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# **New Jersey Pinelands Commission Long-Term Economic Monitoring Program**

## **2004 Annual Report**

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**James J. Florio, Chairman**

**John C. Stokes, Executive Director**

**August 2004**

**NEW JERSEY PINELANDS LONG-TERM ECONOMIC  
MONITORING PROGRAM  
*2004 ANNUAL REPORT***

**August 2004**

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## Acknowledgments

The 2004 Annual Report of the Pinelands Long-Term Economic Monitoring Program was prepared by Pinelands Commission economist Frank Donnelly.

The Pinelands Commission gratefully acknowledges the help of its technical advisors in guiding the Long-Term Economic Monitoring Program. The technical advisory committee currently includes the following:

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The report will be available for from the Pinelands Commission's web site at <http://www.state.nj.us/pinelands>. The raw data used to create the report will also be available for download.

The report is also available from the Pinelands Commission free of charge on CD-ROM. Requests can be mailed to:

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## Executive Summary

This report provides results of an ongoing economic monitoring program that tracks economic conditions in the Pinelands region. The Pinelands is the nation's first federal reserve. Established in 1978, it covers an area of over one million acres in the heart of Southern New Jersey. The Pinelands Comprehensive Management Plan (CMP) was adopted in 1980. The plan establishes minimum standards for land use throughout the region which are implemented at the local level through municipal ordinances.

This report presents data and describes key trends in the areas of population and demographics, real estate, economic growth, and municipal finance. Several core variables are continually monitored in each of these areas every year. A smaller number of supplemental variables are also examined but change from year to year. The basic unit of analysis is determined by the data. Municipal level data is available in most cases and county level data is utilized when municipal data is not available. The general analytical approach involves comparing economic trends (from 1980 onward) of the Pinelands municipalities to other regions outside of the Pinelands (i.e., Non-Pinelands, Southern New Jersey, and the State). In this report, "The Pinelands" refers to an aggregate of forty-seven municipalities that have at least ten percent of their land area within the state-designated Pinelands boundary. The "Non-Pinelands" refers to an aggregate of the remaining 155 municipalities in the eight counties of Southern New Jersey. In some instances certain variables from the US Census are available below the municipal level at the census block or census block group level. Trends inside and outside the Pinelands boundary can be distinguished at those geographic levels.

Supplemental population estimate data for 2001 and 2002 reveal that the Pinelands municipalities are growing at a faster rate than the Non-Pinelands municipalities. According to the estimates, the Pinelands municipal population grew by 28,400 between 2000 and 2002, an increase of 5% (compared to an increase of 2% in the Non-Pinelands). Previous population analysis at the census block level revealed that 277,000 people lived within the actual Pinelands boundary in 2000, a 5.5% increase over the 1990 population of 262,510. By contrast, the population in the portion of the Pinelands municipalities that lie outside of the Pinelands boundary grew by 14.3%, from 361,009 in 1990 to 412,557 in 2000. Additional analysis of population demographics demonstrated that a number of Pinelands municipalities have a high concentration of senior residents. A census block group level analysis determined that a higher percentage of senior citizens live in the portion of Pinelands municipalities that lies outside the boundary compared to the portion inside the boundary.

Results in the area of property values and residential development reflect the healthy, national real estate market in 2003. On average, more building permits were issued in Pinelands municipalities than all other regions of the state. Building permit activity has increased in the Non-Pinelands more quickly than in the Pinelands this year, a reversal of previous trends. Most building permits were issued along the northern, eastern, and western edges of the Pinelands region where development pressures and permitted residential densities are greatest. Real estate transactions remained constant for the state as a whole, but the number of transactions in Southern New Jersey increased. Transactions in the Pinelands increased at a higher rate than the Non-Pinelands, and the Pinelands share of Southern New Jersey's total transactions has increased by two percent since 1999. Similar to building permits, the bulk of home sales took place along the northern, eastern, and western edges of the Pinelands region. The Inflation-adjusted median selling prices of

homes increased significantly this year, with the highest percent change recorded in the monitoring period (since 1989). The median sale price was lower in the Pinelands than the Non-Pinelands, but prices in the Pinelands rose at a faster rate and the gap between Pinelands and Non-Pinelands prices has continued to narrow. Supplemental census block group data from the 2000 Census of Housing indicates that the area within the Pinelands boundary experienced a significant drop in housing construction from the 1970s to the 1980s, while the portion of the Pinelands municipalities that lie outside the boundary had the same level of home construction in the 1980s as in the 1970s.

Findings in the area of economic growth revealed a number of trends. Unemployment stabilized in New Jersey in 2003, and the state unemployment rate was on par with the national rate. The unemployment rate in the Pinelands was 5.6% in 2003, compared to 6.2% in the Non-Pinelands region and to a state and national rate of 5.9%. New municipal data for employment, establishments, and wages was not available, so county data from 1991 to 2002 was analyzed. Southern New Jersey experienced a higher rate of employment growth during this time period, but had a lower rate of growth for establishments and trailed the state's annual average wage by a wide margin. The largest private employment sectors in Southern New Jersey in 2002 were retail, healthcare, and accommodation & food service. Farmland assessment data was expanded with new data from 2001 and old data from the early 1980s. The Pinelands share of the total assessed farmland acreage in Southern New Jersey increased between 1980 and 2001 due to increases in assessed acreage in the Pinelands and large decreases in assessed acreage outside the Pinelands. Prices for cranberries, an important cultural and economic resource of the Pinelands, continued to recover from 2000 to 2002 following a precipitous decline from 1997 to 1999. Blueberry prices also increased in 2002. Supplemental data for state forest visitor attendance indicated that there are approximately 966,000 visits to state forests in the Pinelands each year. Previous analysis of per capita income indicated that income in the Pinelands was lower than the Non-Pinelands but has been increasing in the Pinelands at a faster rate. The Agricultural and Retail Censuses for 2002 are due to be released next year and should yield a wealth of new information.

Monitoring in the municipal finance category demonstrated a continuation of previous trends. Historically, average residential tax bills and effective property tax rates have been lower in the Pinelands than the remainder of the State, and new data reinforces the increasing gap between property taxes in the Pinelands region versus other regions. The average residential property tax bill grew at a slower rate compared to the Non-Pinelands during the period 1983 to 2003. Effective tax rates decreased substantially for all regions following a long period of growth, while the equalized value of property increased at a greater rate than previous years. Supplemental data on local municipal purpose revenues indicated that the local municipal budgets of Pinelands municipalities increased at a greater rate than the Non-Pinelands municipalities between 1995 and 2003, but that per capita revenues were much lower in the Pinelands. State aid to both regions decreased between 1999 and 2003, and the amount per capita aid that both regions received was similar. Previous analysis of assessment class proportions in municipal valuations revealed that the Pinelands continued to have a greater percentage of valuation in the vacant and residential categories than the Non-Pinelands region. The percentage of valuation in the vacant category continued to decrease, while the percentage in valuation in the residential category continued to increase.

In addition to ongoing data collection and analysis, special studies represent the second major component of the economic monitoring program. Because the overall trends

tracked by the Long-Term Economic Monitoring Program can mask the conditions of individual municipalities, the second special study focuses on characterizing and identifying municipalities that are experiencing poor health. Although difficult to define, poor health can be described as being below a given standard with respect to municipalities' social, economic, physical, and fiscal conditions. The project is being administered by Pinelands Commission staff and conducted in consultation with the Pinelands Municipal Council. The final report for the project may provide a basis for legislation to allocate special aid to the most strained towns. Another study is focusing on changes in the sale price and value of vacant developable land within the Pinelands. A large database of transactions covering the years 1989 through 2002 has been assembled and analysis is ready to begin.

## 1. Introduction

### 1.1 The Long Term Economic Monitoring Program

The Pinelands National Reserve was established in 1978 and is the nation's first federal reserve. It covers an area of over one million acres in the heart of southern New Jersey. The Pinelands Comprehensive Management Plan (CMP) was adopted in 1980 and manages land use activities at regional and local levels. A blend of federal, state, and local programs is responsible for safeguarding the environmental and cultural resources of the region. Of particular importance to the regional economy are land use policies and controls included in the CMP and implemented by municipalities that significantly limit development in designated Preservation, Forest, and Agricultural management areas and encourage development in other districts, particularly Regional Growth and Town Areas. These growth areas tend to be located in and around already developed areas, many of which have access to central sewer systems and other infrastructure. Recent studies have suggested that the CMP has been successful in steering growth away from conservation areas towards growth areas.<sup>1</sup>

Of major interest to landowners, residents, and businesses in the region is the economic impact of the regulations on land values, real estate markets, local government finances, and the economic performance of farms and businesses. A number of studies have been conducted since the inception of the CMP in 1980 that have addressed these issues (see Appendix A). These efforts, while directed at measuring the short-term impacts of the CMP, have recognized the importance of monitoring economic and fiscal impacts over the long term.

As part of its second full review of the CMP, the Commission convened a panel of economic experts in 1992 to review the prior studies and develop recommendations for future Commission efforts. Later that year, the Commission formally endorsed the panel's recommendation to monitor the region's economy on a continuing basis. Consequently, the Pinelands Commission prepared a proposal (July 1994) to the National Park Service (NPS) to institute a long-term economic monitoring program, which was incorporated into a September 1994 Cooperative Agreement between the two agencies.

The *New Jersey Pinelands Commission Long-Term Economic Monitoring Program First Annual Report* was released after three years of planning in 1997. The document, the first in a series of annual reports, presented data and described trends for key indicators in the areas of property values, economic growth, and municipal finance. The *First Annual Report* and its accompanying Executive Summary also identified potential topics for future study. Subsequent annual reports updated most of the data in the *First Annual Report*. This *2004 Annual Report* is the eighth in the series and augments most of the data used to develop the previous reports but also includes a variety of information not found in previous reports. A copy of the *2004 Annual Report* is available on CD-ROM by writing to the Pinelands Commission at P.O. Box 7, New Lisbon, NJ, 08064. The report will be available on the Pinelands Commission World Wide Web site at <http://www.state.nj.us/pinelands>.

### 1.2 Program Goal and Objectives

The fundamental goal of the Long-Term Economic Monitoring Program for the Pinelands is **to continually evaluate the health of the economy of the Pinelands region in an objective and reliable way**. The economic monitoring program, in conjunction with an ongoing environmental monitoring program, provides essential information for consideration by the

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<sup>1</sup> See "Managing Land Use and Land-Cover Change: The New Jersey Pinelands Biosphere Reserve" by Walker and Solecki, *Annals of the Association of American Geographers*, 89(2), 1999, p. 220-237.

Pinelands Commission as it seeks to meet the mandates set forth in the federal and state Pinelands legislation.

The program was designed to accomplish several principal objectives:

1. Address key segments of the region's economy while being flexible enough to allow for the analysis of special topics that are identified periodically;
2. Establish a means for comparing Pinelands economic segments with similar areas in the state not located within Pinelands designated boundaries;
3. Establish a means for evaluating economic segments over time so that Pinelands-related trends can be distinguished from general trends;
4. Provide for analyses to be conducted in an impartial and objective manner; and
5. Be designed and implemented in a cost-effective manner so that the program's financial requirements can be sustained over time.

These objectives are accomplished by two means: through the publication of an annual report of indicators, and through the commissioning of periodic special studies. The annual report takes the "temperature" of the regional economy, while special studies take a more in-depth look at specific topics. The following two chapters outline the structure and design of both components.

### 1.3 Program Administration

The development and implementation of the Long-Term Economic Monitoring Program is a collaborative effort. Under the terms of the cooperative agreement with the National Park Service (NPS) the Commission receives funding for personnel and other resources, including a full-time economist, managerial, and technical support staff (on an as-needed basis), expert consultants, data acquisition, equipment, and informational materials. The NPS also can provide oversight and substantive input on an ongoing basis through its own Technical Advisory Committee.

The Commission staff members have primary responsibility for the day-to-day implementation of the program, including acquisition and analysis of data; coordination with the NPS, expert advisory committee, and public; and development of all reports and other products. Perhaps most importantly, the Commission will consider the results of these monitoring efforts as it identifies the need for in-depth economic studies and continues to refine and improve Pinelands protection policies. The data will also be used for other Commission analyses and independent efforts.

A technical advisory committee was created by the Pinelands Commission to provide informed and objective input on an ongoing basis. Committee members have helped to ensure that the program meets appropriate technical standards by assisting in identifying and specifying variables to be monitored, developing the detailed design, implementing appropriate methodologies, interpreting results, and reviewing draft documents. Current members of the expert advisory committee are:

John E. Petersen, Ph.D., Professor of Public Policy and Finance, George Mason University  
Henry O. Pollakowski, Ph.D., Professor, Center for Real Estate, Massachusetts Institute of Technology

## 2. Annual Reports

### 2.1 Data Categories

Ongoing data collection and analysis involves continual monitoring of key economic indicators to establish a historical basis for trend comparison and enables analysis of Pinelands activity in relation to regional and statewide patterns. The ongoing reporting of data will allow the Commission to target topics for in-depth research to determine the basis of economic well being of Pinelands communities and potential cause-and-effect relationships. Data for key variables are collected annually when possible and provide information essential to an understanding of the character of the Pinelands economy. In general, these data are collected from secondary sources. The annually updated data are considered to be the core variables of the report.

The first annual report included a provision for adding supplemental data, and this provision was used for the first time in the 2003 annual report. The 2004 annual report continues this trend with the introduction of some new supplements. Supplemental variables provide valuable information and insight into the Pinelands and regional economy, but are not considered core variables because they are not updated regularly. For instance, the US Census data is extremely valuable but since it is only updated every ten years most of it cannot be considered core. If reliable data can be obtained for a sufficient period of time, supplemental variables can become core in the future.

### 2.2 Core Variables Selected for Long-Term Monitoring

Four primary areas of inquiry are monitored: population and demographics, land and housing values and residential development, the business climate and commerce of the region, and the fiscal health of municipalities. Within each of these areas, several core variables are monitored. Collectively, these variables provide insight into the overall health of the Pinelands' economy; individually, they offer detailed information on specific features of interest. Table 2.2 identifies the monitoring period, frequency of collection, and method of analysis for the core variables tracked for this report. Each of the variable groups is described below.

#### ***Population and Demographics***

This section examines basic information regarding the population of Southern New Jersey and the Pinelands that is necessary for any economic or geographic analysis. The core variables in this section are: population at the municipal and census block level, population change, and age demographics. Population growth drives both consumer demand and reflects labor supply, and therefore is an extremely important indicator of economic growth. Age demographics will affect the level and type of municipal services provided and influences housing markets.

#### ***Property Values and Residential Development***

At the heart of many of the controversies generated by the implementation of the Pinelands land use regulations is the issue of land values. To the extent that development controls affect the value of land, current and prospective landowners will be affected, as will tax rates associated with vacant land. This group of variables identifies trends in development pressures and measures the differences in values of housing and land in different areas of the region. The value of property depends in part on the permitted use that yields the highest rate of return to the owner, often called "the highest and best use." Permitted uses on vacant land

and farmlands in many parts of the Pinelands have been limited significantly and therefore land prices may be adversely affected.

In addition, land use regulation may also affect the value, type and supply of housing and other development activities. For example, the implementation of the CMP has the potential to increase housing prices, both through a reduction in supply in certain areas and by providing a permanent amenity to residents of the region. Conversely, other factors, such as declining or shifting job markets, if they exist, may cause housing price decreases. Building permits, median selling price of homes, and volume of residential real estate transactions are the three variables tracked annually for this variable group. A special study of vacant land values is also being conducted; further explanation can be found in the special studies section of this report.

### ***Economic Growth***

The observation of trends in indicators that are directly tied to the prosperity of a region's residents is central to the measurement of the economic well being of the region. As such, monitoring of employment, income, and the business climate is essential to this program. This group of variables measures the prosperity and viability of business in the region. Tracking economic growth variables over time and comparing them across regions may show differences and indicate areas for special study. To the extent that the CMP has had an effect on the regional economy, there will be both direct and indirect (multiplier) impacts on employment and wages. Impacts (positive or negative) may be substantially different across business sectors.

Seven economic growth variables are tracked annually for this report: retail sales per capita; per capita income; unemployment; employment, establishments, and wages; and agriculture (including farmland assessed acreage, census of agriculture data, and blueberry and cranberry production). Data for employment, establishments, and wages has been presented at the municipal level in previous reports. Since updated municipal data has not been available since 1999, and since new municipal data is not anticipated for release in the near future, the data is being presented at the county level this year for the years 1991 through 2002. The older municipal data has been retained in this 2004 report but will be discontinued in subsequent reports until new data becomes available.

### ***Municipal Finance***

The long-term monitoring of municipal fiscal trends is of interest for several reasons. As discussed in previous studies, Pinelands regulations have affected vacant land assessments in some municipalities (see, for example, *Economic & Fiscal Impacts of the Pinelands Comprehensive Management Plan*, New Jersey Pinelands Commission, 1983 and 1985). In all but one case, however, the short-term impact on tax rates was relatively minor. Public acquisitions of land in a few municipalities have also resulted in a loss of tax ratables. While these problems were mitigated in the short-term by state reimbursement programs, their long-range impacts should be evaluated.

The level of development in a municipality also affects both municipal ratable bases and expenditures for public services and facilities. Development is associated with growth in ratables, although capital and operating costs for schools, roads, and other public facilities will also increase. Whether development results in a net fiscal benefit or cost to the community depends in large part on the type of development (e.g., commercial, industrial, apartments, single-family houses, or retirement communities). Density may also have an effect.

Data is obtained from the New Jersey Department of Community Affairs (DCA), Division of Local Government Services, which publishes property tax information on an annual basis. Three variables are tracked annually for this variable group: average residential property tax bill, state equalized valuation (total value of taxable property), and effective tax rate. Three additional variables were collected in previous reports but were dropped from the 2003 Annual Report because the DCA has not provided updates since 1994, when publication of the *Annual Report for the Division of Local Government Services* was discontinued. As a result, tax collection rate, municipal expenditures by type per capita, and municipal expenditures per household are no longer tracked in the Annual Report. If updates for these variables become available in the future, they will be reinstated. A fourth variable, assessment class proportions in municipal tax revenues, was updated with data from 2002, but the years between 1994 and 2002 are unavailable. This variable may also be discontinued as a core variable if future updates are not available.

Table 2.2 Summary of Core Variables in Annual Report

Name	Years Collected <sup>2</sup>	Years Added <sup>3</sup>	Frequency of Collection	Method of Analysis
Municipal Population	1980, 1990, 2000	None	Decennial	Inside/Outside Pinelands
Census Block Population	1990, 2000	None	Decennial	Census Block, Inside/Outside Pinelands Boundary
Age Demographics	1980, 1990, 2000	2000 (block group level)	Decennial	Inside/Outside Pinelands, Census Block Group (2000)
Building Permits	1980-2003	'03	Annual	Inside/Outside Pinelands
Median Selling Prices of Homes	1988-2003	'03	Annual	Inside/Outside Pinelands
Volume of Real Estate Transactions	1988-2003	'03	Annual	Inside/Outside Pinelands
Retail Sales & Establishments	1992, 1997	None	Quintennial	County, Place
Income	1979, 1989, 1999	None	Decennial	Inside/Outside Pinelands
Unemployment	1980-2003	'03	Annual	Inside/Outside Pinelands
Employment	1993-1999 (municipal level)	1991-2002 (county level)	Annual	Inside/Outside Pinelands (93-99), County (91-02)
Number of Establishments	1993-1999 (municipal level)	1991-2002 (county level)	Annual	Inside/Outside Pinelands (93-99), County (91-02)
Payroll by Major Industry Sector	1993-1999 (municipal level)	1991-2002 (county level)	Annual	Inside/Outside Pinelands (93-99), County (91-02)
Farmland Assessed Acreage	1980-1984, 1986-2001	'80-'84, '01	Annual	Inside/Outside Pinelands
Agricultural Census Data	1982, 1987, 1992, 1997	None	Quintennial	County
Blueberry and Cranberry Production	1972-2002	'02	Annual	State
Average Residential Property Tax Bill	1983-2003	'03	Annual	Inside/Outside Pinelands
Equalized Property Value	1980-2003	'03	Annual	Inside/Outside Pinelands
Effective Tax Rate	1980-2003	'03	Annual	Inside/Outside Pinelands
Assessment Class Proportions in Municipal Valuation	1980-1994, 2002	None	Annual	Inside/Outside Pinelands

<sup>2</sup> Data acquisition is based on the availability of data. An effort is made to acquire data for every year available from 1980 to the present.

