recycling Corporation in Cape May Court House, Cape May County, offers this service. For more information about this service, visit: <http://www.nj.gov/agriculture/divisions/md/prog/dirtyplastics.html>

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

Farmers can also recycle nursery pots, plastic flats, trays, and Cell packs. The NJDA maintains a list of recycling vendors through its website: <http://www.nj.gov/agriculture/divisions/md/prog/plasticpotvendors.html>

#### Pesticide Containers

The New Jersey Department of Agriculture has partnered with Helena Chemical in Hammonton for free recycling of empty plastic pesticide containers. As with other recycling programs, only certain products are accepted and participants must follow strict guidelines. The program is open to agricultural, professional and commercial pesticide applicators, along with Helena Chemical customers who hold NJDEP pesticide licenses, as well as State, County and Municipal government agencies. For further information visit: <http://www.nj.gov/agriculture/divisions/md/prog/recycling.html>

## Energy Conservation Planning

Energy conservation has become an important objective for the agriculture industry, for its positive effects on the sustainability and growth of agricultural operations. With ever-changing technological advancements comes a corresponding increase in energy costs, which can negatively affect a farm business's bottom line. In addition, energy conservation measures and alternative energy sources can positively impact the environment as well as present new business opportunities for farmers.

The New Jersey Department of Agriculture highlighted the significance of energy conservation and alternative energy use in its 2006 Agricultural Smart Growth Plan. The Plan indicates that it is important to, "...promote the use of innovative technologies, recycling, energy conservation and renewable energy systems on New Jersey's farms" and to "...promote, provide technical assistance for and inform the agricultural community about new and existing energy conservation and renewable energy programs by promoting the financial and environmental benefits of implementing these programs."

## Solar Energy

Solar power is one technology that has proved to be a viable option for local farmers. Solar panels installed on farm buildings and on areas that are not in active agricultural production can provide power and heat to operate the farm. Programs are available to farmers to assist in the costs to implement solar opportunities. The Environmental Quality Incentives Program (EQIP) includes cost sharing for conservation practices in addition to solar energy. The U.S. Department of Energy's Solar Energy Technology Program and the New Jersey Board of Utilities' Solar Energy for New Jersey Agriculture program provide grants and technical assistance. Farmers interested in using alternative energy sources can contact their local NRCS office for more information.

Recently, the SADC adopted an Agricultural Management Practice (AMP) for the construction, installation, operation or maintenance of solar energy generation facilities, structures and equipment on commercial farms. The AMP sets limitations and restrictions to the scope of the solar project allowable on a commercial farm as well as the amount of energy that is generated, to ensure that the primary use of the land continues to be agricultural production. Commercial farms must be in compliance to retain Right to Farm protections for these activities. While the amount of energy generated is limited by the AMP, farmers can take advantage of the savings realized by generating energy on-site to support their agricultural operations. Solar energy facilities on commercial farms in Pinelands Agricultural Production and Rural Development Areas may be permitted, but must comply with the standards for such facilities set forth in the Pinelands CMP.

### Bio-diesel

Bio-diesel is a renewable alternative fuel produced from a wide range of vegetable oils and animal fats. Pure bio-diesel or bio-diesel blended with petroleum diesel can be used to fuel diesel vehicles, providing energy security and emissions and safety benefits. Bio-diesel can be used in newer models of both light-duty diesel and heavy-duty diesel vehicles. Bio-diesel is an alternative to the use of petroleum diesel. This organic fuel can be blended and used in diesel engines without modification. Bio-diesel presents a significant reduction from the harmful emissions produced by pure petroleum diesel.

In Atlantic County, the ACUA converted its entire diesel fleet of 106 on-road and off-road vehicles to bio-diesel after a successful trial in 2004. In 2009, ACUA purchased more than 400,000 gallons of bio-diesel blend to use in their trucks and equipment and to sell to other local fleets. In the same continuous effort, ACUA in 2010 built a natural gas fueling station which will serve the public.