<sup>3</sup> Refers to addition from previous report and specifies which years of data are new in this update.

## 2.3 Supplemental Variables

One supplemental variable (or in some cases, groups of variables) has been added to each of the four data categories this year (Table 2.3a). Supplemental variables provide valuable information and insight into the Pinelands and regional economy, but are not be tracked annually as core variables because they are not updated regularly. If the data is viable and a sufficient time series can be obtained, supplements could become core.

Population estimates have been added to the population section. Population estimates calculate population during the years between censuses. The estimates are useful for calculating per-capita figures and become particularly useful as the last census grows older and no longer accurately reflects current population conditions. Year Structure Built from the 2000 Census of Housing was added to the real estate section. This supplement describes the age of housing units as of 2000 by decade from the 1940s to the 1990s, plus an aggregate for homes built before 1940. The number of visitors to state forests was added in an attempt to gauge tourism / recreation in the Pinelands. This supplement was added to the economic growth section. Local municipal purpose revenues were added to the municipal finance section in order to provide insight into the level of services that municipalities provide. This data could become a core variable in absence of municipal expenditure data. These four variables replace the supplements found in the previous (2003) report (Table 2.3b). Please refer to the 2003 Annual Report for information regarding the previous supplements.

Table 2.3a Summary of Supplemental Variables in the 2004 Annual Report

Name	Source	Years Collected	Method of Analysis
Population Estimates	NJ Dept Labor	2001, 2002	Inside / Outside Pinelands
Census of Housing Year Structure Built (By Decade)	US Census Bureau	2000	Inside / Outside Pinelands, Census Block Group
Visitor Attendance for NJ State Forests	NJ DEP Division of Parks and Forestry	1992 - 2002	Inside / Outside Pinelands
Municipal Revenues per Capita	NJ DCA Div Local Govt Services	1995 - 2003	Inside / Outside Pinelands

Table 2.3b Summary of Supplemental Variables in the Previous (2003) Annual Report

Name	Source	Years Collected	Method of Analysis
Population Density	US Census Bureau	1980, 1990, 2000	Inside / Outside Pinelands
Census of Housing (Units, Occupancy, Ownership, Year Structure Built)	US Census Bureau	1990, 2000	Inside / Outside Pinelands
Place of Work by Place of Residence	US Census Bureau	2000	Inside / Outside Pinelands
Municipal Services: Police Protection, Garbage Collection	NJ State Police NJ Bureau Solid Waste	2001 2002	Inside / Outside Pinelands

## 2.4 Geographic Scale: Defining the Pinelands

Concise definitions of the various levels of geography used in this report can be found on page 13, which is the first page of the indicators section. This section provides a detailed geographical description and definition of the "Pinelands" which is used in this report.

The state designated Pinelands Area encompasses portions of seven counties in Southern New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Ocean. There are 53 municipalities that have part or all of their land in the Pinelands. Most of the variables monitored in the report are obtained at the municipal level, since this is typically the most precise level of geography available. Municipal values are aggregated into Pinelands and Non-Pinelands regions, based on a “10% rule.” Any municipality with at least 10% of its land in the Pinelands area is considered to be in the Pinelands region, and all remaining municipalities in southern New Jersey (those located in the seven counties mentioned above, plus Salem County) are considered to be Non-Pinelands municipalities. Of the 53 municipalities completely or partially located in the Pinelands Area, 47 were classified as inside, while six<sup>4</sup> were classified as outside, joining the remaining 149 municipalities located entirely outside the Pinelands. In summary, the term “Pinelands,” as used in this report, refers to 47 municipalities that have at least 10% of their land in the state-designated Pinelands Area, while the term “Non-Pinelands” refers to the remaining 155 municipalities of Southern New Jersey.

While the aggregate method used in this report is the best currently available it is not ideal. Many municipalities are split by the Pinelands boundary, so activities and phenomena present outside the Pinelands boundary are counted as occurring inside the Pinelands. In some cases areas inside a Pinelands municipality, but outside the Pinelands boundary, are growing rapidly. This growth can distort the Pinelands aggregate, indicating that the Pinelands is growing rapidly, while in reality much of the growth is occurring just outside of the Pinelands boundary.

Obtaining data at a sub-municipal level circumvents this problem. For instance, the population for each Pinelands municipality was calculated at the block level, to obtain population counts for areas of Pinelands municipalities inside and outside the Pinelands boundary. The results of the count showed that approximately 277,000 people lived inside the Pinelands boundary, while approximately 413,000 people lived outside the boundary, but within Pinelands municipalities. Population growth between 1990 and 2000 was 5.5% inside the boundary, and 14.3% outside the boundary within Pinelands municipalities. Clearly, the Pinelands aggregates are including a fair amount of Non-Pinelands activity. Additional data at the census block and census block group level is being sought. Other methods of obtaining sub-municipal data are also being explored, such as using GIS to pinpoint variables with address information to streets, so an inside / outside boundary count can be made. For variables where sub-municipal census data is available, the terms “Pinelands Municipal Area Inside the Boundary,” and “Pinelands Municipal Area Outside the Boundary,” are used to refer to the areas of Pineland’s municipalities that are split by the state-designated Pinelands boundary.

Despite these limitations, the Inside / Outside Pinelands municipal aggregate system is currently the most viable method for comparing the Pinelands to the Non-Pinelands regions based on data currently available. The census block analysis revealed that certain municipalities with as much as 30% of their land in the Pinelands had practically no residents in the Pinelands. Analysis has shown that altering the 10% percent rule in favor of a 20, 25 or 30% rule yields no significant difference in the value of the aggregates. Strictly identifying whether an activity is occurring inside or outside of the boundary may be unnecessary to some extent, as economic activity occurs regardless of where boundaries exists. Areas inside and outside of the boundary interact economically with each other, and both interact with other regions. Consequently, this report retains the 10% rule to define inside and outside municipalities.

Municipal level data is unavailable in certain cases. The Agricultural Census and Retail Census are restricted to county level data. For the Agricultural Census data, Pinelands counties

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<sup>4</sup> The six are: Corbin City, North Hanover Township, Springfield Township, Berlin Borough, Vineland City, and Dover Township.

(Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Ocean) are compared to Non-Pinelands counties (Salem plus the thirteen counties of North Jersey). For the Retail Census and Covered Employment data (employment, establishment, and wages), information is presented for the eight Southern New Jersey counties along with totals for the entire state. Because county-level data are necessarily limited in the amount of geographic information they can convey, a chart showing the contribution of each county to Pineland's acreage is provided in Appendix B to aid in interpretation whenever county data are presented. Blueberry and cranberry production data are available only at the state level, but since these crops are found almost exclusively within the Pinelands, statewide figures provide ample information for the purposes of this analysis.

## 2.5 Presentation of Data

Data in the annual report is arranged by variable, grouped into four main sections. Each core variable is designated by section (population, real estate, economy, and municipal finance) and by number. When a new section begins, numeration restarts at 1. For instance, there are population variables 1 through 4, Real Estate variables 1 through 4, etc. Numbers followed by an "S" indicate supplemental variables. Supplemental variables always appear at the end of a section. A checkbox in the upper right hand corner of the page indicates whether a variable was updated since the last report. A variable is considered updated if additional years of recent data were added or further analysis of previous data was conducted.

Pinelands and Non-Pinelands aggregates are charted, along with Southern New Jersey and state averages. Data is obtained as far back as 1980, when possible. In most cases, averages for each region are calculated by averaging the values for all municipalities in the region. In a few instances values are not averages but are sums for the region.<sup>5</sup> For example, retail establishments per capita for each region is calculated by dividing the total population of the region by the total number of establishments in each region. It is not calculated by averaging the ratio of each municipality to get a regional average.

Data is presented by Pinelands municipality for some variables in the form of tables, and certain variables are mapped for all of Southern New Jersey. While the aggregates provide a regional picture, the tables and maps illustrate the degree of variation that exists among the municipalities. Tables display and sort data for the 47 "inside" municipalities, and record data for five<sup>6</sup> of the "outside" municipalities separately at the bottom of the table. The sorting column(s) for each table vary and are indicated by a shaded column heading. Tables and graphs embedded in the text are not enumerated.

Variables in the Annual Report that describe monetary amounts are adjusted for inflation using the Consumer Price Index (CPI-U) from the U.S. Bureau of Labor Statistics, shown in 2003 dollars. This is an update from the previous 2002 and 2003 annual reports, where variables were keyed to the 2000 CPI. Variables in the Fact Book are not inflation adjusted, as the purpose is to display the most recent information available and not to monitor change over time.

Indexes were derived for many variables in this report. Indexing is a common technique for characterizing economic time series data and measures how variables change over time. Change is measured relative to a pre-selected base period. In this report, the base period selected is usually the first year that data for the variable are available. As an example, if 1988

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<sup>5</sup> See "Unit of Analysis" for each variable to ascertain whether municipal averages or regional sums are used.

<sup>6</sup> The five municipalities counted as "outside" the Pinelands in this report which have between one and ten percent of their land in the Pinelands. Dover Township is excluded, as less than 1/2 of one percent of its land is in the Pinelands.

is selected as the base period for housing transactions, the 1988 index number for housing transactions would be 1.00. The remaining index numbers are calculated by dividing each year's total housing transactions by total 1988 housing transactions. A 1999 index number of 1.10 indicates that 1999 housing transactions are 10% greater than 1988 levels. Portraying multiple indexes for different regions on one graph enables easy comparison of relative changes among those groups.

The Municipal Fact Book was a new addition to the 2002 Annual Report, and was significantly updated and enhanced for the 2003 report. The 2004 report uses the same format with a few minor changes. Economic data are arranged by Pinelands municipality rather than by variable, in order to provide a better understanding of the unique economic characteristics of each municipality. The fact sheets are arranged alphabetically by county, then by municipality. Variables for each municipality are listed beside the average value for all municipalities in Southern New Jersey and the municipality's rank for that variable among the 202 municipalities in Southern New Jersey. Additional information, such as census block data, population graphs, and map of development zones, is also provided. Fact sheets for each of the Southern New Jersey counties are a new addition to the 2004 report. The county sheets use the same format as the municipal sheets, with county values displayed beside the average Southern New Jersey County value and the county's rank among the eight counties.

The factbook is located in Appendix G. Additional resources in the appendix include: a list of reference materials, a table of Pinelands and southern New Jersey acreage by county, a map showing place names for all 202 towns in southern New Jersey, a description of Pinelands Management Areas, a map of Pinelands Management Areas, and a map of housing unit construction trends at the block group level from the 1940s to the 1990s.

### 3. Special Studies

Special studies represent the second major component of the monitoring program. Studies may be initiated in any year of the program. The ongoing data program will be highly instructive in selecting topics for special study to provide an in-depth examination on apparent differences between Pinelands and Non-Pinelands economic trends. Special studies may also provide an opportunity to augment ongoing data collection should a need be identified for primary (rather than secondary) data or for more geographically specific data.

#### *First Study: Value-Added Blueberry Products (Complete)*

The blueberry study was a partnership between Cook College at Rutgers University, the Pinelands Commission (supported through the National Park Service), and New Jersey's blueberry growers for the purpose of boosting the blueberry industry by creating a value added product. The study was successfully completed in November 2001, and a detailed explanation of the project can be found in the 2001 Annual Report. Development and marketing of value-added blueberry products will continue indefinitely through Blueberry Health, Inc. Blueberry Health buys blueberry pulp for products from New Jersey farmers, and reinvests its profits in blueberry research and product development.

#### *Second Study: Indicators of Municipal Health (Underway)*

At its September 1999 meeting, the Pinelands Municipal Council unanimously recommended that the Long-Term Economic Monitoring Program conduct a special project to identify and characterize municipalities experiencing poor health. Although difficult to define, poor municipal health can generally be described as being below a given standard with respect to municipalities' social, economic, physical, and fiscal conditions. The project is being administered by Pinelands Commission staff and conducted in consultation with the Pinelands Municipal Council.

In November 1999, the Pinelands Commission authorized the project as the second special study. The goals of the project are to: 1) produce a database of indicators that are reflective of municipalities' social, economic, physical, and fiscal conditions; 2) produce an objective, systematic and repeatable model which identifies municipalities that are experiencing poor health using the database of indicators; 3) select economically challenged communities using the results from the model; and 4) develop methods to calculate financial aid and/or other resources that may alleviate the degree of strain in the identified municipalities.

In January 2001, a short questionnaire was administered to municipal officials (i.e., mayors, CFO's, administrators, council members, etc.) of 36 municipalities.<sup>7</sup> The questionnaire was designed to reveal municipal officials' opinions on indicators of fiscal health and on ways to measure and compare fiscal health among municipalities. In general, the results of the questionnaire suggest that the most pressing municipal health concerns of the Pinelands municipalities relate to a healthy tax base (i.e., a mix of commercial, industrial, residential land), tax rates, and school costs. These themes are being examined more closely during the course of this project.

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<sup>7</sup> All municipalities with at least 50% of their land within the Pinelands were included (33 municipalities) plus three additional municipalities which requested to be included.

The preliminary design of the study consists of two parts. The first part focuses on a Pinelands and Non-Pinelands analysis of fiscal indicators. Based on responses from the questionnaires and the availability of data, the following eight variables are being examined: unemployment rate, per capita income, poverty rate, population change, effective tax rate, tax to income ratio, effective school tax rate, and the percentage of ratables that are commercial and industrial. The analysis will calculate percentiles and use statistical tests to identify fiscal issues unique to Pinelands municipalities. A series of other comparisons will also be made, examining urban towns versus rural towns, comparing rural Pinelands towns versus rural Non-Pinelands towns, and comparing Pinelands growth towns to Non-Pinelands growth towns. Variables for this part of the study have been updated, and preliminary tests have been performed.

The second part of the study will identify Pinelands towns that are most in need of fiscal assistance, and will design a corresponding funding model. Municipalities with at least 30% of their land in the Pinelands will be included. Variables that may be used in these models include: effective school tax rate, per capita income, tax to income ratio, percentage of total ratable base that is commercial or industrial, proportion of land in Pinelands Conservation Areas, unemployment rate, population change inside the Pinelands boundary, and municipal revenues per capita.

#### *Special Project: Vacant Land Value Study (Underway)*

While not an official special study, the vacant land value project is an extension of the property value and real estate monitoring aspect of the annual report. In September 1999, Pinelands Commission staff obtained data from the New Jersey Department of Treasury on all New Jersey land and housing transactions dating back to 1989. Vacant land transactions were supplemented with additional information in order to enhance the usefulness of the data in determining the value of vacant land. Pinelands Commission staff gathered supplemental data for each vacant land transaction (i.e., acreage, zoning, management area, and more). The supplemental data was gathered from tax maps as well as other available data sources. Data collection culminated in 2003. A formal database was created and cleaned in order to reconcile errors and fill in missing data. The database contains approximately 5,700 records of transactions inside the Pinelands boundary and 16,000 records outside the Pinelands boundary from the years 1989 through 2002. Statistical analysis of the data is presently being conducted. Data collection of vacant land transactions will continue in the future.

#### *Special Project: Housing Task Force*

In October of 2003, the Pinelands Commission formed a Housing Task Force in order to update housing demand estimates in the Comprehensive Management Plan. The Economic Monitoring Program has been an integral part of the process, through analysis of population data, the collection and evaluation of population projections, estimating future housing units, defining and calculating vacant developable land using land use and land cover data, and allocating future population and housing to Pinelands development areas based on vacant land. The Task Force is expected to complete its objectives by March 2005.

As part of this process, a *Pinelands Population Reference Guide* was created in order to gather population and housing data for the Pinelands for a range of geographic scales from 1970 through 2000 into one document. The reference guide is available on the Long-Term Economic Monitoring Program's 2004 Annual Report CD-ROM.

## NJ Pinelands Commission Long-Term Economic Monitoring Program 2004 Annual Report of Indicators

### Geographic Definitions

**State-Designated Pinelands Area:** area designated by The Pinelands Protection Act. This is the state-designated area under the jurisdiction of the Pinelands Commission.

**Pinelands National Reserve:** area designated by The National Parks and Recreation Act of 1978. This is the federally designated area that includes the state-designated area plus areas under CAFRA and DEP jurisdiction. This report focuses on the state-designated area only.

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**Pinelands:** 47 municipalities in southern New Jersey that have at least 10% of their land within the state-designated Pinelands area.

**Non-Pinelands:** the remaining 155 municipalities in southern New Jersey that have less than 10% of their land in the state-designated Pinelands area (6 municipalities have between 0.1% and 9% in the Pinelands, the remaining 149 have no land in the Pinelands).

**Southern New Jersey:** the Pinelands municipalities plus the Non-Pinelands municipalities (47 + 155 = 202 municipalities total). Defined as the counties of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, and Salem.

**State of New Jersey:** data for the state as a whole that includes southern (202 municipalities) and northern (364 municipalities) New Jersey (566 municipalities total).

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**Pinelands Municipal Area Inside the Pinelands Boundary:** all census blocks or census block groups that have their geographic center within the state-designated Pinelands boundary. Provides the most accurate measure of Pinelands activity. Available in limited instances.

**Pinelands Municipal Area Outside the Pinelands Boundary:** all census blocks or census block groups that have their geographic center outside the state-designated Pinelands boundary, but within a municipality that has at least 1% of its land within the state-designated Pinelands boundary. Available in limited instances.

# Population

US Census Bureau 1980, 1990, 2000

☐ Updated

- Population Growth in Pinelands municipalities outpaced Non-Pinelands municipalities between 1980 and 2000.

## Population 1980 - 2000

	1980	1990	2000	Change 1980-1990	Change 1990-2000	Change 1980-2000
New Jersey	7,365,011	7,730,188	8,414,350	5.0%	8.9%	14.2%
South Jersey	1,854,074	2,083,938	2,263,516	12.4%	8.6%	22.1%
Non-Pinelands	1,430,609	1,534,417	1,647,532	7.3%	7.4%	15.2%
Pinelands	423,465	549,521	615,984	29.8%	12.1%	45.5%

**Description:** Population data is useful both as an indicator of demand for housing and for private and public goods and services, as well as for various per capita and per household calculations.

**Unit of Analysis:** Population data are compiled at the municipal level and aggregated to allow for inside/outside Pinelands, regional, and statewide analyses.

### Summary of Previous Findings

The percentage increase in population was much higher in the Pinelands (30%) than outside (7%) from 1980 to 1990. Both areas surpassed the statewide increase in population of approximately 5% over the decade. A separate analysis of trends by county found that Atlantic County had the greatest differential between inside and outside growth rates from 1980-1990, which was most likely due to the start of casino gambling in Atlantic City and associated growth in nearby communities. The percentage increase in population was higher in the Pinelands than outside from 1990 to 2000 (although in absolute terms, population increased more outside the Pinelands over the same period); however, the disparity between inside and outside Pinelands annual growth rates decreased.

Population growth was higher in the Pinelands (12.1%) than all other regions of the state from 1990 to 2000. As figure P1 illustrates, population growth was highest in municipalities located along the edge of the Pinelands, especially those located in the northern and eastern regions. Stafford, Jackson, and Galloway grew the most in terms of percentages (see Table P1). However, a large portion of population growth in these towns occurred outside the Pinelands boundary (see next section on population by census block group).

An examination of group quarters population adds additional insight to population change within certain Pinelands municipalities. Persons living in group quarters (i.e. housing where unrelated persons live together) are classified as institutional (prisons and mental hospitals) and non-institutional (military bases, colleges and universities, nursing homes, and shelters). Several municipalities have been impacted by changes in group quarters population which distorts the actual change in the number of residents. Practically all of Woodland's population decrease (826 persons out of 893) was due to a decrease in the institutional population. The population of Washington decreased while the number of persons in group quarters increased, masking the "actual" decrease in residents. Maurice River's increase can almost entirely be attributed to an increase in the institutional population, while Woodbine experienced a decrease in institutional population that masks a larger non-group quarters increase.

In New Hanover, the number of persons in non-institutions (military base) decreased by 5,035 people, while the number of people in institutions (prison) increased by 4,225 people. The number of persons not in group quarters increased by 1,008, but since the military population declined so steeply, the official population change was only 198. Wrightstown and Pemberton Township had large population decreases and have a significant military presence but experienced little change in group quarters population in spite of base reductions. Military personnel in these towns may have lived off the military base and were thus not considered to be in group quarters.

Figure P1      Municipal Population Change (1990-2000)

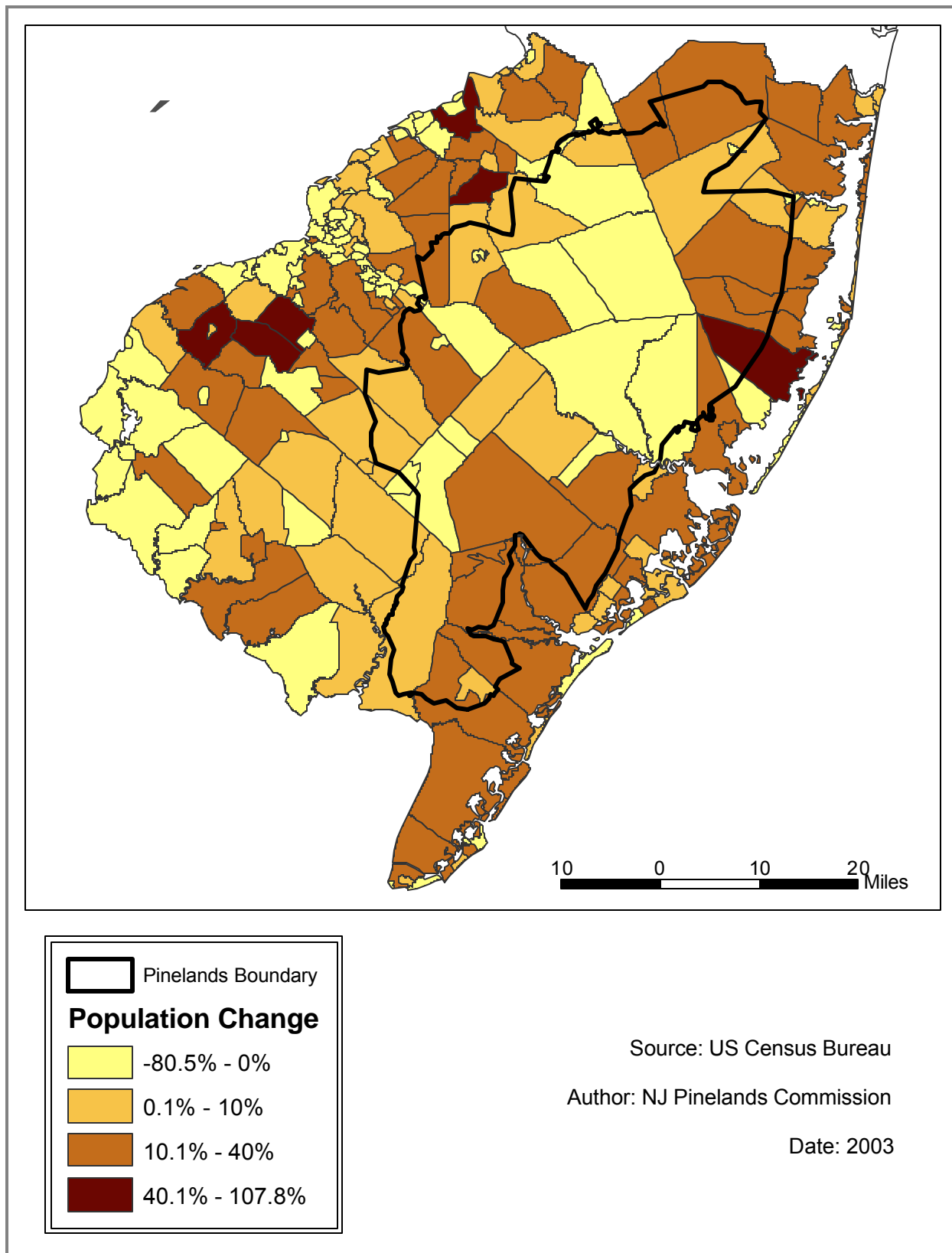


Table P1a Population by Pinelands Municipality

Municipality	County	2000	1990	1980	Change 1990-00	Change 1980-90
Stafford Twp.	Ocean	22,532	13,325	10,385	69%	28%
Galloway Twp.	Atlantic	31,209	23,330	12,176	34%	92%
Jackson Twp.	Ocean	42,816	33,233	25,644	29%	30%
Hamilton Twp.	Atlantic	20,499	16,012	9,499	28%	69%
Egg Harbor Twp.	Atlantic	30,726	24,544	19,381	25%	27%
Barneгат Twp.	Ocean	15,270	12,235	8,702	25%	41%
Plumsted Twp.	Ocean	7,275	6,005	4,674	21%	28%
Evesham Twp.	Burlington	42,275	35,309	21,508	20%	64%
Little Egg Harbor Twp.	Ocean	15,945	13,333	8,483	20%	57%
Ocean Twp.	Ocean	6,450	5,416	3,731	19%	45%
Dennis Twp.	Cape May	6,492	5,574	3,989	16%	40%
Weymouth Twp.	Atlantic	2,257	1,957	1,260	15%	55%
Winslow Twp.	Camden	34,611	30,087	20,034	15%	50%
Lacey Twp.	Ocean	25,346	22,141	14,161	14%	56%
Estell Manor City	Atlantic	1,585	1,404	848	13%	66%
Upper Twp.	Cape May	12,115	10,681	6,713	13%	59%
Shamong Twp.	Burlington	6,462	5,765	4,537	12%	27%
Beachwood Boro	Ocean	10,375	9,324	7,687	11%	21%
Medford Twp.	Burlington	22,253	20,526	17,622	8%	16%
Monroe Twp.	Gloucester	28,967	26,703	21,639	8%	23%
Manchester Twp.	Ocean	38,928	35,976	27,987	8%	29%
Franklin Twp.	Gloucester	15,466	14,482	12,396	7%	17%
Berkeley Twp.	Ocean	39,991	37,319	23,151	7%	61%
Port Republic City	Atlantic	1,037	992	837	5%	19%
Maurice River Twp.	Cumberland	6,928	6,648	4,577	4%	45%
Hammonton town	Atlantic	12,604	12,208	12,298	3%	-1%
New Hanover Twp.	Burlington	9,744	9,546	14,258	2%	-33%
Southampton Twp.	Burlington	10,388	10,202	8,808	2%	16%
Woodbine Boro	Cape May	2,716	2,678	2,809	1%	-5%
Mullica Twp.	Atlantic	5,912	5,896	5,243	0%	12%
Chesilhurst Boro	Camden	1,520	1,526	1,590	0%	-4%
Egg Harbor City	Atlantic	4,545	4,583	4,618	-1%	-1%
Eagleswood Twp.	Ocean	1,441	1,476	1,009	-2%	46%
Buena Vista Twp.	Atlantic	7,436	7,655	6,959	-3%	10%
Tabernacle Twp.	Burlington	7,170	7,360	6,236	-3%	18%
Berlin Twp.	Camden	5,290	5,466	5,348	-3%	2%
Bass River Twp.	Burlington	1,510	1,580	1,344	-4%	18%
Waterford Twp.	Camden	10,494	10,940	8,126	-4%	35%
Medford Lakes Boro	Burlington	4,173	4,462	4,958	-6%	-10%
South Toms River Boro	Ocean	3,634	3,869	3,954	-6%	-2%
Pemberton Twp.	Burlington	28,691	31,342	29,720	-8%	5%
Folsom Boro	Atlantic	1,972	2,181	1,892	-10%	15%
Buena Boro	Atlantic	3,873	4,441	3,642	-13%	22%
Lakehurst Boro	Ocean	2,522	3,078	2,908	-18%	6%
Washington Twp.	Burlington	621	805	808	-23%	0%
Woodland Twp.	Burlington	1,170	2,063	2,285	-43%	-10%
Wrightstown Boro	Burlington	748	3,843	3,031	-81%	27%
<i>"Outside" Municipalities*</i>						
Corbin City	Atlantic	468	412	254	14%	62%
Berlin Boro	Camden	6,149	5,672	5,786	8%	-2%
Springfield Twp.	Burlington	3,227	3,028	2,691	7%	13%
Vineland City	Cumberland	56,271	54,780	53,753	3%	2%
North Hanover Twp.	Burlington	7,347	9,994	9,050	-26%	10%

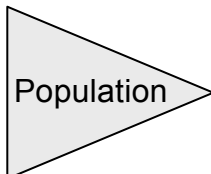
\*These five municipalities have land in the Pinelands but are counted as Non-Pinelands municipalities because less than ten percent of their land area is in the Pinelands. They are displayed for informational purposes in this and subsequent tables.

Table P1b 2000 Census Group Quarters Population

Municipality	County	Population	Group Quarters	GQ %	Institution	Inst %	Non Institution	Non Inst %
New Hanover	Burlington	9,834	6,124	62.3%	4,846	49.3%	1,278	13.0%
Maurice River	Cumberland	6,928	3,360	48.5%	3,360	48.5%	0	0.0%
Washington	Burlington	579	179	30.9%	109	18.8%	70	12.1%
Woodbine	Cape May	2,716	568	20.9%	568	20.9%	0	0.0%
Chesilhurst	Camden	1,520	138	9.1%	88	5.8%	50	3.3%
Galloway	Atlantic	31,159	2,080	6.7%	0	0.0%	2,080	6.7%
Hamilton	Atlantic	20,499	1,041	5.1%	1,028	5.0%	13	0.1%
Winslow	Camden	34,659	1,112	3.2%	1,061	3.1%	51	0.1%
Dennis	Cape May	6,503	208	3.2%	155	2.4%	53	0.8%
Hammonton	Atlantic	12,604	348	2.8%	205	1.6%	143	1.1%
Estell Manor	Atlantic	1,592	33	2.1%	33	2.1%	0	0.0%
Waterford	Camden	10,485	207	2.0%	0	0.0%	207	2.0%
Manchester	Ocean	38,960	728	1.9%	546	1.4%	182	0.5%
Pemberton	Burlington	28,650	516	1.8%	378	1.3%	138	0.5%
Berkeley	Ocean	39,988	591	1.5%	223	0.6%	368	0.9%
Egg Harbor City	Atlantic	4,545	70	1.5%	35	0.8%	35	0.8%
Stafford	Ocean	22,517	293	1.3%	223	1.0%	70	0.3%
Buena Vista	Atlantic	7,436	94	1.3%	0	0.0%	94	1.3%
Medford	Burlington	22,253	255	1.1%	201	0.9%	54	0.2%
Wrightstown	Burlington	747	8	1.1%	0	0.0%	8	1.1%
Little Egg Harbor	Ocean	16,019	166	1.0%	166	1.0%	0	0.0%
Tabernacle	Burlington	7,170	72	1.0%	67	0.9%	5	0.1%
Jackson	Ocean	42,810	374	0.9%	360	0.8%	14	0.0%
Buena	Atlantic	3,873	33	0.9%	0	0.0%	33	0.9%
Barneget	Ocean	15,285	127	0.8%	125	0.8%	2	0.0%
Ocean	Ocean	6,450	54	0.8%	0	0.0%	54	0.8%
Mullica	Atlantic	5,912	47	0.8%	0	0.0%	47	0.8%
Monroe	Gloucester	28,967	212	0.7%	155	0.5%	57	0.2%
Franklin	Gloucester	15,466	90	0.6%	0	0.0%	90	0.6%
Southampton	Burlington	10,333	61	0.6%	61	0.6%	0	0.0%
Port Republic	Atlantic	1,032	6	0.6%	0	0.0%	6	0.6%
Evesham	Burlington	42,428	185	0.4%	100	0.2%	85	0.2%
Berlin Township	Camden	5,290	19	0.4%	0	0.0%	19	0.4%
Folsom	Atlantic	1,972	7	0.4%	0	0.0%	7	0.4%
Egg Harbor Twp	Atlantic	30,619	49	0.2%	0	0.0%	49	0.2%
Lacey	Ocean	25,346	39	0.2%	26	0.1%	13	0.1%
Upper	Cape May	12,115	8	0.1%	0	0.0%	8	0.1%
Plumsted	Ocean	7,275	8	0.1%	0	0.0%	8	0.1%
Beachwood	Ocean	10,316	6	0.1%	0	0.0%	6	0.1%
Shamong	Burlington	6,462	2	0.0%	0	0.0%	2	0.0%
Medford Lakes	Burlington	4,173	0	0.0%	0	0.0%	0	0.0%
So. Toms River	Ocean	3,608	0	0.0%	0	0.0%	0	0.0%
Lakehurst	Ocean	2,522	0	0.0%	0	0.0%	0	0.0%
Weymouth	Atlantic	2,250	0	0.0%	0	0.0%	0	0.0%
Bass River	Burlington	1,552	0	0.0%	0	0.0%	0	0.0%
Eagleswood	Ocean	1,441	0	0.0%	0	0.0%	0	0.0%
Woodland	Burlington	1,160	0	0.0%	0	0.0%	0	0.0%
<i>"Outside" Munis</i>								
Vineland	Cumberland	56,271	2,393	4.3%	1,031	1.8%	1,362	2.4%
Berlin Borough	Camden	6,149	72	1.2%	18	0.3%	54	0.9%
Springfield	Burlington	3,227	7	0.2%	0	0.0%	7	0.2%
North Hanover	Burlington	7,325	0	0.0%	0	0.0%	0	0.0%
Corbin City	Atlantic	468	0	0.0%	0	0.0%	0	0.0%

Table P1c Group Quarters Components of Population Change 1990-2000

Municipality	County	2000 Population	Pop Change 1990 – 2000	Institutional Change	Non- Institutional Change	Non-Group Quarters Change	Difference
New Hanover	Burlington	9,834	198	4,225	-5,035	1,008	810
Washington	Burlington	579	-184	86	70	-340	156
Woodbine	Cape May	2,716	38	-134	0	172	134
Pemberton Twp	Burlington	28,650	-2,651	6	103	-2,760	109
Lacey	Ocean	25,346	3,205	-121	13	3,313	108
Buena Vista	Atlantic	7,436	-219	0	85	-304	85
Winslow	Camden	34,659	4,524	-66	-14	4,604	80
Tabernacle	Burlington	7,170	-190	67	5	-262	72
Manchester	Ocean	38,960	2,952	180	-249	3,021	69
Shamong	Burlington	6,462	697	-70	2	765	68
Chesilhurst	Camden	1,520	-6	88	-22	-72	66
Medford	Burlington	22,253	1,727	-93	54	1,766	39
Waterford	Camden	10,485	-446	-152	186	-480	34
Franklin	Gloucester	15,466	984	0	-34	1,018	34
Buena	Atlantic	3,873	-568	0	16	-584	16
Mullica	Atlantic	5,912	16	-60	47	29	13
Monroe	Gloucester	28,967	2,264	-21	10	2,275	11
Estell Manor	Atlantic	1,592	181	-10	0	191	10
Folsom	Atlantic	1,972	-209	0	7	-216	7
Berlin	Camden	5,290	-176	0	6	-182	6
Weymouth	Atlantic	2,250	300	0	0	300	0
Bass River	Burlington	1,552	-70	0	0	-70	0
Medford Lakes	Burlington	4,173	-289	0	0	-289	0
Eagleswood	Ocean	1,441	-35	0	0	-35	0
Lakehurst	Ocean	2,522	-556	0	0	-556	0
South Toms River	Ocean	3,608	-235	0	0	-235	0
Ocean	Ocean	6,450	1,034	0	3	1,031	-3
Barnegat	Ocean	15,285	3,035	2	2	3,031	-4
Egg Harbor City	Atlantic	4,545	-38	-20	15	-33	-5
Port Republic	Atlantic	1,032	45	0	6	39	-6
Beachwood	Ocean	10,316	1,051	0	6	1,045	-6
Dennis	Cape May	6,503	918	-45	53	910	-8
Upper	Cape May	12,115	1,434	0	8	1,426	-8
Plumsted	Ocean	7,275	1,270	0	8	1,262	-8
Hammonton	Atlantic	12,604	396	-103	113	386	-10
Egg Harbor Twp	Atlantic	30,619	6,182	0	27	6,155	-27
Little Egg Harbor	Ocean	16,019	2,612	45	0	2,567	-45
Jackson	Ocean	42,810	9,583	63	-15	9,535	-48
Evesham	Burlington	42,428	6,966	-23	78	6,911	-55
Southampton	Burlington	10,333	186	61	-5	130	-56
Berkeley	Ocean	39,988	2,672	-296	361	2,607	-65
Wrightstown	Burlington	747	-3,095	0	-91	-3,004	-91
Galloway	Atlantic	31,159	7,879	-40	193	7,726	-153
Stafford	Ocean	22,517	9,207	118	70	9,019	-188
Maurice River	Cumberland	6,928	280	358	0	-78	-358
Hamilton	Atlantic	20,499	4,487	406	-37	4,118	-369
Woodland	Burlington	1,160	-893	-826	0	-67	-826
<i>"Outside" Munis</i>							
Springfield	Burlington	3,227	199	-40	-17	256	57
Corbin City	Atlantic	468	56	0	0	56	0
North Hanover	Burlington	7,325	-2,647	0	-25	-2,622	-25
Berlin Boro	Camden	6,149	477	18	54	405	-72
Vineland	Cumberland	56,271	1,491	-939	1,050	1,380	-111



2

# Population – Census Block

☐ Updated

## US Census Bureau 1990, 2000

- Most of the population growth in Pinelands municipalities between 1990 and 2000 occurred outside of the Pinelands boundary.

Census Block Population

	1990	2000	Change
In Boundary	262,507	276,889	5.5%
Out Boundary	361,009	412,557	14.3%

Municipal Population Change Categories

	# Munis	% Total
Gained Inside and Gained Outside	16	30.8%
Gained Inside and Lost Outside	7	13.4%
Gained Inside, No Area Outside	4	7.7%
Lost Inside, Gained Outside	9	17.3%
Lost Inside, Lost Outside	8	15.4%
Lost Inside, No Area Outside	8	15.4%

**Description:** Population data at the census block level is useful in overcoming the limitations of municipal level population data by identifying the actual number of residents who live within the state-designated Pinelands area.

**Unit of Analysis:** Sub-Municipal data is aggregated by counting the population of census blocks inside and outside the Pinelands boundary using GIS. The actual population of the state-designated Pinelands area is calculated, along with areas of Pinelands municipalities that are outside the boundary. Census blocks from 1990 were normalized to make them comparable to 2000 census blocks.

### Summary of Previous Findings

While population in the Pinelands region has grown to 615,984, the population actually inside the Pinelands boundary was less than half that number in 2000. Pinelands population data analyzed at the census block level revealed that 276,889 people lived in the Pinelands in 2000, a 5.5% increase over 1990 population of 262,507. The number of persons living in Pinelands municipalities outside of the Pinelands boundary increased from 361,009 in 1990 to 412,557 in 2000, an increase of 14.3%.

The top three municipalities with the largest populations inside the Pinelands boundary are Pemberton Township, Hamilton Township, and Medford Township (Table P2a). Of the fifty-two municipalities with land in the Pinelands, the top ten municipalities in population account for 58% of the Pinelands total population, while the top twenty municipalities account for 85% of the population. The municipalities in the top bracket contain at least one of the Pinelands development areas: Regional Growth Areas, Pinelands Towns, and Pinelands Villages. Conversely, the ten municipalities with the least population in the Pinelands do not even comprise 1/2% of the total Pinelands population. Five of these ten are defined as "Non-Pinelands" municipalities for the purposes of this study, as less than 10% of their land is within the Pinelands. Some municipalities have more than 10% of their land in the Pinelands, but have extremely few people. For example, Eagleswood has 20% of its land in the Pinelands, but has no residents in the Pinelands, while Beachwood has 28% of its land in the Pinelands and has only four residents. In most instances, these areas fall within Preservation or Forest management areas.

The largest absolute changes in population inside the Pinelands boundary between 1990 and 2000 occurred in municipalities that have Regional Growth Areas (Table P2b). Stafford, Egg Harbor Township, and Hamilton were the top three municipalities in terms of absolute growth, while Berkeley was the fastest growing in terms of percent change. Wrightstown, Pemberton Township, and North Hanover had the largest absolute decreases in population, due to military base reductions.

The fifty-two municipalities with some or all of their land inside the Pinelands were classified according to where their population gain occurred. Municipalities that gained population both inside and outside the boundary accounted for 30.8% of the total municipalities, the largest category by far. Municipalities completely located inside the Pinelands that experienced population gain made up the smallest percentage of the total, with 7.7%. Percentages in the other categories were relatively equal, with between seven and nine towns in each category.