## Renewable Energy Systems and Energy Efficiency Improvements Program

This program is meant to assist farmers, ranchers, and rural small businesses in developing renewable energy systems and making energy efficiency improvements



to their operations. The USDA, Rural Development agency operates the program in collaboration with Energy Department. The program is focused on energy that is derived from wind, solar, biomass, geothermal source or hydrogen derived from biomass or water using either wind, solar, or geothermal energy source. The USA, 2002 Farm Bill authorized the implementation of this program. The program provides competitive grants and guaranteed loan to agricultural producers to aid them purchase renewable energy systems and make energy efficient improvements. It is important that county local farmers will have a good understanding of what their options are concerning this program. For more information visit: [http://attra.ncat.org/guide/n\\_z/renewable.html](http://attra.ncat.org/guide/n_z/renewable.html)

### *Wind Energy*

Wind power can be captured by turbines or windmills, turning such power into electricity. Evolving technology attracts farmers seeking ways in which to cut energy costs. The ACUA and Atlantic Wind, LLC, a partner with Community Energy, Inc. developed a windmill facility at the ACUA's Wastewater Treatment Facility in Atlantic City, which has been operational since December 2005. Power generated from the turbines at this site connects to an existing 23 KV substation located at the ACUA City Island Plant. Each turbine is capable of producing 1.5 megawatts for a total of 7.5 megawatts, enough energy to power approximately 2,500 homes. It is estimated that the energy produced here will save the energy equivalent of 11,964 barrels of crude oil per year. When operating at its maximum capacity, the energy is used to operate the ACUA wastewater treatment plant, with any excess energy provided to the main power grid. The wind farm saved the ACUA approximately \$2 million in its first four years of operation. In April 2009, the wind farm set a production record, generating over 3 million kWh of electricity. For further information visit <http://www.acua.com/acua/content.aspx?id=486>

### *Outreach*

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.

Atlantic County, through the local Rutgers Extension Service, the USDA and other farm community organizations should promote emerging trends and opportunities that will enable farmers to embrace energy conservation and alternative energy measures available through new and emerging technologies. It is important for Atlantic County farmers to gain an understanding of the benefits they could derive from these programs.

## VIII. SUSTAINABILITY OF ATLANTIC COUNTY'S AGRICULTURE INDUSTRY

As represented in this Plan, Atlantic County's agriculture industry is strong and continues to play a leading role in crop production and revenue in the State. Efforts to support and promote the industry are needed for continued growth and success into the future. The acquisition of farmland preservation easements results in a variety of opportunities not only for the current landowner, but also for future prospective farmers. However, the availability of land is only one consideration. Many factors influence the degree of success in any agricultural operation. Continued long-term viability of the local industry is dependent upon further exploration and implementation of the various initiatives discussed within this Plan and is largely dependent upon education as well as public policies, laws and programs that support agriculture. Therefore, agriculture should be a priority in present and future decisions regarding taxation, regulations, financial incentives and educational opportunities.

Farmland is recognized as a major contributor toward the rural character that presently exists in the County. The retention of farmland helps to improve aquifer recharge, provides wildlife habitat and provides scenic open space vistas. A Farmland Preservation Program in Atlantic County, thereby protecting farmland from developing with more intense land uses, also reduces the rate of storm water runoff, reduces potential traffic generation and eliminates the costs of services that are associated with other types of development.

### *Existing Agricultural Industry Support*

#### *Right to Farm Act*

The Right to Farm Act provides commercial farmers with protection from restrictive municipal ordinances, as well as public and private nuisance complaints, when the farm is operated in accordance with Agricultural Management Practices (AMPs) that have been adopted by the SADC. The Act gives primary jurisdiction in resolving complaints against agricultural operations to local CADBs (and ultimately to the SADC if the decisions of the county board are appealed), subject to a formal conflict resolution process. Operations must meet the definition of a 'commercial farm' as defined within the Act, at N.J.S.A. 4:1C-1 et seq.

New Jersey's Right-to-Farm Act is considered the strongest in the nation, yet many municipalities and others are unaware of the protections and procedures under the Act. The Right-to-Farm Act protects those farm operations that meet the definition of a "commercial farm" and meet the following criteria.

#### *Basic Requirements for Right to Farm Eligibility*

To qualify for the protections of the Right to Farm Act, a farm must meet the following eligibility criteria:

1. The farm must qualify as a commercial farm. This means an operation larger than five acres must annually engage in agricultural or horticultural

production worth at least \$2,500 and be eligible for differential property taxation under Farmland Assessment. For farms smaller than five acres, the annual production requirement is a minimum of \$50,000 and the farm must satisfy eligibility requirements for farmland assessment, other than the farm-size requirement.

2. The farm (as of December 31, 1997 or thereafter) must be located in an area in which agriculture is a permitted use under the municipal zoning ordinance and is consistent with the municipal master plan. If the commercial farm was in operation on the effective date of the 1998 amendments to the Right to Farm Act (July 2, 1998), however, this zoning ordinance/master plan requirement does not need to be met.
3. The farmer must conduct his operation, or a specific agricultural activity at issue, in compliance with the standards contained in agricultural management practices that have been promulgated by the SADC, or with generally accepted agricultural practices.
4. The operation must be in compliance with relevant state and federal statutes and rules.
5. The operation must not pose a direct threat to public health and safety.