Table P2a 2000 Population Inside and Outside the Pinelands Boundary  
by Pinelands Municipality

Municipality	% Land in Pinelands	Total Population Inside 2000	% Population Inside	% Population Outside	Total Population Outside 2000
Pemberton Twp	90%	28,127	98%	2%	564
Hamilton	97%	19,136	93%	7%	1,363
Medford Twp	75%	18,239	82%	18%	4,014
Egg Harbor Twp	38%	16,209	53%	47%	14,517
Winslow	81%	15,599	45%	55%	19,012
Monroe	69%	14,406	50%	50%	14,561
Stafford	39%	13,390	59%	41%	9,142
Hammonton	100%	12,604	100%	0%	
Manchester	72%	12,185	31%	69%	26,743
Evesham	55%	11,553	27%	73%	30,722
Galloway	38%	10,658	34%	66%	20,551
Waterford	100%	10,494	100%	0%	
New Hanover	91%	9,109	93%	7%	635
Southampton	73%	7,193	69%	31%	3,195
Tabernacle	100%	7,170	100%	0%	
Shamong	100%	6,462	100%	0%	
Buena Vista	90%	6,248	84%	16%	1,188
Mullica	100%	5,912	100%	0%	
Maurice River	69%	4,819	70%	30%	2,109
Egg Harbor City	100%	4,545	100%	0%	
Medford Lakes	100%	4,173	100%	0%	
Jackson	47%	4,106	10%	90%	38,710
Barnegat	56%	3,226	21%	79%	12,044
North Hanover	4%	3,090	42%	58%	4,257
Woodbine	95%	2,716	100%	0%	
Franklin	36%	2,664	17%	83%	12,802
South Toms River	48%	2,495	69%	31%	1,139
Berkeley	30%	2,467	6%	94%	37,524
Lakehurst	87%	2,393	95%	5%	129
Folsom	100%	1,972	100%	0%	
Weymouth	82%	1,668	74%	26%	600
Dennis	38%	1,623	25%	75%	4,869
Chesilhurst	100%	1,520	100%	0%	
Estell Manor	72%	1,502	95%	5%	72
Bass River	87%	1,234	82%	18%	276
Upper	33%	1,175	10%	90%	10,940
Woodland	100%	1,170	100%	0%	
Buena	47%	865	22%	78%	3,008
Washington	100%	621	100%	0%	
Lacey	67%	521	2%	98%	24,825
Plumsted	53%	412	6%	94%	6,863
Berlin Twp	16%	403	8%	92%	4,887
Vineland	7%	186	0%	100%	56,085
Ocean	41%	145	2%	98%	6,305
Berlin Boro	10%	141	2%	98%	6,008
Wrightstown	73%	123	16%	84%	625
Little Egg Harbor	23%	107	1%	99%	15,838
Port Republic	35%	102	10%	90%	935
Corbin City	1%	7	1%	99%	461
Beachwood	28%	4	0%	100%	10,371
Eagleswood	20%	0	0%	100%	1,441
Springfield	2%	0	0%	100%	3,227

Table P2b Population Change Inside and Outside the Pinelands Boundary  
by Pinelands Municipality (1990 – 2000)

Municipality	% Land in Pinelands	Total Population Inside 1990	Change in Pop In Pines 1990-2000	Percent Change 1990-2000	Total Population Outside 1990	Change in Pop Out Pines 1990-2000	Percent Change 1990-2000
Stafford	39%	5739	7651	133%	7568	1574	21%
Egg Harbor Twp	38%	11687	4522	39%	12905	1612	12%
Hamilton	97%	14988	4148	28%	1024	339	33%
Galloway	38%	8497	2161	25%	14824	5727	39%
Berkeley	30%	865	1602	185%	36424	1100	3%
Manchester	72%	10589	1596	15%	25387	1356	5%
Evesham	55%	10121	1432	14%	25188	5534	22%
Shamong	100%	5765	697	12%			
Barneгат	56%	2701	525	19%	9552	2492	26%
Maurice River	69%	4392	427	10%	2256	-147	-7%
Southampton	73%	6792	401	6%	3410	-215	-6%
Hammonton	100%	12208	396	3%			
Weymouth	82%	1340	328	24%	630	-30	-5%
Estell Manor	72%	1268	234	18%	123	-51	-41%
Winslow	81%	15426	173	1%	14661	4351	30%
New Hanover	91%	8962	147	2%	584	51	9%
Franklin	36%	2531	133	5%	11951	851	7%
Dennis	38%	1536	87	6%	4038	831	21%
Berlin Twp	16%	344	59	17%	5122	-235	-5%
Ocean	41%	91	54	59%	5325	980	18%
Upper	33%	1133	42	4%	9548	1392	15%
Woodbine	95%	2678	38	1%			
Medford Twp	75%	18206	33	0%	2320	1694	73%
Vineland	7%	166	20	12%	54614	1471	3%
Mullica	100%	5896	16	0%			
Berlin Boro	10%	133	8	6%	5539	469	8%
Corbin City	1%	3	4	133%	409	52	13%
Eagleswood	20%	0	0	0%	1476	-35	-2%
Chesilhurst	100%	1526	-6	0%			
Jackson	47%	4124	-18	0%	29108	9602	33%
Port Republic	35%	124	-22	-18%	877	58	7%
Plumsted	53%	436	-24	-6%	5569	1294	23%
Bass River	87%	1269	-35	-3%	311	-35	-11%
Egg Harbor City	100%	4583	-38	-1%			
Lacey	67%	563	-42	-7%	21578	3247	15%
Beachwood	28%	65	-61	-94%	9259	1112	12%
Little Egg Harbor	23%	172	-65	-38%	13158	2680	20%
Springfield	2%	123	-123	-100%	2911	316	11%
Washington	100%	805	-184	-23%			
Tabernacle	100%	7360	-190	-3%			
South Toms River	48%	2689	-194	-7%	1210	-71	-6%
Folsom	100%	2181	-209	-10%			
Buena	47%	1077	-212	-20%	3364	-356	-11%
Buena Vista	90%	6512	-264	-4%	1143	45	4%
Medford Lakes	100%	4462	-289	-6%			
Waterford	100%	10940	-446	-4%			
Lakehurst	87%	2939	-546	-19%	139	-10	-7%
Monroe	69%	15122	-716	-5%	11581	2980	26%
Woodland	100%	2063	-893	-43%			
North Hanover	4%	5493	-2403	-44%	4560	-303	-7%
Pemberton Twp	90%	30740	-2613	-9%	602	-38	-6%
Wrightstown	73%	3082	-2959	-96%	761	-136	-18%

# Age Demographics

 Updated

US Census Bureau, 1980, 1990, 2000

- The population of Southern New Jersey is aging.

Population Under 18 (Municipal Level)

	< 18 Years		
	1980	1990	2000
<b>Pinelands</b>	29.1%	24.7%	24.4%
<b>Non-Pinelands</b>	28.1%	24.8%	25.4%
<b>New Jersey</b>	27.0%	23.3%	24.8%

Population 65 and over (Municipal Level)

	> 65 Years		
	1980	1990	2000
<b>Pinelands</b>	13.5%	16.4%	16.8%
<b>Non-Pinelands</b>	12.5%	14.2%	14.6%
<b>New Jersey</b>	11.7%	13.4%	13.2%

**Description:** The age distribution of the population within each municipality provides some determination of the demand for services and the ability of the population to withstand changes in tax rates.

**Unit of Analysis:** Demographic data are compiled at the municipal level and aggregated to allow for inside/outside Pinelands, regional, and statewide analyses.

## Summary of Previous Findings

Examination of demographic data indicated that the population throughout Southern New Jersey is aging. The proportion of the population under 18 declined 3.3 percentage points outside of the Pinelands between 1980 and 1990, and declined 4.4 percentage points inside of the Pinelands over the same period. During the same decade, the proportion of the population over 65 increased 1.7 percentage points outside of the Pinelands and rose 2.9 percentage points inside of the Pinelands. Statewide trends were similar to those found in Southern New Jersey. Table P3 shows the prevalence of different age classes in Pinelands and Non-Pinelands municipalities. An examination of the geographic distribution of the 20 municipalities in the eight southern counties with the lowest and highest median ages in 1980 and 1990 found that both age extremes (youngest and oldest) are found at the edges of the region, predominantly outside of the Pinelands. The concentration of older populations along the southern and eastern borders reflects the popularity of resort and beach communities among retirees, while the concentration of younger populations in the north and west most likely reflects the presence of large military installations, a college campus, and more urban areas in Camden County.

Average age in the Pinelands continued to increase gradually during the 1990's, while the proportion of the population under 18 and over 65 changed very little from 1990-2000. However, Table P3a provides evidence of an aging working population (18-65 years old) both inside and outside of the Pinelands. The majority of Pinelands municipalities fell within median age 30-34 in 1990; however, by 2000, that majority moved to median age 35-39. Similarly the largest number of Non-Pinelands municipalities moved up to the 35-39 median age group over the same period.

## Update

Census Block Groups are small enough to distinguish population inside and outside the Pinelands boundary, thus overcoming the limitations of municipal level data. Data at the Census Block Group level was used to calculate age groups inside and outside the Pinelands boundary for the year 2000. Based on the block group data, the actual population inside the boundary was approximately 283,600.<sup>8</sup> Of these residents, 24.7% are under 18 years of age and 13.6% are over 64 years of age. Compared to the municipal Pinelands aggregate, the number of younger residents is approximately the same but the number of senior residents inside the Pinelands boundary is 3% lower. The population of the portion Pinelands municipalities that lie outside the boundary was 405,000 residents. Of this number, 24.6% are under 18 and 18.4% are over 64. So, the number of juveniles in Pinelands municipalities are evenly spread inside and outside the boundary, but there are a greater number of seniors in Pinelands municipalities who live outside the boundary compared to inside the boundary. The Pinelands portion of Berkeley, Manchester, Southampton, and Barnegat stand out as areas that have a large percentage of senior residents (over 40%). These areas are home to several retirement communities (Table P3c).

<sup>8</sup> This figure differs from the block level count, which was approximately 277,000. Block level data is more precise than Block Group level data, but less information is available at the block level.

Table P3a Median Age, 1980, 1990 and 2000 (Municipal Level)

<b>1980</b>									
<b>Age Class</b>	<b>18 - 22</b>	<b>23 - 29</b>	<b>30 - 34</b>	<b>35 - 39</b>	<b>40 - 49</b>	<b>50 - 59</b>	<b>60 - 64</b>	<b>65 - 69</b>	<b>Total<sup>9</sup></b>
# of Non-Pinelands Municipalities	0	32	78	20	17	7	0	0	154
% Non-Pinelands	0.0%	20.8%	50.6%	13.0%	11.0%	4.5%	0.0%	0.0%	100.0%
# of Pinelands Municipalities	1	26	13	3	2	1	0	1	47
% Pinelands	2.1%	55.3%	27.7%	6.4%	4.3%	2.1%	0.0%	2.1%	100.0%
<b>1990</b>									
<b>Age Class</b>	<b>18 - 22</b>	<b>23 - 29</b>	<b>30 - 34</b>	<b>35 - 39</b>	<b>40 - 49</b>	<b>50 - 59</b>	<b>60 - 64</b>	<b>65 - 69</b>	<b>Total</b>
# of Non-Pinelands Municipalities	0	10	69	51	15	7	3	0	155
% Non-Pinelands	0.0%	6.5%	44.5%	32.9%	9.7%	4.5%	1.9%	0.0%	100.0%
# of Pinelands Municipalities	0	6	27	11	1	0	0	2	47
% Pinelands	0.0%	12.8%	57.4%	23.4%	2.1%	0.0%	0.0%	4.3%	100.0%
<b>2000</b>									
<b>Age Class</b>	<b>18 - 22</b>	<b>23 - 29</b>	<b>30 - 34</b>	<b>35 - 39</b>	<b>40 - 49</b>	<b>50 - 59</b>	<b>60 - 64</b>	<b>65 - 69</b>	<b>Total</b>
# of Non-Pinelands Municipalities	0	4	19	78	40	13	1	0	155
% Non-Pinelands	0.0%	2.6%	12.3%	50.3%	25.8%	8.4%	0.6%	0.0%	100.0%
# of Pinelands Municipalities	0	0	9	29	7	0	0	2	47
% Pinelands	0.0%	0.0%	19.1%	61.7%	14.9%	0.0%	0.0%	4.3%	100.0%

<sup>9</sup> Municipalities in 1980 totaled 201 due to lack of data for Tavistock Boro (population=9).

Table P3b Population Under 18 Years of Age Inside and Outside the Pinelands Boundary (Census Block Group Level)

County	Municipality	Population Inside 2000	Population Under 18 Inside	% Under 18 Inside	% Under 18 Outside	Population Under 18 Outside	Population Outside 2000
Ocean	South Toms River	2,877	909	31.6%	34.1%	258	757
Cape May	Upper	2,816	864	30.7%	28.0%	2,603	9,299
Ocean	Lakehurst	2,522	771	30.6%	0.0%	0	0
Burlington	Shamong	6,462	1,898	29.4%	0.0%	0	0
Burlington	Washington	621	182	29.3%	0.0%	0	0
Atlantic	Egg Harbor Twp	16,209	4,663	28.8%	27.5%	3,800	13,841
Atlantic	Egg Harbor City	4,545	1,284	28.3%	0.0%	0	0
Ocean	Little Egg Harbor	989	280	28.3%	23.9%	3,574	14,956
Ocean	Beachwood	1,331	375	28.2%	28.6%	2,585	9,044
Burlington	Pemberton Twp	27,243	7,658	28.1%	18.2%	263	1,448
Burlington	Tabernacle	7,170	2,004	27.9%	0.0%	0	0
Burlington	Medford Twp	18,919	5,245	27.7%	21.9%	729	3,334
Gloucester	Franklin	2,664	735	27.6%	27.7%	3,546	12,802
Atlantic	Buena	865	237	27.4%	25.3%	760	3,008
Ocean	Jackson*	5,627	1,523	27.1%	30.1%	11,178	37,183
Atlantic	Hamilton	19,287	5,199	27.0%	29.2%	354	1,212
Ocean	Stafford	13,390	3,612	27.0%	19.0%	1,740	9,142
Atlantic	Mullica	5,912	1,594	27.0%	0.0%	0	0
Burlington	Bass River	1,510	405	26.8%	0.0%	0	0
Atlantic	Buena Vista	6,248	1,659	26.6%	15.1%	179	1,188
Atlantic	Estell Manor / Weymouth/ Corbin City*	3,177	841	26.5%	30.0%	340	1,133
Gloucester	Monroe	14,813	3,905	26.4%	24.9%	3,522	14,154
Cape May	Dennis	2,135	562	26.3%	29.2%	1,274	4,357
Ocean	Ocean	825	216	26.2%	25.4%	1,427	5,625
Burlington	Evesham	12,827	3,338	26.0%	27.7%	8,147	29,448
Burlington	Woodland	1,170	302	25.8%	0.0%	0	0
Camden	Waterford	10,494	2,701	25.7%	0.0%	0	0
Burlington	Medford Lakes	4,173	1,067	25.6%	0.0%	0	0
Burlington	Wrightstown	39	10	25.6%	29.9%	212	709
Ocean	Lacey	521	130	25.0%	25.6%	6,353	24,825
Atlantic	Folsom	1,972	491	24.9%	0.0%	0	0
Ocean	Jackson / Manchester / Plumsted*	446	108	24.2%	0.0%	0	0
Cape May	Woodbine	2,716	723	23.6%	0.0%	0	0
Camden	Winslow	15,710	3,687	23.5%	33.2%	6,278	18,901
Camden	Chesilhurst	1,520	348	22.9%	0.0%	0	0
Atlantic	Hammononton	12,604	2,874	22.8%	0.0%	0	0
Atlantic	Galloway*	10,658	2,418	22.7%	28.9%	4,470	15,465
Ocean	Barnegat	3,226	467	14.5%	30.4%	3,666	12,044
Burlington	Southampton	6,445	907	14.1%	24.0%	947	3,943
Burlington	New Hanover +	9,109	1,224	13.4%	29.8%	189	635
Cumberland	Maurice River +	5,152	424	8.2%	26.4%	468	1,776
Ocean	Manchester*	10,995	871	7.9%	11.7%	3,206	27,493
Ocean	Berkeley	2,391	7	0.3%	12.1%	4,521	37,434
Atlantic	Galloway / Port Republic*	0	0	0.0%	23.2%	1,423	6,123
Camden	Berlin Twp	0	0	0.0%	25.8%	1,364	5,290
Ocean	Eagleswood	0	0	0.0%	24.7%	356	1,441
Ocean	Plumsted*	0	0	0.0%	28.5%	2,071	7,275
<i>"Outside" Municipalities</i>							
Burlington	North Hanover +	3,090	1,383	44.8%	25.5%	1,085	4,257
Cumberland	Vineland	186	58	31.2%	25.7%	14,405	56,085
Burlington	Springfield	0	0	0.0%	25.8%	833	3,227
Camden	Berlin Boro	0	0	0.0%	24.6%	1,513	6,149

\* Some municipalities cannot be isolated because census block groups cut across municipal boundaries. Block groups that are shared by more than one municipality are listed separately.

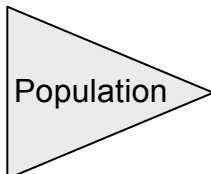
+ Influenced by group quarters population.

Table P3c Population Over 64 Years of Age Inside and Outside the Pinelands Boundary (Census Block Group Level)

County	Municipality	Population Inside 2000	Population Over 64 Inside	% Over 64 Inside	% Over 64 Outside	Population Over 64 Outside	Population Outside 2000
Ocean	Berkeley	2,391	2,076	86.8%	50.0%	18,701	37,434
Ocean	Manchester*	10,995	6,816	62.0%	52.4%	14,394	27,493
Burlington	Southampton	6,445	2,830	43.9%	11.8%	465	3,943
Ocean	Barnegat	3,226	1,315	40.8%	11.8%	1,424	12,044
Burlington	Washington	621	151	24.3%	0.0%	0	0
Atlantic	Hammonton	12,604	2,265	18.0%	0.0%	0	0
Ocean	Stafford	13,390	2,281	17.0%	21.5%	1,963	9,142
Burlington	Wrightstown	39	6	15.4%	8.2%	58	709
Atlantic	Estell Manor / Weymouth/ Corbin City*	3,177	479	15.1%	9.7%	110	1,133
Camden	Chesilhurst	1,520	229	15.1%	0.0%	0	0
Ocean	Jackson*	5,627	811	14.4%	8.6%	3,198	37,183
Atlantic	Egg Harbor City	4,545	633	13.9%	0.0%	0	0
Atlantic	Buena	865	111	12.8%	16.7%	502	3,008
Burlington	Medford Lakes	4,173	516	12.4%	0.0%	0	0
Ocean	Ocean	825	98	11.9%	14.0%	790	5,625
Camden	Winslow	15,710	1,853	11.8%	5.7%	1,086	18,901
Atlantic	Buena Vista	6,248	692	11.1%	37.5%	446	1,188
Gloucester	Monroe	14,813	1,595	10.8%	15.1%	2,142	14,154
Atlantic	Mullica	5,912	630	10.7%	0.0%	0	0
Burlington	Bass River	1,510	161	10.7%	0.0%	0	0
Cape May	Woodbine	2,716	283	10.4%	0.0%	0	0
Atlantic	Galloway*	10,658	1,078	10.1%	6.9%	1,073	15,465
Ocean	Little Egg Harbor	989	98	9.9%	18.2%	2,723	14,956
Atlantic	Folsom	1,972	193	9.8%	0.0%	0	0
Cape May	Dennis	2,135	203	9.5%	13.7%	595	4,357
Ocean	Beachwood	1,331	125	9.4%	8.5%	771	9,044
Burlington	Pemberton Twp	27,243	2,501	9.2%	20.2%	292	1,448
Atlantic	Egg Harbor Twp	16,209	1,477	9.1%	8.7%	1,198	13,841
Gloucester	Franklin	2,664	238	8.9%	9.7%	1,242	12,802
Burlington	Medford Twp	18,919	1,658	8.8%	21.9%	729	3,334
Ocean	South Toms River	2,877	250	8.7%	10.3%	78	757
Ocean	Lacey	521	45	8.6%	15.3%	3,809	24,825
Atlantic	Hamilton	19,287	1,599	8.3%	6.9%	84	1,212
Camden	Waterford	10,494	854	8.1%	0.0%	0	0
Ocean	Lakehurst	2,522	201	8.0%	0.0%	0	0
Burlington	Woodland	1,170	90	7.7%	0.0%	0	0
Cape May	Upper	2,816	203	7.2%	13.6%	1,269	9,299
Burlington	Tabernacle	7,170	502	7.0%	0.0%	0	0
Burlington	Shamong	6,462	386	6.0%	0.0%	0	0
Burlington	Evesham	12,827	732	5.7%	10.2%	3,018	29,448
Cumberland	Maurice River +	5,152	214	4.2%	12.9%	229	1,776
Burlington	New Hanover +	9,109	75	0.8%	7.9%	50	635
Ocean	Jackson / Manchester / Plumsted*	446	0	0.0%	0.0%	0	0
Atlantic	Galloway / Port Republic*	0	0	0.0%	13.1%	803	6,123
Camden	Berlin Twp	0	0	0.0%	12.5%	663	5,290
Ocean	Eagleswood	0	0	0.0%	14.4%	207	1,441
Ocean	Plumsted*	0	0	0.0%	8.5%	621	7,275
<i>"Outside" Municipalities</i>							
Cumberland	Vineland	186	19	10.2%	14.2%	7,957	56,085
Burlington	North Hanover +	3,090	4	0.1%	10.5%	448	4,257
Burlington	Springfield	0	0	0.0%	10.7%	346	3,227
Camden	Berlin Boro	0	0	0.0%	13.6%	837	6,149

\* Some municipalities cannot be isolated because census block groups cut across municipal boundaries. Block groups that are shared by more than one municipality are listed separately.