Farms that meet the eligibility requirements listed above, may also be entitled for protection for the following activities:

1. Produce agricultural and horticultural crops, trees and forest products, livestock, poultry and other commodities as described in the Standard Industrial Classification for agriculture, forestry, fishing and trapping
2. Process and package the agricultural output of the commercial farm
3. Provide for the operation of a farm market, including the construction of building and parking areas in conformance with municipal standards
4. Replenish soil nutrients and improve soil tilth
5. Control pests, predators and diseases of plants and animals
6. Clear woodlands using open burning and other techniques, install and maintain vegetative and terrain alterations and other physical facilities for water and soil conservation and surface water control in wetland areas
7. Conduct on-site disposal of organic agricultural wastes
8. Conduct agriculture-related educational and farm-based recreational activities provided that the activities are related to marketing the agricultural or horticultural output of the commercial farm
9. Engage in the generation of power or heat from biomass, solar or wind energy within certain limits
10. Engage in any other agricultural activity as determined by the State Agriculture Development Committee and adopted by rule or regulation pursuant to the provisions of the "Administrative Procedure Act," P.L.1968, c.410 (C52:14B-1 et seq.)



When an individual or municipality is “aggrieved” by a commercial farm operation the Right-to-Farm Act requires such persons file a complaint with the applicable CADB, or directly to the SADC, prior to filing an action in court. Municipalities seeking to enforce their ordinance are therefore required to file such a complaint rather than issue a summons against the farmer. Once a complaint is filed, a public hearing is held by the CADB, or SADC to determine whether the farmer is entitled to the protections of the Act. If a finding by the CADB is questioned, it may be appealed to the SADC and, if necessary, to the New Jersey Superior Court, Appellate Division.

Atlantic County encourages municipalities with local farms to adopt of Right to Farm Ordinances. Presently, three municipalities in Atlantic County have adopted a Right to Farm ordinance - they are Buena Vista Township, Buena Borough and Hammonton.

### *Farmland Assessment*

The Farmland Assessment Program was established in 1964, as part of the Farmland Assessment Act, N.J.S.A. 54:4-23.1 et seq. This Act permits farmland and woodland actively devoted to an agricultural or horticultural use to be assessed at its productivity value. The Act does not apply to buildings of any kind, or to the land associated with the farmhouse. Buildings and homesites on farms are assessed like all other non-farm property. When and if the land qualified under the Act changes to a non-agricultural or non-horticultural use, it is subject to a rollback tax.

Land may be eligible for “farmland assessment” when it meets the following qualifications:

1. Applicant must own the land.
2. Owner must annually apply for Farmland Assessment on Form FA-1 with the municipal tax assessor on or before August 1 of the year immediately preceding the tax year.
3. The land must be actively devoted to agricultural and/or horticultural use for at least the 2 successive years immediately preceding the tax year for which “farmland assessment” is requested.
4. Land must consist of at least 5 contiguous acres being farmed and/or under a woodlot management plan. Land under and adjoining the farmhouse is not counted in the 5-acre minimum needed to qualify.
5. Gross sales of products from the land must average at least \$1,000 per year for the first 5 acres, plus an average of \$5 per acre for each acre over 5, except in the case of woodland or wetland where the income requirement is \$500 per year for the first 5 acres plus \$0.50 per acre for any acreage over 5; or there is clear evidence of anticipated yearly gross sales, payments, or fees within a reasonable period of time dependent on the agricultural or horticultural products being produced
6. Owner must represent that the land will continue in agricultural or horticultural use to the end of the tax year.

When land, which is in agricultural or horticultural use (and is being valued under the Farmland Assessment Act), is applied to a use other than agricultural or horticultural, it is subject to additional taxes, referred to as roll-back taxes, in an amount equal to the difference, if any, between the taxes paid or payable on the basis of “Farmland Assessment” and the taxes that would have been paid or payable had the land been valued, assessed and taxed as other land in the taxing district. In the case of a change in use, the roll-back taxes shall be applicable in the year in which the change took place and in such of the 2 tax years, immediately preceding, in which the land was valued, assessed and taxed under the Farmland Assessment Act.

Land shall be deemed to be in agricultural use when devoted to the production for sale of plants and animals useful to man, including but not limited to: forages and sod crops; grains and feed crops; dairy animals and dairy products; poultry and poultry products; livestock, including beef cattle, sheep, swine, horses, ponies, mules or goats, including the breeding, boarding, raising, rehabilitating, training or grazing of any or all of such animals, except that “livestock” shall not include dogs; bees and apiary products; fur animals, trees and forest products; or when devoted to and meeting the requirements and qualifications for payments or other compensation pursuant to a soil conservation program under an agreement with an agency of the federal government.

Land shall be deemed to be in horticultural use when devoted to the production for sale of fruits of all kinds, including grapes, nuts and berries; vegetables; nursery, floral ornamental and greenhouse products; or when devoted to and meeting the requirements and qualifications for payments or other compensation pursuant to a soil conservation program under an agreement with an agency of the federal government. There are additional requirements for the boarding, training, or rehabilitation of livestock and for forestlands under a woodlot management program.

### *Local Support*

As outlined in Chapter Three, land use and development in Atlantic County is highly regulated. However, actions at the local level can help to limit the number of Right to Farm complaints and can demonstrate local support for the agriculture industry:

1. The adoption of the SADC’s model Right to Farm Ordinance in support of agriculture
2. Zoning actions that support agriculture as a permitted land use
3. Require notification to all prospective new homeowners purchasing a home near an active agriculture farmland.

Municipalities can provide a cushion between agriculture and other land uses to minimize conflict. With increased pressures from development, the degree of support received at the local level is a significant consideration for farmers, and can convey the to others the importance of the industry.

### *Agricultural Education, Outreach and Sustainability*

A well-trained and educated workforce is paramount to the success of the local agriculture industry. Educational opportunities must be readily available for industry participants, to advance the knowledge gained through the continued study, research and development of industry issues and topics. Education and training in areas related to business management, marketing, and the industry in general help to advance the efforts of local farmers who wish to expand their business and maximize profitability. Apart from the programs and educational opportunities offered through various organizations dedicated to agriculture, secondary schools, colleges and other higher education institutes should offer programs for those interested in entering the field or wishing to expand their knowledge and keep up with the latest industry advancements.

The significance of the local agriculture industry can be conveyed at the local K-12 level through school curriculum as well as programs offered through area organizations such as the 4-H Club. Agricultural Science is one of the program areas offered through the 4-H Science, Engineering and Technology Initiative (SET). Such programs offer a hands-on approach to learning, and provide opportunities to help build confidence, learn responsibility and develop skills. Information related to local 4-H programs in Atlantic County can be found online at <http://rutgers-atlantic.org/4-H/>

The New Jersey Agricultural Society’s Agricultural Leadership Program is a two-year program providing educational programming to individuals involved in farming, focusing on leadership development, management skills, communication, decision making, conflict resolution, as well as other areas. More information on this program can be found at <http://www.njagsociety.org/njaldp/njaldp.htm>

The National Future Farmers of America Organization (FFA) was founded in 1928, and currently has 7,242 chapters and nearly 500,000 members. The program is open to students in middle school and high school. Although originally focused solely on the agriculture industry, the organization now seeks to prepare students for a broad range of career opportunities. According to the National website, there are currently three chapters in Atlantic County, at Buena Regional High School, Atlantic County Vocational Technical School and Oakcrest Regional High School. More information about the FFA Organization can be found at <https://www.ffa.org/Pages/default.aspx#>

The New Jersey Department of Agriculture offers technical, financial, and regulatory assistance, and provides educational outreach to landowners throughout the state. The Department also offers, in conjunction with the U.S. Department of Agriculture, farm risk management and crop insurance education programs to assist farmers in the county. Additional programs are highlighted throughout this document, which also provide educational opportunities and programs for local farmers.

Educational opportunities are equally important to those currently involved in agriculture as well as to those who have an interest in entering the field. To be effective, the industry’s leadership and employment needs must be identified and communicated



to decision makers and educators preparing young people for careers in agriculture. As Atlantic County's farmer population gradually ages - the 2012 Agriculture Census indicated the average age was 57.8 - the next generation of local farmers must be knowledgeable about all aspects of the industry.

As previously stated, research and technology are at the forefront of industry sustainability. Through various programs and opportunities offered to farmers, they are able to keep up-to-date on the latest information as it becomes available. One of the greatest resources available to farmers is other farmers. Networking opportunities through meetings and industry conventions allow industry participants to share their knowledge. In addition, the internet has become an essential tool for learning and communication among farmers and farm workers.