+ Influenced by group quarters population.



4S

# Population Estimates

☒ Updated

## US Census Bureau / NJ Dept of Labor 2001 - 2002

- The Pinelands municipalities grew more quickly than the Non-Pinelands municipalities between 2000 and 2002.

### Population Estimates

	2000 Census	2001 Estimate	2002 Estimate	Change 2000 – 2002	% Change 2000 - 2002
New Jersey	8,414,350	8,511,116	8,590,300	175,950	2.1%
South Jersey	2,263,516	2,290,673	2,322,584	59,068	2.6%
Pinelands	615,984	630,550	644,385	28,401	4.6%
Non-Pinelands	1,647,532	1,660,123	1,678,199	30,667	1.9%

**Description:** Population estimates are useful for measuring population during, and calculating per capita values for, intercensal years. Population estimates are particularly important in the later half of the decade as the census year becomes more distant and ceases to be a good measure of current population. Unfortunately, estimates further from the census year have a greater margin of error. Estimates are calculated using birth and death rates and a factor for migration. Estimates for 2001 and 2002 will be updated when 2003 estimates are released, and once the next census is taken (2010), estimates for this decade will be re-adjusted for the final time to reflect the new census.

**Unit of Analysis:** Population data are compiled at the municipal level and aggregated to allow for inside/outside Pinelands, regional, and statewide analyses.

### Supplement: Population Estimates

The population of New Jersey grew by 2.1% between 2000 and 2002, adding almost 176,000 residents. New Jersey's growth was driven by natural increase and international migration. Although internal migration to the state was negative (more US residents moved out than in), the Southern New Jersey region had a positive internal migration (more US residents moved in than out).

The Pinelands municipalities grew more quickly than the Non-Pinelands municipalities and the state, adding 28,400 residents for an increase of 4.6%. Sixteen percent of New Jersey's total population increase between 2000 and 2002 occurred in the Pinelands. Components of population growth (natural increase and migration) cannot be calculated for the Pinelands and Non-Pinelands as this information is not available below the county level.

Some of the Pinelands municipalities were the fastest growing in the state in terms of the number of additional residents. Jackson (2<sup>nd</sup>), Egg Harbor Township (8<sup>th</sup>), Manchester (10<sup>th</sup>), Galloway (11<sup>th</sup>), and Evesham (14<sup>th</sup>) all had population increases of 2,000 or more (New Jersey has 566 municipalities). None of the Pinelands municipalities were in the top tier in terms of percent change, with growth rates of 15% or more. None of the Pinelands municipalities were in the bottom tier for absolute population loss (100 or more), but Dennis (5<sup>th</sup>) and Woodbine (9<sup>th</sup>) were in the bottom tier for percent decline (one percent or more).<sup>10</sup>

The fastest growing municipalities in the Pinelands were located on the fringe of the Pinelands boundary and contained regional growth areas. A considerable amount of population growth may have occurred outside the Pinelands boundary in many of the Pinelands municipalities, assuming that the past inside / outside growth trends uncovered by the census block analysis continue. An estimate of population growth inside and outside the Pinelands boundary cannot be calculated, as estimates are not available below the municipal level.

10 For more information, see "2002 Municipal Population Estimates for New Jersey" by Sen-Yuan Wu, NJ Economic Indicators, December 2003. Division of Labor Market and Demographic Research, NJ Department of Labor.

Table P4 Population Estimates

Municipality	County	2000	2001	2002	Change	%Change
Jackson	Ocean	42,816	45,635	47,580	4,764	11.1%
Egg Harbor Township	Atlantic	30,726	31,984	33,382	2,656	8.6%
Manchester	Ocean	38,928	40,519	41,431	2,503	6.4%
Galloway	Atlantic	31,209	32,640	33,593	2,384	7.6%
Evesham	Burlington	42,275	43,533	44,555	2,280	5.4%
Berkeley	Ocean	39,991	41,191	41,946	1,955	4.9%
Little Egg Harbor	Ocean	15,945	16,628	17,695	1,750	11.0%
Hamilton	Atlantic	20,499	21,071	21,968	1,469	7.2%
Stafford	Ocean	22,532	23,135	23,785	1,253	5.6%
Barneget	Ocean	15,270	15,805	16,405	1,135	7.4%
Lacey	Ocean	25,346	25,697	26,170	824	3.3%
Medford	Burlington	22,253	22,655	23,047	794	3.6%
Plumsted	Ocean	7,275	7,650	7,920	645	8.9%
Maurice River	Cumberland	6,928	7,468	7,565	637	9.2%
Monroe	Gloucester	28,967	29,227	29,522	555	1.9%
Winslow	Camden	34,611	34,740	34,954	343	1.0%
Franklin	Gloucester	15,466	15,630	15,809	343	2.2%
Southampton	Burlington	10,388	10,540	10,730	342	3.3%
Ocean	Ocean	6,450	6,566	6,726	276	4.3%
Beachwood	Ocean	10,375	10,438	10,628	253	2.4%
Hammonton	Atlantic	12,604	12,707	12,840	236	1.9%
Shamong	Burlington	6,462	6,499	6,634	172	2.7%
Woodland	Burlington	1,170	1,313	1,336	166	14.2%
Chesilhurst	Camden	1,520	1,523	1,665	145	9.5%
Waterford	Camden	10,494	10,528	10,627	133	1.3%
Tabernacle	Burlington	7,170	7,179	7,270	100	1.4%
Pemberton Township	Burlington	28,691	28,513	28,772	81	0.3%
Buena Vista	Atlantic	7,436	7,447	7,512	76	1.0%
Mullica	Atlantic	5,912	5,933	5,977	65	1.1%
Eagleswood	Ocean	1,441	1,464	1,501	60	4.2%
Estell Manor	Atlantic	1,585	1,605	1,631	46	2.9%
Weymouth	Atlantic	2,257	2,277	2,301	44	1.9%
South Toms River	Ocean	3,634	3,627	3,678	44	1.2%
Lakehurst	Ocean	2,522	2,525	2,564	42	1.7%
Berlin Township	Camden	5,290	5,296	5,331	41	0.8%
Bass River	Burlington	1,510	1,519	1,538	28	1.9%
Port Republic	Atlantic	1,037	1,042	1,058	21	2.0%
Medford Lakes	Burlington	4,173	4,156	4,189	16	0.4%
Washington	Burlington	621	626	633	12	1.9%
Folsom	Atlantic	1,972	1,968	1,974	2	0.1%
Wrightstown	Burlington	748	744	748	0	0.0%
New Hanover	Burlington	9,744	9,721	9,741	-3	0.0%
Buena	Atlantic	3,873	3,843	3,841	-32	-0.8%
Woodbine	Cape May	2,716	2,702	2,683	-33	-1.2%
Egg Harbor City	Atlantic	4,545	4,507	4,498	-47	-1.0%
Upper	Cape May	12,115	12,089	12,032	-83	-0.7%
Dennis	Cape May	6,492	6,445	6,400	-92	-1.4%
<i>"Outside" Municipalities</i>						
Berlin Borough	Camden	6,149	6,526	6,759	610	9.9%
Springfield	Burlington	3,227	3,326	3,421	194	6.0%
North Hanover	Burlington	7,347	7,380	7,487	140	1.9%
Vineland	Cumberland	56,271	55,971	56,340	69	0.1%
Corbin City	Atlantic	468	491	505	37	7.9%

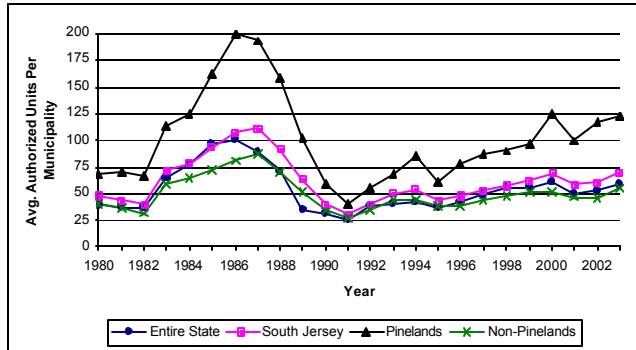
# Building Permits for Dwelling Units

New Jersey Department of Labor 1980 - 2003

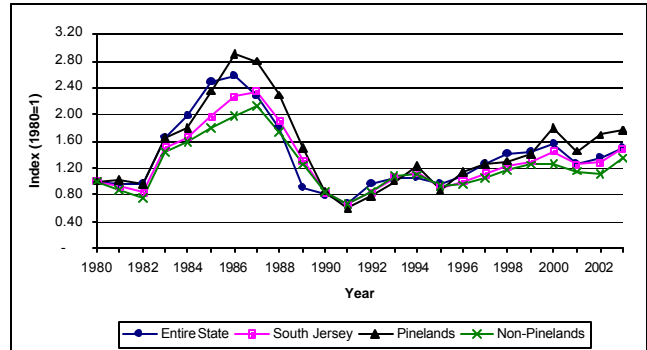
Updated

- The average number of building permits issued is much higher in the Pinelands than the Non-Pinelands, but the Non-Pinelands average increased at a greater rate in 2003.

Avg # Dwelling Units Authorized by Building Permits



Index of Dwelling Units Authorized by Building Permits



**Description:** Building permit activity measures the number of dwelling units authorized for construction as reported by municipal building inspectors in New Jersey.

**Unit of Analysis:** Municipal level data are aggregated to allow for inside/outside Pinelands, regional, and statewide analyses. The aggregation method calculates the average units authorized per municipality.

## Summary of Previous Findings

The overall trend in permits for dwelling units followed the broad cycle of economic activity, from a building boom in the mid-1980's to recession at the turn of the decade and subsequent recovery. The average number of permits issued by Pinelands municipalities was consistently higher and experienced somewhat higher volatility than other areas throughout the monitoring period. This finding is not surprising because the Pinelands region is less developed than the other regions. Another factor involved is the residential build-up that followed the beginning of casino gambling in Atlantic City in the early 1980's.

Building permit activity has gradually increased in all regions of the state from 1995 to 2002, except for a dip in activity during 2001 due to the onset of economic recession. Pinelands municipalities that ranked highest in building permits during the 1990s tended to be suburban municipalities in the northern and/or eastern Pinelands region. However, much of this building activity actually occurred outside Pinelands boundaries with few exceptions. An analysis conducted in 2001 suggested that as little as 18% of all Pinelands municipalities' building permits were actually directed within the Pinelands boundary. The Pinelands average is traditionally high because it is influenced by a few towns which are experiencing rapid growth – some in regional growth areas inside the Pinelands boundary, others in areas outside the Pinelands boundary. The Non-Pinelands average is affected by a larger number of municipalities that are smaller in land area and / or have little or no remaining developable land. These municipalities drive the Non-Pinelands average downward.

## Update:

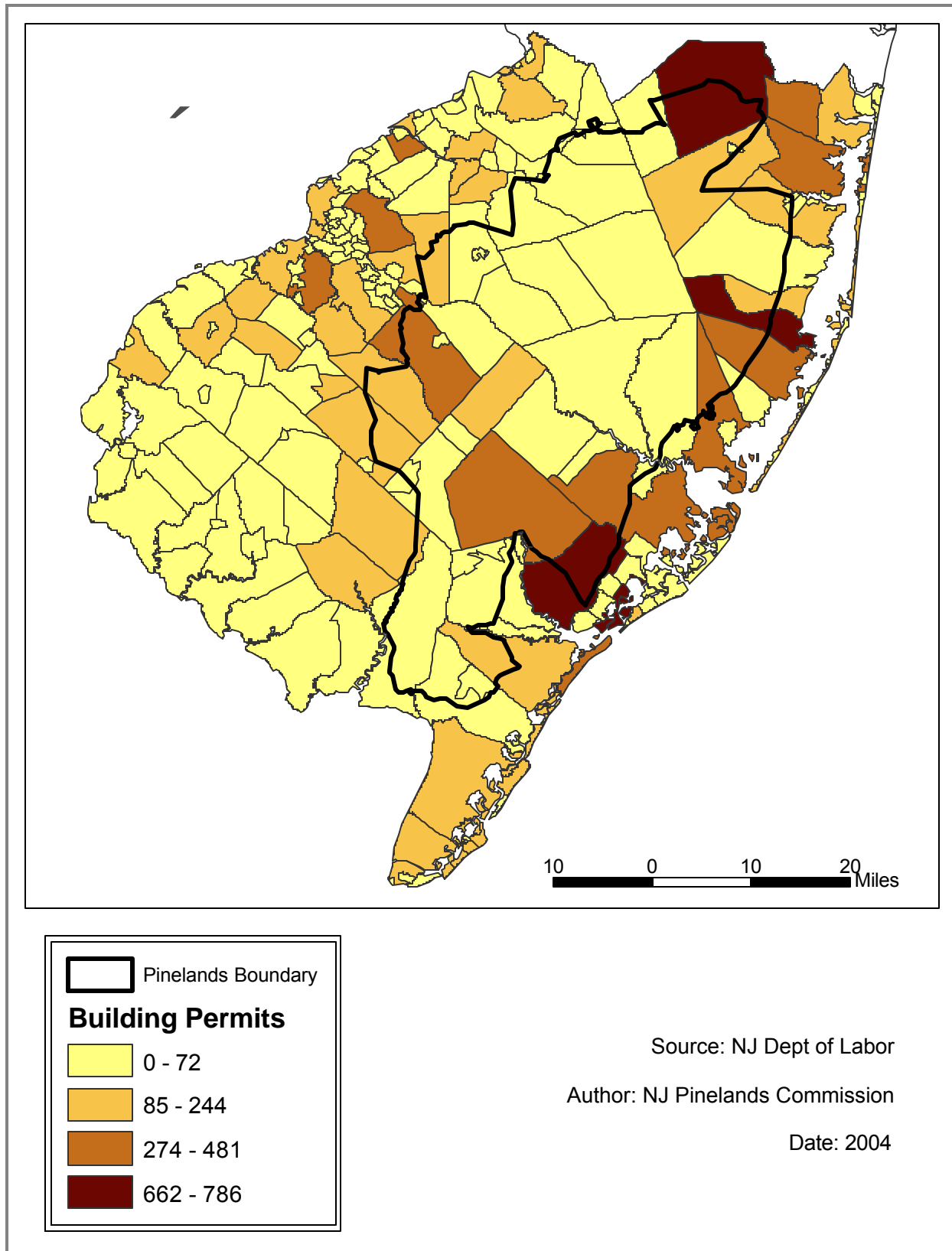
The number of building permits issued continued to increase in 2003. The state's average number of permits issued grew from 53 to 58, an increase of 10%. The Non-Pinelands region had a higher percent increase of 20%, from an average of 46 to 55 permits issued per municipality. The Pinelands region continued to have the highest average number of permits issued but had a much lower percent change compared to the Non-Pinelands and the state. The average number of permits issued by a Pinelands municipality increased by 5% between 2002 and 2003, from 117 to 122. Most building permits were issued along the fringe of the Pinelands Boundary in 2003, in the suburban communities of Ocean County and in communities surrounding the built-up portions of the Atlantic City and Philadelphia metropolitan areas (Figure RE1). Winslow, Barnegat, and Jackson had the largest increases in the number of permits issued, while Evesham and Manchester had the largest decreases. (Table RE1).

Table R1 Residential Building Permits<sup>11</sup>

Municipality	County	Permits Issued					Permits 2000-2003
		2003	2002	Change	% Change	4 Year Avg	
Winslow	Camden	382	90	292	324%	151	602
Barneгат	Ocean	662	470	192	41%	374	1,497
Upper	Cape May	196	36	160	444%	83	333
Jackson	Ocean	786	640	146	23%	696	2,784
Egg Harbor Township	Atlantic	781	676	105	16%	609	2,437
Franklin	Gloucester	139	69	70	101%	86	345
Berkeley	Ocean	188	123	65	53%	300	1,198
Stafford	Ocean	315	251	64	25%	276	1,105
Hamilton	Atlantic	357	294	63	21%	309	1,237
Hammonton	Atlantic	121	79	42	53%	82	327
Port Republic	Atlantic	27	6	21	350%	11	44
Buena	Atlantic	14	1	13	1300%	4	16
Waterford	Camden	26	13	13	100%	23	91
Dennis	Cape May	24	13	11	85%	19	74
Egg Harbor City	Atlantic	8	2	6	300%	3	10
Buena Vista	Atlantic	22	16	6	38%	17	68
New Hanover	Burlington	8	3	5	167%	3	13
Estell Manor	Atlantic	16	11	5	45%	12	46
Woodbine	Cape May	11	8	3	38%	6	23
Lacey	Ocean	11	8	3	38%	73	293
Tabernacle	Burlington	11	9	2	22%	11	45
Washington	Burlington	2	1	1	100%	2	7
Maurice River	Cumberland	5	4	1	25%	4	15
South Toms River	Ocean	5	4	1	25%	4	14
Wrightstown	Burlington	0	0	0	0%	0	0
Lakehurst	Ocean	2	2	0	0%	2	9
Berlin Township	Camden	14	15	-1	-7%	12	48
Medford Lakes	Burlington	2	3	-1	-33%	2	9
Beachwood	Ocean	18	20	-2	-10%	24	97
Weymouth	Atlantic	7	9	-2	-22%	8	32
Woodland	Burlington	4	6	-2	-33%	6	24
Folsom	Atlantic	1	3	-2	-67%	3	10
Shamong	Burlington	28	31	-3	-10%	26	103
Bass River	Burlington	4	7	-3	-43%	5	18
Pemberton Township	Burlington	25	29	-4	-14%	23	91
Chesilhurst	Camden	28	34	-6	-18%	29	116
Plumsted	Ocean	25	31	-6	-19%	61	244
Eagleswood	Ocean	7	13	-6	-46%	10	41
Galloway	Atlantic	297	305	-8	-3%	375	1,501
Mullica	Atlantic	17	27	-10	-37%	19	77
Southampton	Burlington	21	68	-47	-69%	53	211
Medford	Burlington	52	104	-52	-50%	104	414
Little Egg Harbor	Ocean	379	451	-72	-16%	405	1,619
Ocean	Ocean	141	224	-83	-37%	118	472
Monroe	Gloucester	241	333	-92	-28%	199	795
Manchester	Ocean	109	380	-271	-71%	410	1,640
Evesham	Burlington	217	576	-359	-62%	393	1,571
<i>"Outside" Munis</i>							
Berlin Borough	Camden	308	28	280	1000%	136	545
Vineland	Cumberland	179	151	28	19%	141	562
North Hanover	Burlington	26	11	15	136%	16	63
Corbin City	Atlantic	4	6	-2	-33%	6	25
Springfield	Burlington	12	28	-16	-57%	25	101

<sup>11</sup> Municipalities with small populations tend to experience greater volatility from one year to the next. This applies to all variables in this report, not just building permits.

Figure R1 Residential Building Permits Issued 2003



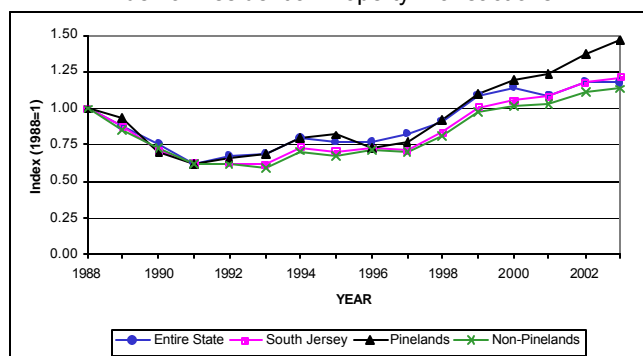
# Residential Real Estate Transactions

NJ Dept of Treasury, Div of Taxation 1988 - 2003

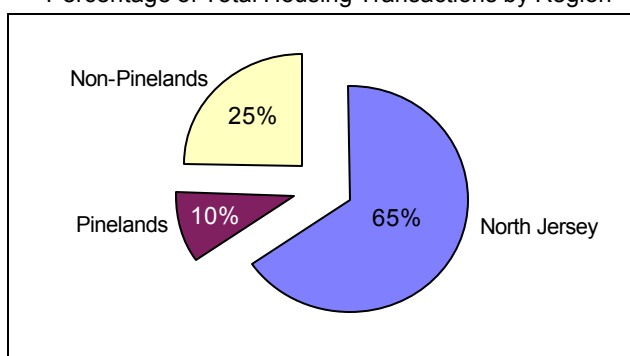
☒ Updated

- The number of residential transactions increased in the Pinelands in 2003 while the number of statewide transactions remained relatively unchanged.

Index of Residential Property Transactions



Percentage of Total Housing Transactions by Region



**Description:** The number of homes sold in each municipality is derived from useable sales data compiled by the New Jersey Department of Treasury.

**Unit of Analysis:** Real estate transaction data are compiled at the municipal level and aggregated to allow for inside/outside Pinelands analysis.

## Summary of Previous Findings

The proportion of residential real estate transactions in the Pinelands (relative to the number of state transactions) remained relatively steady over the course of the monitoring period from 1988 to 1999. The Pinelands share of total transactions has been increasing since 1999. The actual number of transactions in all regions of the state declined substantially from the beginning of monitoring in 1988 through 1991. Residential real estate transactions increased statewide between 1991 to 1996 followed by more substantial increases through 2002.

## Update:

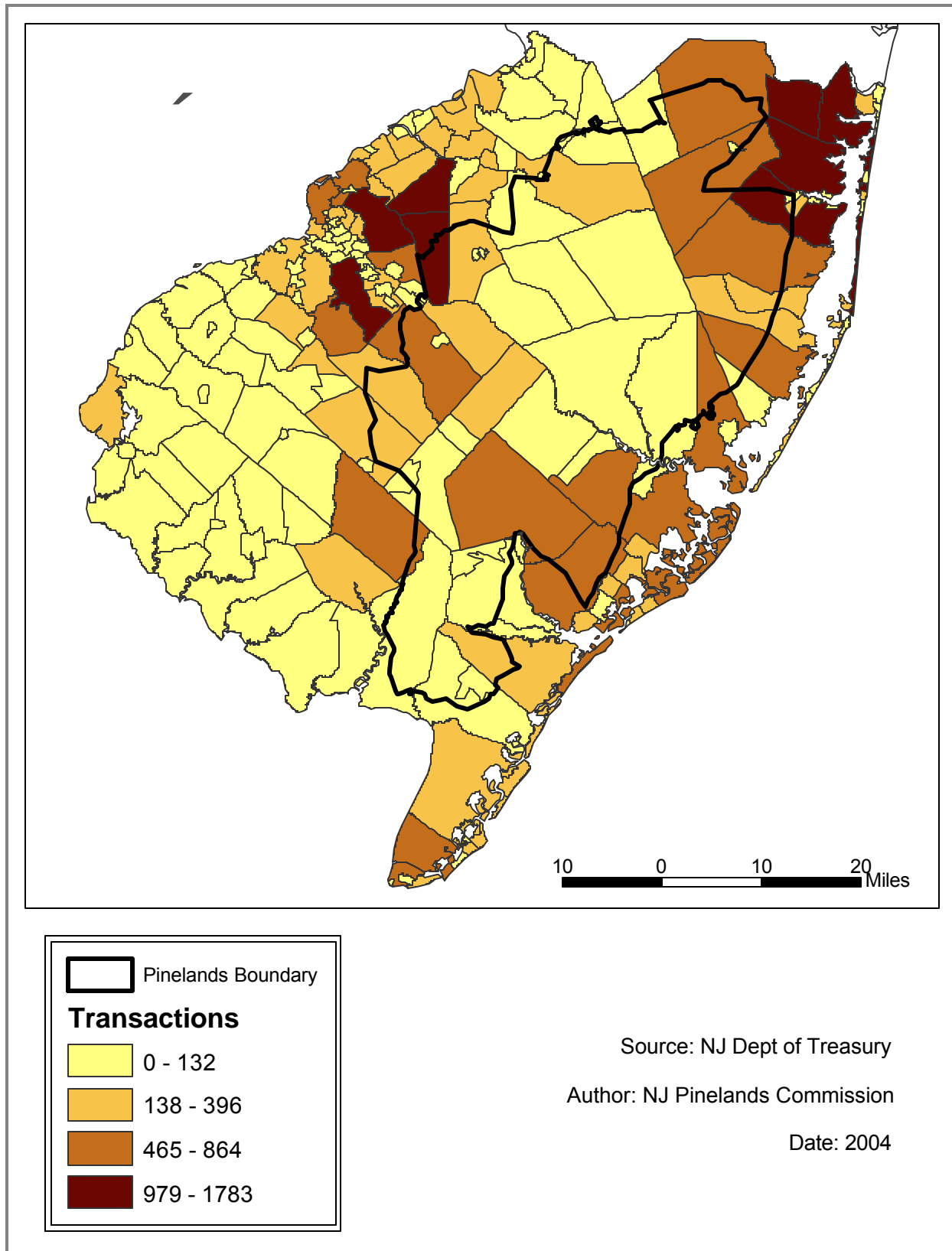
The number of transactions remained relatively unchanged for the state as a whole in 2003, but increased in Southern New Jersey. The total number of state transactions fell from 108,886 to 108,340, a decrease of 0.5%. The number of transactions continued to rise in Southern New Jersey but at a slower pace than in 2002, with increases of 6.5% in the Pinelands Region and 1.4% in the Non-Pinelands Region in 2003. The Pinelands had approximately 10,920 transactions and the Non-Pinelands had 26,690 transactions. Sales in Southern New Jersey represented 34.7% of all New Jersey sales, up from 33.6% in 2001. The Pinelands share of state transactions has steadily increased from 8.2% of all transactions in 1999 to 10.1% in 2003.

The geographic pattern of transactions mirrors that of building permits, with most transactions occurring in Ocean County and the areas around the fringe of the Atlantic City and Philadelphia metropolitan areas (Figure R2). Berkeley, Evesham, Galloway, and Jackson continued to have the highest number of real estate transactions among the Pinelands municipalities in 2003, while Stafford, Galloway, and Winslow had the largest increases in transactions between 2002 and 2003 (Table R2).

Table R2 Residential Housing Transactions

Municipality	County	2003	2002	Change	% Change	5 Year Avg
Stafford	Ocean	551	369	182	49%	441
Galloway	Atlantic	864	735	129	18%	683
Winslow	Camden	717	595	122	21%	564
Evesham	Burlington	979	874	105	12%	874
Egg Harbor Township	Atlantic	588	496	92	19%	445
Hamilton	Atlantic	495	416	79	19%	387
Pemberton Township	Burlington	332	271	61	23%	265
Monroe	Gloucester	365	311	54	17%	305
Berkeley	Ocean	1052	1008	44	4%	899
Franklin	Gloucester	156	116	40	34%	99
Lacey	Ocean	574	537	37	7%	515
Upper	Cape May	199	163	36	22%	149
Hammononton	Atlantic	148	125	23	18%	108
Berlin Township	Camden	63	46	17	37%	52
Maurice River	Cumberland	32	19	13	68%	26
Barneгат	Ocean	321	309	12	4%	271
Buena	Atlantic	37	28	9	32%	30
Waterford	Camden	148	140	8	6%	132
Woodland	Burlington	13	7	6	86%	10
Lakehurst	Ocean	26	20	6	30%	22
Jackson	Ocean	739	733	6	1%	689
Folsom	Atlantic	20	15	5	33%	16
Woodbine	Cape May	8	6	2	33%	5
Dennis	Cape May	77	76	1	1%	80
Port Republic	Atlantic	13	13	0	0%	12
Egg Harbor City	Atlantic	51	52	-1	-2%	42
Bass River	Burlington	9	10	-1	-10%	10
Chesilhurst	Camden	8	9	-1	-11%	8
Wrightstown	Burlington	2	3	-1	-33%	2
Eagleswood	Ocean	19	21	-2	-10%	16
Buena Vista	Atlantic	28	31	-3	-10%	32
Estell Manor	Atlantic	13	16	-3	-19%	15
Washington	Burlington	4	8	-4	-50%	5
Tabernacle	Burlington	97	102	-5	-5%	89
Ocean	Ocean	151	158	-7	-4%	145
Plumsted	Ocean	63	74	-11	-15%	72
New Hanover	Burlington	1	12	-11	-92%	6
South Toms River	Ocean	41	54	-13	-24%	40
Little Egg Harbor	Ocean	562	576	-14	-2%	482
Weymouth	Atlantic	8	23	-15	-65%	17
Medford Lakes	Burlington	73	89	-16	-18%	81
Mullica	Atlantic	44	60	-16	-27%	48
Medford	Burlington	395	425	-30	-7%	371
Shamong	Burlington	64	94	-30	-32%	74
Manchester	Ocean	551	592	-41	-7%	541
Beachwood	Ocean	153	208	-55	-26%	166
Southampton	Burlington	65	204	-139	-68%	156
<i>"Outside" Municipalities</i>						
North Hanover	Burlington	15	8	7	88%	19
Springfield	Burlington	29	25	4	16%	24
Berlin Borough	Camden	89	87	2	2%	79
Corbin City	Atlantic	3	3	0	0%	3
Vineland	Cumberland	481	490	-9	-2%	438

Figure R2 Residential Housing Transactions 2003

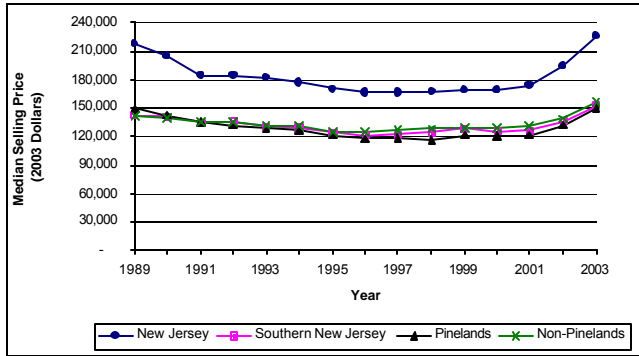


# Median Selling Price of Homes ☒ Updated

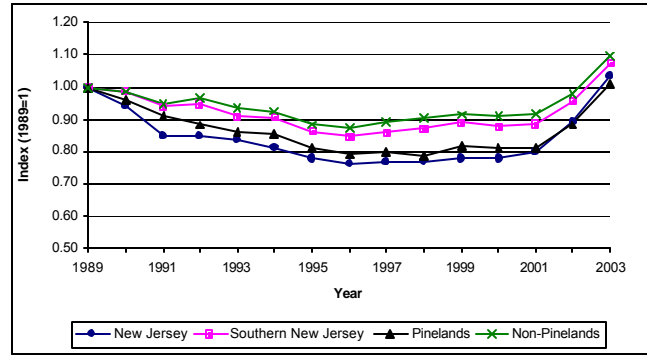
NJ Dept of Treasury, Division of Taxation 1989 - 2003

- Housing prices increased substantially in 2003. The median sale price of homes grew faster in the Pinelands than in the Non-Pinelands.

Median Sale Price of Homes



Index of Median Sale Price of Homes



**Description:** The median selling price for homes sold in each municipality in a given year is derived from sales data compiled by the New Jersey Department of Treasury. Selling prices are shown in 2003 dollars.

**Unit of Analysis:** Data on median selling prices are compiled at the municipal level and are derived from the middle value from the total number of sales for each region for inside/outside Pinelands, regional, and statewide analyses.

## Summary of Previous Findings

Median selling prices of homes inside and outside of the Pinelands declined from the beginning of the monitoring period (1989) into the early 1990's and increased slightly in subsequent years through 2001. This period encompassed the end of a real estate boom, recession, and subsequent recovery. Prices began to escalate for all regions in 2002, in spite of a recession in 2001 and weak job market thereafter. Overall, median selling prices were slightly higher in the Non-Pinelands than in the Pinelands, which is consistent with data from the years prior to implementation of the CMP and shortly thereafter (see, for example, *Economic & Fiscal Impacts of the Comprehensive Management Plan*, New Jersey Pinelands Commission, 1983). Historically, median selling prices at the state level have been substantially higher than those for Southern New Jersey.

## Update:

The median sale price of homes continued to increase for all regions in 2003, the most significant increase in the entire monitoring period. The state median inflation-adjusted sales price rose by 16.0%, while the median values for the Pinelands and Non-Pinelands region rose by 14.2% and 11.9% respectively. The gap in sales price between the Pinelands and Non-Pinelands region narrowed between 2002 and 2003, but Pinelands homes continue to sell for lower prices. The median sales price for a home in the Pinelands in 2003 was approximately \$150,000, compared to \$155,000 for a Non-Pinelands home (the median price for a home in 2002, not adjusted for inflation, was only \$128,000 for a Pinelands home and \$135,000 for a Non-Pinelands home).

## Year Structure Built

Updated

US Census Bureau 2000

- The number of units built in the Pinelands municipalities has decreased since the 1970s.

Decade That Housing Units Were Built as of 2000

	Total Units	1990s	1980s	1970s	1960s	1950s	1940s	Before 1940
New Jersey	3,310,275	346,126	409,978	462,740	526,732	565,847	332,806	666,046
Southern New Jersey	988,913	133,063	160,688	193,775	163,267	139,648	67,728	130,744
Pinelands Municipalities	248,975	45,312	61,938	67,129	32,578	19,707	7,811	14,500
Non-Pinelands Munis	739,938	87,751	98,750	126,646	130,689	119,941	59,917	116,244
New Jersey		10.5%	12.4%	14.0%	15.9%	17.1%	10.1%	20.1%
Southern New Jersey		13.5%	16.2%	19.6%	16.5%	14.1%	6.8%	13.2%
Pinelands Municipalities		18.2%	24.9%	27.0%	13.1%	7.9%	3.1%	5.8%
Non-Pinelands Munis		11.9%	13.3%	17.1%	17.7%	16.2%	8.1%	15.7%

**Description:** Data on year structure built were obtained from answers to the long form questionnaire, which takes a 1 in 6 sample of the population. Data was aggregated by the Census Bureau into decades. The data is useful for illustrating building trends over time in addition to describing the age of current housing. The data is better suited for illustrating more current building trends (past few decades) and less suited for longer trends, since it is more likely that older homes were demolished or destroyed (thus masking the true amount of home construction for more distant decades).

**Unit of Analysis:** Municipal level data are aggregated to allow for inside/outside Pinelands, regional, and statewide analyses. The aggregation method sums total values for each region. Data at the census block group level is also available and was aggregated using GIS to calculate units inside and outside the Pinelands boundary. Due to differences in sample size and aggregation techniques, the sums of the number of units at the block group level do not equal sums at the municipal level. There is a slight discrepancy between the sum of housing units at the block group level and housing unit counts from the Census short form, as the short form is based on a 100% count rather than a sample.

#### Supplemental Data

Housing in New Jersey tends to be old. With the exception of the 1940s (when few housing units were constructed between 1941 and 1945 because of World War II), the percentage of total housing units in New Jersey built in each decade decreases as time moves forward. Twenty percent of New Jersey's housing stock was built before 1940, while only 10.5% was built in the 1990s. The time series for South Jersey differs from the state as a whole, as the percentage of units built in each decade increases through the 1970s, and decreases thereafter.

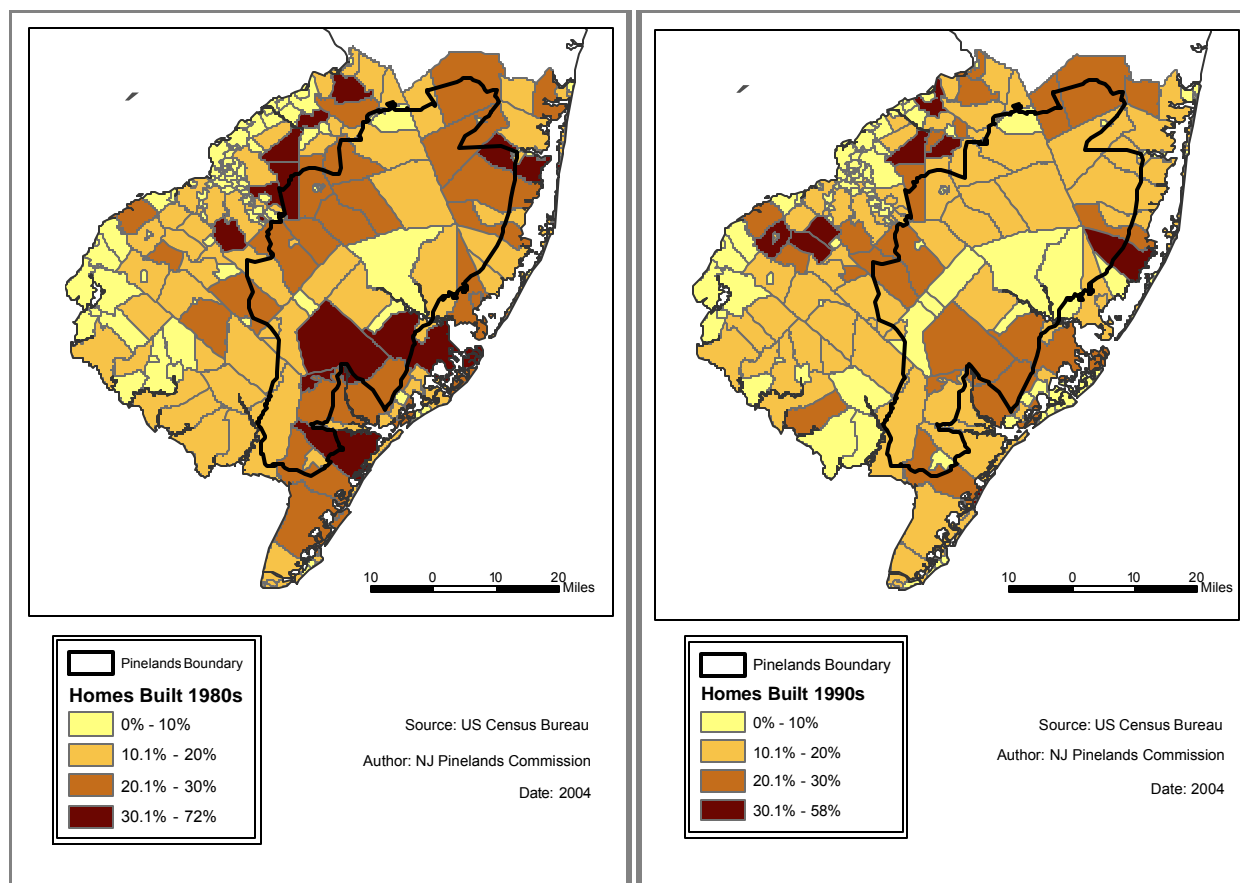
The Pinelands stands in stark comparison to the Non-Pinelands region and particularly to the state as a whole, as it has a larger percentage of new units. Seventy percent of the homes in the Pinelands municipalities were built between 1970 and 1999. Only 42% of homes in the Non-Pinelands and 37% of all the homes in the state were built in this same period. The Pinelands developed later primarily due to its greater distance from the urban core. Building in the Pinelands peaked in the 1970s and declined in subsequent decades, possibly due to the effects of the CMP and due to lower rates of population growth throughout the state in the 1980s and 1990s.