In 2012, the NJDA and the Vegetable Growers Association of New Jersey held their first joint convention in Atlantic City. By combining the diverse programs offered by these groups at their individual annual conventions, this opportunity allows greater participation and interaction among participants from all areas of the industry. Participants are exposed to information, discussions and presentation on a host of issues, including regulations and policy, technological advancements, research, marketing strategies, among other areas.

Also available to local farmers is an online discussion group for vegetable workers and growers around the country. This site fosters timely communication between farmers in the US and around the world, offering news, reports, and discussions on ag-related topics. This resource is available at [http://tech.groups.yahoo.com/group/veg\\_prod/](http://tech.groups.yahoo.com/group/veg_prod/)

Throughout this Plan, the importance of sustaining a healthy industry into the future has been highlighted. The importance of research and continued education are included as important tools in attaining this goal, but these endeavors can require much in the way of resources, especially monetary. Farmers and other industry professionals can pursue various grants for research and development initiatives, increasing the likelihood of participation. For example, the Northeast Sustainable Agriculture Research and Education program offers grant opportunities to farmers, researchers and educators. It also presents a vehicle with which these entities can gain access to project results and publications, as well as other resources. More information can be found at <http://nesare.org/>

With persistent and committed efforts to preserve lands, conserve natural resources, and provide farmers with the tools and knowledge necessary for advancement, Atlantic County's agriculture industry is poised for continued success well into the future.

#### *Public Meeting- July 14, 2016*

On July 14, 2016, a public meeting was held at the Anthony Canale Training Center in Egg Harbor Township to receive feedback from the community on the County's overall Master Plan efforts, including this Farmland Preservation Plan. An Open

House approach was utilized, allowing the public to visit stations and provide feedback on various issues including Farmland Preservation, Open Space and Recreation, Land Use, Resiliency, Transportation and Infrastructure. In regards to Farmland, a number of participants expressed a need for agritourism opportunities. Types of agritourism included petting zoos, farms with wildlife interaction, and pick-it-yourself facilities.

### *Atlantic County's Vision for Farmland Preservation*

The future of farmland preservation in Atlantic County remains a priority for the County. Although funding has decreased significantly over the past several years, cost-sharing grants with the SADC will provide additional revenue to preserve farms as individual farmland preservation applications are filed with County staff.

The Goals of this Farmland Preservation Plan are listed below:

- Preserve land for farm uses so that agricultural businesses can thrive
- Minimize the impact of future non-farming development on important and priority farmland
- Preserve the rural farming environment
- Promote agritourism
- Encourage economic development strategies including roadside farm stands, farmers markets, community support agriculture, and value-added products
- Continue to expand the base of preserved farms and support the farming community

The commitment of the County Board of Freeholders, Atlantic County Agriculture Development Board and the citizens to sustain agricultural as a business and as a way of life should be made clear in the municipalities where agricultural lands are located. These municipalities should examine their plans and ordinances to reflect the importance these areas.





*Implementation Matrix*

The matrix below gives the above recommendations a schedule to follow. Each recommendation has been classified as either being a short-, mid-, or long-term action. Short-term actions are usually completed within 1-3 years, mid-term in 3-7 years, and long-term in 7+ years.

<i>Table 1.26 Implementation Matrix</i>			
<b>Funding Mechanisms</b>	<b>Short-Term</b>	<b>Mid-Term</b>	<b>Long-Term</b>
Continue to utilize County Open Space Tax Trust Fund in order to assist with the preservation of farmland	On Going		
Continue to maximize revenues of the Open Space Tax levy by supporting the maximum rate allowed under law.	On Going		
Seek State, Federal and non-profit assistance when acquiring and restricting land for agricultural purposes			X
<b>Preservation</b>			
Prioritize farmland preservation based upon percentage of prime soils, tillable acres, boundaries and buffers, local commitment, and size and density.			X
Continue to work with the State Agriculture Development Committee, NJ Office of Planning, NJ Pinelands Commission, and other entities to preserve farmland where appropriate	On Going		
<b>Agritourism</b>			
Develop a Marketing plan to capitalize on the benefits of agri-tourism by working with farmers, land owners, local groups, farmers markets, etc.	X		
Explore partnerships to build on existing and potential agri-tourism programs		X	
<b>Natural Resource Conservation</b>			
Create outreach programs/identify existing programs to promote sustainable agricultural and water quality improvement techniques and practices		X	
Promote and encourage buffer strips and pollination plots		X	