An analysis of year structure built at the block group level identifies the different patterns of growth which occurred within the Pinelands municipalities, inside and outside the Pinelands boundary (Table R4a). The percentage of total units built between 1970 and 1999 is roughly equal in the areas of Pinelands municipalities inside and outside the boundary, with 65% inside and 69% percent outside. The decade by decade pattern of development shows that the area inside the boundary has a higher percentage of pre-1940 homes than the area outside the boundary (8.3% before 1940 compared to 5.8%). Both areas have an increasing percentage of homes built in the 1950s and 1960s. The area inside the boundary peaks in the 1970s, then drops significantly in the 1980s, while the area outside has a relatively equal percentage of homes built in the 1970s and 1980s. The enactment of the CMP in 1979 may be partially responsible for a drop in construction during the 1980s. Both areas have an equal percentage of homes built in the 1990s, as Regional Growth Areas inside the boundary and fringe areas outside the Pinelands boundary continued to grow. Geographical trends are illustrated in figures R4 on page 36 and in Appendix F on page 80.

Table R4a Decade Structure Built in 2000 Inside and Outside the Pinelands Municipalities by Census Block Group

	Total Units	1990s	1980s	1970s	1960s	1950s	1940s	Before 1940
Pinelands Municipal Area Inside Boundary	104,623	18,673	20,018	28,900	13,682	10,297	4,365	8,688
Pinelands Municipal Area Outside Boundary	171,087	29,907	44,792	43,249	23,895	13,899	5,471	9,874
Pinelands Municipal Area Inside Boundary		17.8%	19.1%	27.6%	13.1%	9.8%	4.2%	8.3%
Pinelands Municipal Area Outside Boundary		17.5%	26.2%	25.3%	14.0%	8.1%	3.2%	5.8%

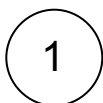
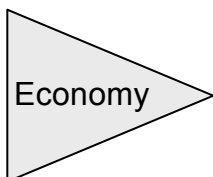
Figure R4 Percentage of Total Structures in 2000 Built in the 1980s and 1990s\*



\* These maps indicate that the Pinelands has a larger percentage of homes built in the 1980s compared to the 1990s. When the same data is examined at the block group level, the picture changes. While Pinelands municipalities have a large portion of homes built in the 1980s, the percentage of homes built in the 1980s inside the Pinelands boundary is smaller than outside the boundary. A significant portion of homes built in the 1980s in Pinelands municipalities was actually built in areas outside the Pinelands boundary. For an illustration of block group housing unit construction throughout the decades, see Appendix F on page 80.

Table R4b Decade Structure Built as of 2000 by Pinelands Municipality

County	Municipality	Total Units	1990s	1980s	1970s	1960s	1950s	1940s	Before 1940
Atlantic	Buena	1,553	10.1%	11.9%	10.4%	16.9%	20.8%	8.0%	21.9%
Atlantic	Buena Vista	2,827	9.7%	16.0%	20.5%	17.1%	20.1%	6.4%	10.3%
Atlantic	Egg Harbor City	1,770	2.4%	6.6%	9.7%	10.2%	21.0%	15.4%	34.7%
Atlantic	Egg Harbor Twp	12,046	23.0%	23.0%	28.2%	14.1%	5.8%	2.1%	3.8%
Atlantic	Estell Manor	554	18.2%	27.6%	22.4%	6.7%	9.6%	4.9%	10.6%
Atlantic	Folsom	702	6.4%	8.0%	39.2%	20.4%	12.1%	5.1%	8.8%
Atlantic	Galloway	11,388	28.6%	38.1%	12.7%	7.9%	5.7%	1.8%	5.2%
Atlantic	Hamilton	7,567	20.9%	30.5%	20.3%	10.0%	6.1%	3.6%	8.6%
Atlantic	Hammononton	4,843	8.7%	10.6%	12.8%	13.9%	14.5%	10.6%	28.9%
Atlantic	Mullica	2,176	15.9%	15.4%	20.4%	13.8%	14.5%	8.6%	11.4%
Atlantic	Port Republic	380	13.2%	12.9%	22.6%	7.1%	7.9%	10.8%	25.5%
Atlantic	Weymouth	901	24.4%	33.4%	12.8%	5.9%	5.9%	5.2%	12.4%
Burlington	Bass River	610	5.1%	11.6%	27.5%	14.4%	9.0%	8.9%	23.4%
Burlington	Evesham	16,436	25.0%	35.2%	21.3%	12.3%	4.4%	0.9%	1.1%
Burlington	Medford	8,147	15.4%	23.9%	34.4%	11.4%	7.1%	2.5%	5.3%
Burlington	Medford Lakes	1,555	4.7%	4.4%	11.4%	29.8%	32.7%	5.9%	11.2%
Burlington	New Hanover	1,397	6.9%	3.9%	17.4%	23.5%	35.9%	6.8%	5.6%
Burlington	Pemberton Twp	10,762	10.1%	10.8%	33.8%	20.8%	15.3%	5.0%	4.2%
Burlington	Shamong	2,175	14.8%	26.1%	40.9%	6.1%	6.3%	1.1%	4.7%
Burlington	Southampton	4,686	10.1%	20.1%	39.2%	11.3%	10.4%	2.2%	6.8%
Burlington	Tabernacle	2,385	12.1%	20.8%	42.0%	5.6%	10.0%	3.6%	5.9%
Burlington	Washington	163	2.5%	6.1%	17.8%	3.1%	31.3%	16.6%	22.7%
Burlington	Woodland	447	12.5%	15.7%	26.2%	17.4%	12.1%	6.0%	10.1%
Burlington	Wrightstown	339	2.1%	6.8%	21.8%	8.0%	29.2%	24.8%	7.4%
Camden	Berlin Twp	2,009	11.1%	12.4%	20.8%	23.3%	17.3%	5.1%	10.0%
Camden	Chesilhurst	535	4.5%	10.1%	40.4%	27.1%	5.4%	3.6%	9.0%
Camden	Waterford	3,655	14.6%	22.7%	29.9%	6.5%	8.3%	5.1%	12.9%
Camden	Winslow	12,426	23.0%	29.4%	27.1%	7.9%	3.8%	2.2%	6.7%
Cape May	Dennis	2,309	22.2%	25.4%	21.8%	6.3%	5.9%	3.0%	15.4%
Cape May	Upper	5,472	15.5%	36.4%	20.7%	11.6%	6.3%	2.0%	7.5%
Cape May	Woodbine	1,080	7.8%	14.3%	20.4%	21.4%	10.9%	7.0%	18.2%
Cumberland	Maurice River	1,461	10.6%	10.9%	11.4%	15.7%	11.5%	7.0%	32.9%
Gloucester	Franklin	5,461	15.1%	20.3%	22.4%	11.4%	13.2%	8.7%	8.9%
Gloucester	Monroe	11,069	21.4%	16.9%	26.9%	12.4%	11.4%	4.1%	7.0%
Ocean	Barneget	6,039	23.5%	29.4%	35.0%	4.5%	2.5%	0.9%	4.1%
Ocean	Beachwood	3,586	10.8%	17.5%	33.0%	13.7%	11.1%	3.7%	10.2%
Ocean	Berkeley	22,291	15.1%	37.5%	29.5%	8.2%	6.0%	1.6%	2.0%
Ocean	Eagleswood	693	7.8%	18.0%	18.6%	12.4%	11.7%	12.8%	18.6%
Ocean	Jackson	14,638	25.3%	24.1%	19.3%	20.5%	6.1%	2.6%	2.1%
Ocean	Lacey	10,580	14.4%	26.7%	32.4%	13.7%	7.8%	2.4%	2.5%
Ocean	Lakehurst	961	3.2%	8.9%	15.9%	15.9%	20.8%	18.8%	16.3%
Ocean	Little Egg Harbor	7,937	17.9%	25.9%	24.9%	24.4%	4.1%	0.3%	2.5%
Ocean	Manchester	22,677	14.7%	26.5%	43.1%	10.7%	2.7%	1.1%	1.2%
Ocean	Ocean	2,981	12.3%	15.4%	22.9%	25.8%	16.3%	3.7%	3.6%
Ocean	Plumsted	2,628	25.2%	13.3%	16.0%	11.5%	10.0%	9.6%	14.5%
Ocean	South Toms River	1,129	1.2%	4.3%	13.0%	49.5%	23.6%	4.3%	4.0%
Ocean	Stafford	11,549	30.6%	19.5%	25.7%	15.1%	5.0%	1.4%	2.6%
<i>"Outside" Municipalities</i>									
Atlantic	Corbin City	204	15.2%	18.6%	14.7%	8.8%	14.7%	6.9%	21.1%
Burlington	North Hanover	2,650	11.1%	18.6%	17.8%	20.7%	18.9%	5.2%	7.8%
Burlington	Springfield	1,138	19.5%	21.2%	11.7%	16.7%	13.5%	1.7%	15.7%
Camden	Berlin Borough	2,275	17.5%	5.4%	20.4%	17.4%	16.3%	5.5%	17.5%
Cumberland	Vineland	20,958	11.4%	10.1%	19.0%	18.7%	16.7%	8.4%	15.8%



# Per Capita Income



US Census Bureau 1979, 1989, 1999

- Per Capita Income is lower in the Pinelands than in the Non-Pinelands, but is growing at a faster rate.

## Per Capita Income

Location	1979 PCI (2003 \$)	1989 PCI (2003 \$)	1999 PCI (2003 \$)	Change 1979-89	Change 1989-99	Change 1979-99
Pinelands	\$16,210	\$21,493	\$23,189	33%	11%	47%
Non-Pinelands	\$18,960	\$26,402	\$27,173	39%	3%	43%
Statewide	\$20,664	\$27,859	\$29,923	35%	7%	45%

**Description:** Per capita income is an important indicator of regional economic health because it provides information regarding the ability of a region's residents to make purchases and pay taxes, and provides a measure of the economic well-being of individuals. Values are adjusted for inflation and shown in 2000 dollars (not 2003 dollars).

**Unit of Analysis:** Per capita income data are compiled at the municipal level and aggregated to allow for inside/outside Pinelands and statewide analyses.

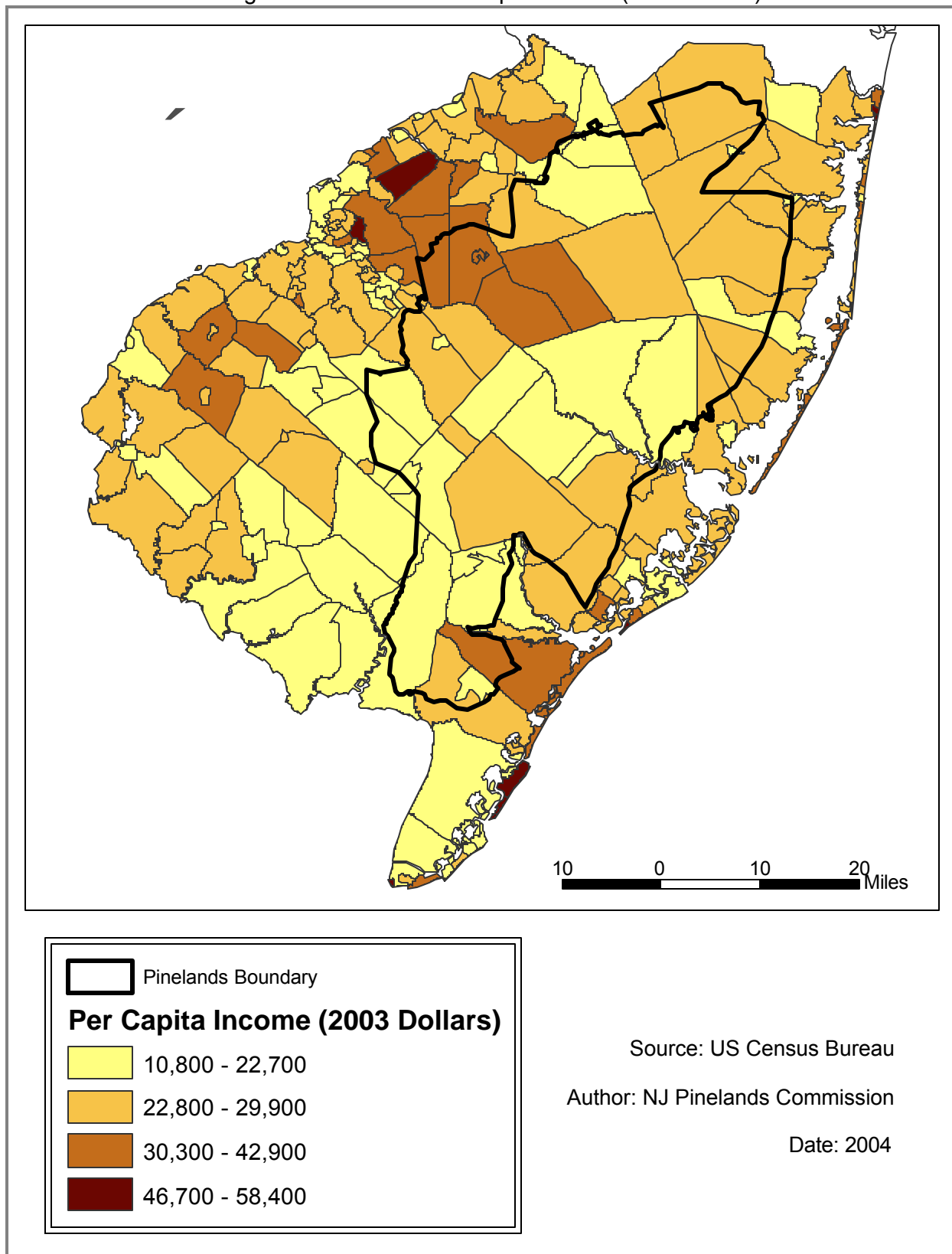
### Summary of Previous Findings

Real per capita income increased significantly inside and outside of the Pinelands during the 1980s, unlike many areas of the country. Per capita income growth in the Pinelands more than kept pace and finished slightly behind the surrounding region in terms of percentage change between 1980 and 1990. The level of per capita income remained higher in absolute terms in the Non-Pinelands region compared to the Pinelands region.

Per capita income continued to increase during the 1990s, but the rate of growth was much lower than in the 1980s. The Pinelands region experienced an 11% increase in income levels between 1989 and 1999, compared to an increase of 7% for the state and 3% for the Non-Pinelands region. While the Pinelands region is catching up to the rest of the state, its income levels are still significantly lower than the rest of the state. Medford Township, Medford Lakes, and Shamong had the highest incomes in the Pinelands, while New Hanover, Washington, and Woodbine had the lowest income levels. Woodland experienced the largest increase in income between 1990 and 2000 (74%), while Washington had the largest decrease (40%). The changes in both towns are anomalies related to shifts in institutional group quarters population and volatility due to small population size. A positive sign is that many towns with the lowest per capita incomes experienced the largest increases in income (i.e. Woodbine, Wrightstown, South Toms River, Maurice River, and Lakehurst).

Geographically, income levels appear as a series of bands that run across Southern New Jersey. A band of higher income surrounds the Philadelphia metropolitan area and stretches into the upper-middle portion of the Pinelands. This band represents suburbanizing communities outside of the city. The band is actually split in two by older, working class suburbs and rural communities that have only begun to suburbanize. Another thin band of high income stretches along the shore. A band of more moderate income stretches across the south-central half of the state, and a smaller, moderate income area is located in the northeastern part of Southern New Jersey. These communities tend to be rural communities, with some experiencing recent suburbanization. A region of poverty exists in the extreme southern portion of the state, along with a small pocket of lower income in the heart of the Pinelands. These areas are predominantly rural, and are the least impacted by development. Smaller pockets of poverty persist in the military towns of Burlington County, and in the older urban areas such as Camden and Atlantic City, which have suffered economic hardship. It is interesting to note that while the Pinelands does have a lower Per Capita income than the Non-Pinelands region, these bands of different income stretch across Southern New Jersey regardless of the Pinelands boundary.

Figure E1 1999 Per Capita Income (2003 Dollars)



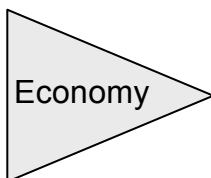
\* This range excludes Mantoloking Borough, Ocean County, because it is an extreme outlier.

Table E1 Per Capita Income by Pinelands Municipality (2003 Dollars)

Municipality	County	1999	1989	1979	Change 1989-1999	Change 1979-1989
Medford Twp.	Burlington	\$42,814	\$36,597	\$24,301	17%	51%
Medford Lakes Boro	Burlington	\$34,771	\$33,002	\$24,181	5%	36%
Shamong Twp.	Burlington	\$34,275	\$28,002	\$18,615	22%	50%
Evesham Twp.	Burlington	\$32,679	\$29,753	\$21,938	10%	36%
Tabernacle Twp.	Burlington	\$30,884	\$30,249	\$17,710	2%	71%
Upper Twp.	Cape May	\$30,468	\$26,225	\$18,315	16%	43%
Southampton Twp.	Burlington	\$29,891	\$24,840	\$19,530	20%	27%
Woodland Twp.*	Burlington	\$28,948	\$16,623	\$10,382	74%	60%
Stafford Twp.	Ocean	\$28,140	\$21,777	\$16,995	29%	28%
Port Republic City	Atlantic	\$27,001	\$26,204	\$20,512	3%	28%
Jackson Twp.	Ocean	\$26,571	\$23,977	\$16,975	11%	41%
Lacey Twp.	Ocean	\$25,635	\$22,149	\$16,815	16%	32%
Ocean Twp.	Ocean	\$25,296	\$20,044	\$17,857	26%	12%
Plumsted Twp.	Ocean	\$24,856	\$22,377	\$16,192	11%	38%
Manchester Twp.	Ocean	\$24,829	\$22,191	\$18,452	12%	20%
Egg Harbor Twp.	Atlantic	\$24,739	\$23,615	\$17,451	5%	35%
Berkeley Twp.	Ocean	\$24,595	\$20,624	\$16,159	19%	28%
Berlin Twp.	Camden	\$24,572	\$20,103	\$15,859	22%	27%
Waterford Twp.	Camden	\$24,017	\$21,742	\$15,902	10%	37%
Dennis Twp.	Cape May	\$23,772	\$22,779	\$15,864	4%	44%
Hamilton Twp.	Atlantic	\$23,610	\$23,742	\$17,214	-1%	38%
Winslow Twp.	Camden	\$23,549	\$20,866	\$16,141	13%	29%
Beachwood Boro	Ocean	\$23,542	\$21,601	\$15,699	9%	38%
Galloway Twp.	Atlantic	\$23,321	\$24,269	\$16,810	-4%	44%
Little Egg Harbor Twp.	Ocean	\$22,846	\$21,202	\$16,283	8%	30%
Eagleswood Twp.	Ocean	\$22,844	\$19,547	\$13,629	17%	43%
Folsom Boro	Atlantic	\$22,844	\$19,734	\$16,255	16%	21%
Monroe Twp.	Gloucester	\$22,701	\$20,459	\$16,103	11%	27%
Bass River Twp.	Burlington	\$22,583	\$19,350	\$16,406	17%	18%
Franklin Twp.	Gloucester	\$22,467	\$20,112	\$15,627	12%	29%
Hammononton town	Atlantic	\$22,037	\$23,283	\$18,076	-5%	29%
Mullica Twp.	Atlantic	\$21,899	\$20,632	\$16,362	6%	26%
Estell Manor City	Atlantic	\$21,572	\$23,313	\$16,428	-7%	42%
Barneget Twp.	Ocean	\$21,392	\$19,524	\$14,608	10%	34%
Pemberton Twp.	Burlington	\$21,316	\$18,773	\$14,382	14%	31%
Weymouth Twp.	Atlantic	\$21,038	\$20,170	\$15,345	4%	31%
Lakehurst Boro	Ocean	\$20,376	\$15,624	\$13,321	30%	17%
Buena Vista Twp.	Atlantic	\$20,367	\$18,778	\$14,369	8%	31%
Maurice River Twp.	Cumberland	\$18,992	\$15,168	\$12,330	25%	23%
Buena Boro	Atlantic	\$18,522	\$17,750	\$16,467	4%	8%
South Toms River Boro	Ocean	\$18,052	\$14,932	\$12,459	21%	20%
Chesilhurst Boro	Camden	\$16,899	\$16,667	\$13,301	1%	25%
Egg Harbor City	Atlantic	\$16,787	\$18,595	\$17,629	-10%	5%
Wrightstown Boro	Burlington	\$16,054	\$12,760	\$9,825	26%	30%
Washington Twp.+	Burlington	\$15,487	\$25,674	\$14,140	-40%	82%
Woodbine Boro	Cape May	\$14,775	\$11,207	\$9,388	32%	19%
New Hanover Twp.	Burlington	\$13,451	\$13,507	\$13,240	0%	2%
<i>"Outside" Municipalities</i>						
Springfield Twp.	Burlington	\$32,489	\$27,626	\$18,829	18%	47%
Berlin Boro	Camden	\$27,340	\$23,487	\$20,019	16%	17%
Corbin City	Atlantic	\$23,624	\$22,499	\$17,672	5%	27%
Vineland City	Cumberland	\$20,827	\$19,298	\$15,645	8%	23%
North Hanover Twp.	Burlington	\$19,479	\$16,736	\$13,631	16%	23%

\* Large change the partially the result of a large decrease in institutional population

+ Erratic change caused by small population size and presence of large institutional population



2

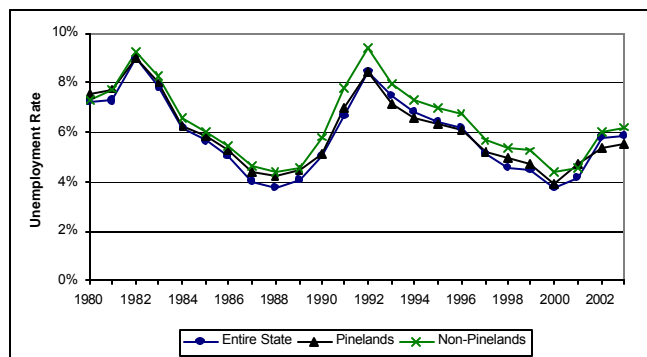
# Unemployment

Updated

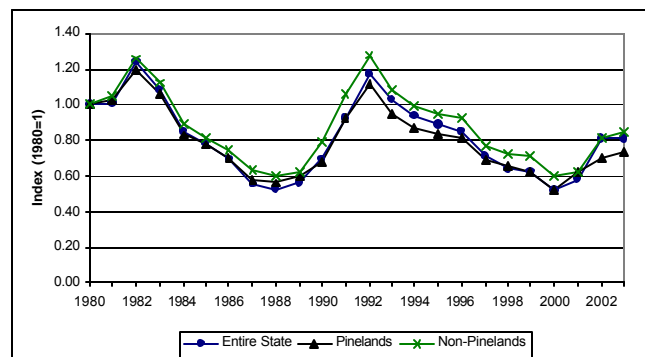
New Jersey Department of Labor 1980 - 2003

- The unemployment rate in the Pinelands remains below the Non-Pinelands, state, and national rates.

Unemployment Rate



Index of Unemployment Rate



**Description:** The unemployment rate is the proportion of the labor force (the number of people available to be, and desiring to be, working for pay) residing in an area which is unemployed (not working for pay) at a given point in time.

**Unit of Analysis:** Municipal level data are aggregated to allow for inside/outside Pinelands and statewide analyses. Values are based on sums for each region and not averages.

## Summary of Previous Findings

Trends in unemployment in the Pinelands and Non-Pinelands regions have tracked closely together, with levels in the Pinelands consistently lower than the levels in the Non-Pinelands from 1990-2000. Unemployment in Southern New Jersey appeared to follow general economic conditions, declining in the mid-1980s before increasing at the turn of the decade during the recession. Following a peak in 1992, unemployment levels declined steadily by roughly four percentage points by 2000, coinciding with a period of economic growth. Unemployment rose in 2001 with the onset of recession.

## Update

Although recession ended in 2002, the job market has remained weak. According to the US Bureau of Labor Statistics, approximately 8.8 million Americans were unemployed in 2003, compared to 5.7 million in 2000. The national unemployment rate rose from 4.0% to 6.0% during that period. US employers have cut approximately 2.5 million jobs since the start of the recession in 2001. Mirroring national trends, unemployment in New Jersey rose from 4.2% in 2001 to 5.8% in 2002 to 5.9% in 2003.

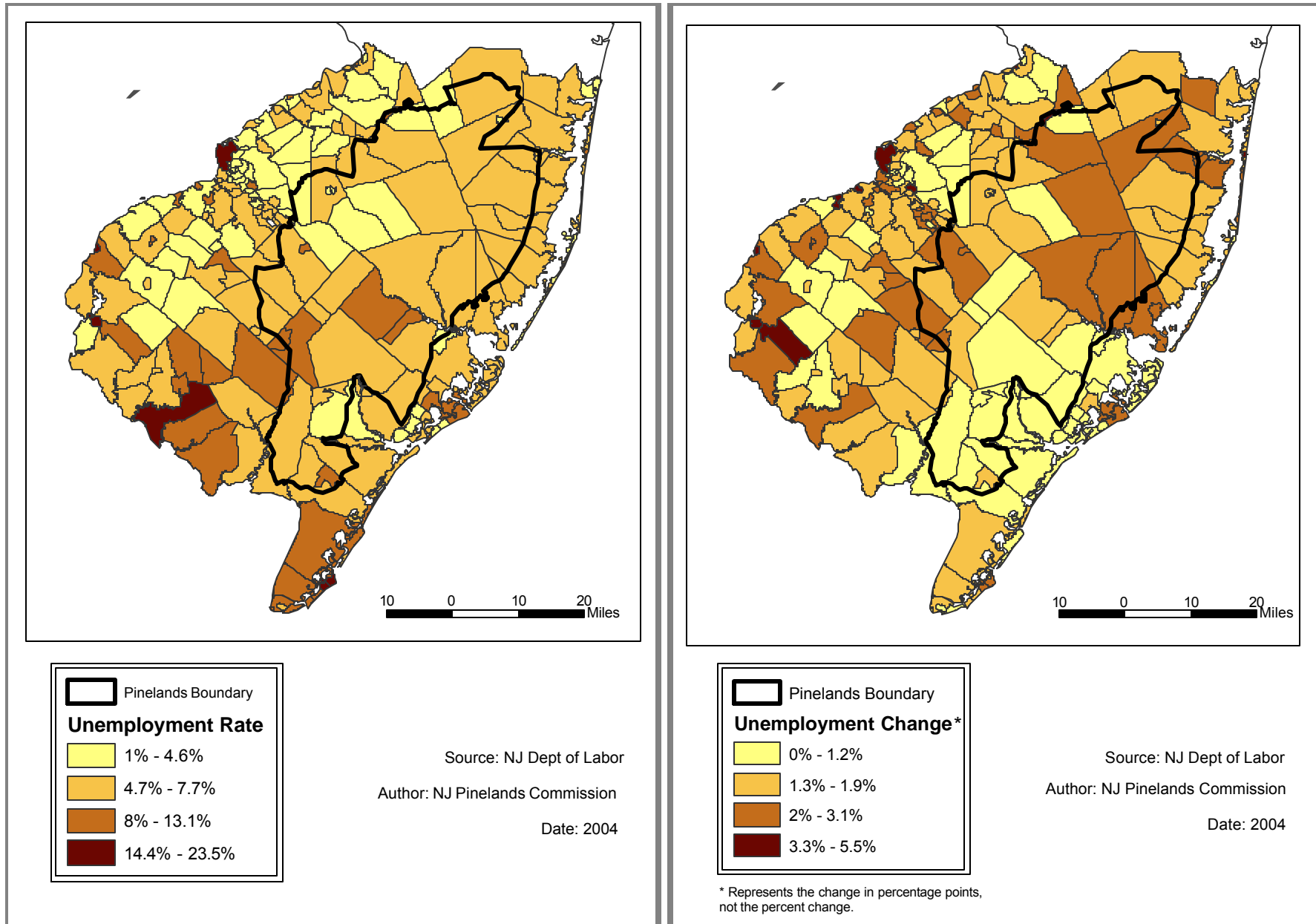
While the state unemployment rate has risen, the increase was minor (from 5.8% to 5.9%) which means that the rate has effectively stabilized between 2002 and 2003. The unemployment rate in the Pinelands climbed from 5.3% in 2002 to 5.6% in 2003, while the Non-Pinelands rate increased from 6.0% to 6.2%.

Unemployment rates in Southern New Jersey are highest in southern Cape May and Cumberland counties and lowest in the more recently suburbanizing municipalities of Burlington and Gloucester counties. Municipalities in Atlantic County generally had smaller increases in unemployment from 2000 to 2003 (from the end of the economic boom in the 1990s to the present) compared to the rest of Southern New Jersey. Increases in the unemployment rate in Pinelands municipalities have been greatest in small boroughs and in large townships in the heart of the Pinelands.

Table E2 Unemployment 2000 – 2003

Municipality	County	2003	2002	2001	2000	Change
Wrightstown Boro	Burlington	11.0%	11.0%	7.8%	7.1%	3.9%
Chesilhurst Boro	Camden	8.2%	7.9%	5.6%	5.4%	2.8%
Little Egg Harbor Twp.	Ocean	7.6%	7.2%	5.5%	5.2%	2.4%
South Toms River Boro	Ocean	7.6%	7.1%	5.4%	5.2%	2.4%
North Hanover Twp.	Burlington	6.5%	6.5%	4.5%	4.1%	2.4%
Pemberton Twp.	Burlington	6.4%	6.4%	4.4%	4.0%	2.4%
Berkeley Twp.	Ocean	7.1%	6.7%	5.1%	4.8%	2.3%
Washington Twp.	Burlington	6.3%	6.4%	4.3%	4.0%	2.3%
Buena Boro	Atlantic	13.1%	12.5%	10.2%	10.9%	2.2%
Manchester Twp.	Ocean	6.9%	6.5%	4.9%	4.7%	2.2%
Beachwood Boro	Ocean	6.4%	6.1%	4.6%	4.4%	2.0%
Franklin Twp.	Gloucester	6.2%	5.9%	4.3%	4.2%	2.0%
Winslow Twp.	Camden	5.6%	5.4%	3.8%	3.6%	2.0%
Woodland Twp.	Burlington	5.5%	5.5%	3.8%	3.5%	2.0%
Bass River Twp.	Burlington	5.2%	5.3%	3.6%	3.2%	2.0%
Stafford Twp.	Ocean	6.0%	5.7%	4.3%	4.1%	1.9%
Lacey Twp.	Ocean	5.9%	5.6%	4.2%	4.0%	1.9%
Southampton Twp.	Burlington	5.0%	5.0%	3.4%	3.1%	1.9%
Ocean Twp.	Ocean	5.7%	5.4%	4.1%	3.9%	1.8%
Jackson Twp.	Ocean	5.5%	5.2%	3.9%	3.7%	1.8%
Eagleswood Twp.	Ocean	5.4%	5.1%	3.8%	3.6%	1.8%
Medford Twp.	Burlington	4.7%	4.7%	3.2%	2.9%	1.8%
Egg Harbor City	Atlantic	9.6%	9.1%	7.4%	7.9%	1.7%
Barneget Twp.	Ocean	5.3%	5.0%	3.8%	3.6%	1.7%
Berlin Twp.	Camden	4.5%	4.3%	3.1%	2.9%	1.6%
Mullica Twp.	Atlantic	8.4%	8.0%	6.5%	6.9%	1.5%
Monroe Twp.	Gloucester	4.7%	4.5%	3.3%	3.2%	1.5%
Lakehurst Boro	Ocean	4.5%	4.3%	3.2%	3.0%	1.5%
Woodbine Boro	Cape May	10.7%	10.3%	8.9%	9.3%	1.4%
Buena Vista Twp.	Atlantic	8.4%	8.0%	6.5%	7.0%	1.4%
Medford Lakes Boro	Burlington	3.8%	3.8%	2.6%	2.4%	1.4%
Plumsted Twp.	Ocean	4.1%	3.9%	2.9%	2.8%	1.3%
Waterford Twp.	Camden	3.5%	3.3%	2.4%	2.2%	1.3%
Shamong Twp.	Burlington	3.4%	3.4%	2.3%	2.1%	1.3%
Tabernacle Twp.	Burlington	3.1%	3.1%	2.1%	1.9%	1.2%
Weymouth Twp.	Atlantic	6.1%	5.8%	4.7%	5.0%	1.1%
Hammonton town	Atlantic	5.9%	5.6%	4.5%	4.8%	1.1%
Maurice River Twp.	Cumberland	5.8%	5.6%	5.0%	4.8%	1.0%
Egg Harbor Twp.	Atlantic	5.7%	5.4%	4.4%	4.7%	1.0%
Evesham Twp.	Burlington	2.6%	2.6%	1.8%	1.6%	1.0%
Dennis Twp.	Cape May	6.9%	6.7%	5.7%	6.0%	0.9%
Upper Twp.	Cape May	6.4%	6.2%	5.3%	5.5%	0.9%
Galloway Twp.	Atlantic	5.2%	4.9%	4.0%	4.3%	0.9%
Hamilton Twp.	Atlantic	5.0%	4.7%	3.8%	4.1%	0.9%
Folsom Boro	Atlantic	5.0%	4.7%	3.8%	4.1%	0.9%
Estell Manor City	Atlantic	3.4%	3.3%	2.6%	2.7%	0.7%
Port Republic City	Atlantic	3.7%	3.6%	2.9%	3.1%	0.6%
<i>"Outside Municipalities"</i>						
Berlin Boro	Camden	5.0%	4.8%	3.4%	3.2%	1.8%
Vineland City	Cumberland	8.4%	8.2%	7.3%	7.0%	1.4%
Springfield Twp.	Burlington	3.9%	3.9%	2.7%	2.5%	1.4%
New Hanover Twp.	Burlington	3.0%	2.9%	2.0%	1.8%	1.2%
Corbin City	Atlantic	4.9%	4.6%	3.9%	4.3%	0.6%

Figure E2 Unemployment Rate 2003 and Change in Unemployment Rate 2000 - 2003



# Employment, Establishments, Wages

New Jersey Department of Labor 1991 - 2002

☒ Updated

- The largest private employment sectors in Southern New Jersey are retail, healthcare, and accommodation & food service.

2002 NAICS	Largest Employment Sector	2 <sup>nd</sup> Largest Sector	3 <sup>rd</sup> Largest Sector
Atlantic	Accommodation & Food (46%)	Retail (12%)	Healthcare (12%)
Burlington	Retail (17%)	Healthcare (13%)	Manufacturing (13%)
Camden	Healthcare (18%)	Retail (15%)	Manufacturing (11%)
Cape May	Accommodation & Food (27%)	Retail (21%)	Healthcare (12%)
Cumberland	Manufacturing (24%)	Retail (17%)	Healthcare (16%)
Gloucester	Retail (21%)	Manufacturing (13%)	Healthcare (13%)
Ocean	Retail (23%)	Healthcare (22%)	Accommodation & Food (10%)
Salem	Manufacturing (23%)	Healthcare (21%)	Retail (16%)
South Jersey	Retail (17%)	Healthcare (16%)	Accommodation & Food (10%)
New Jersey	Retail (14%)	Healthcare (13%)	Manufacturing (11%)

**Description:** These three variables collectively describe the composition, size, strength, and location of the job market. The first variable, *employment*, is a basic measure of economic health. Employment data count the number of jobs tracked by unemployment insurance coverage.<sup>12</sup> The data are broken down to the first Standard Industrial Classification (SIC) code level (major industry division) to track the shifting of activity between major economic components. The second variable, *number of establishments*, refers to the number of businesses that have employees and is presented at the single-digit SIC code level. The third variable, *wages*, is a measure of economic activity that complements employment and number of establishments. In 2001 the state began using the new North American Industrial Classification System (NAICS) and discontinued the use of SIC codes. NAICS data is broken down to the two-digit level for post 2000 data.

**Unit of Analysis:** Municipal level data became available for all three variables beginning in 1993 but new data has not been available since 1999. The NJ Department of Labor is under contract to produce county level data each year, so county level data will be presented in this year's report. SIC data at the county level is included from 1991 to 2000 and NAICS data is presented for 2001 and 2002. The municipal level data previously collected is presented here, but may be discontinued if new updates are not available in the future. It must be emphasized that there are limitations to municipal data due to disclosure regulations.<sup>13</sup> Therefore, Pinelands and Non-Pinelands aggregates are approximations, not exact counts. County level data is subjected to the same limitations, but to a lesser degree. Municipal data is not comparable to the county data due to the effects of data suppression (i.e. the sum of the municipal parts does not equal the county whole).

## Summary of Previous Findings

### Employment

The Pinelands region outpaced the Non-Pinelands region and the state for growth in employment between 1993 and 1999, but most of the growth occurred between 1993 and 1994. Employment in the Pinelands grew by 17.3% during that period, compared to 14.3% for the state and 8.8% for the Non-Pinelands region. Growth in employment steadily increased for all regions, except for a small decrease in the Non-Pinelands region between 1998 and 1999 due to job cuts in the manufacturing sector.

<sup>12</sup> Because government employment is not included in all data sets, any such data have been omitted to facilitate comparisons over the entire monitoring period. Federal, state, local, and postal service jobs are therefore not represented in the data shown. This exclusion is in addition to the types of employment not tracked by the New Jersey Department of Labor, which includes "self-employed and unpaid family workers or certain agricultural and in-home domestic workers." As used in this report, the term "employment" refers to the modified private employment figures.

<sup>13</sup> The information derived in this analysis was obtained from the records of the Covered Employment system, which does not release data in cases where it has the possibility of providing information about a single employer or employment location. Data are "suppressed" when the system contains information on three or fewer employers, or when one employer represents 80% or more of the market. While it is unlikely that data suppression has had a large effect at the county level, it is likely to affect data at the municipal level, especially when the data are further broken down by industrial sector.

The largest sectors of employment in the Pinelands are services, retail, and construction, whereas the largest sectors for the state and Non-Pinelands region are services, retail, and manufacturing. While service employment is greater than retail employment in the Pinelands, employment in the Pinelands is weighted more towards the retail sector and less towards the service sector compared to the state and the Non-Pinelands region. Employment shifts between different sectors was minimal in the Pinelands over the course of the monitoring period.

#### *Establishments*

The Pinelands region outpaced the Non-Pinelands region for growth in establishments during the monitoring period, but state growth outpaced Pinelands growth between 1998 and 1999. The number of establishments in the Pinelands increased by 27.1%, compared to an increase of 29.1% for the state and 15.5% for the Non-Pinelands.

The sectors with the largest number of establishments are synonymous with the sectors of largest employment. Construction establishments comprise a larger percentage of total establishments in the Pinelands compared to the other regions. The percentage of total establishments in the agricultural sector is also larger in the Pinelands, while the percentage of service and retail sectors are fairly close between all three regions.

#### *Wages*

The Pinelands region outpaced the state and the Non-Pinelands region for growth in average annual wages during the monitoring period, but the average annual wage in the Pinelands is still slightly lower than the Non-Pinelands wage and is considerably lower than the state wage. The highest paying sectors in the Pinelands are wholesale, finance-insurance-real estate, and construction. The highest paying sectors in the state are finance-insurance-real estate, transportation-communications-utilities, and wholesale, and the highest paying in the Non-Pinelands region are manufacturing, wholesale, and construction. Agricultural wages are much higher in the Pinelands compared to the Non-Pinelands region, while manufacturing wages are much lower in the Pinelands compared to the Non-Pinelands.

<b>Employment</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>Change</b>
State	2,872,496	2,928,869	2,972,128	3,006,549	3,079,798	3,160,385	3,283,702	14.3%
Pinelands	102,031	108,449	111,619	113,925	116,433	118,607	119,683	17.3%
Non Pinelands	550,063	564,997	574,319	582,399	595,244	600,769	598,217	8.8%
<b>Establishments</b>								
State	218,159	218,953	223,091	229,512	238,105	241,165	281,666	29.1%
Pinelands	9,346	9,561	9,864	10,297	10,982	11,320	11,882	27.1%
Non Pinelands	38,149	38,766	39,684	40,495	42,243	42,952	44,051	15.5%
<b>Wages</b>								
State	\$42,489	\$37,040	\$42,741	\$43,674	\$39,731	\$41,345	\$42,176	-0.7%
Pinelands	\$28,747	\$28,670	\$27,288	\$27,848	\$28,660	\$29,569	\$30,258	5.3%
Non Pinelands	\$30,481	\$30,663	\$29,881	\$30,364	\$30,645	\$31,484	\$31,960	4.9%

Employment Per Sector as a Percentage of Total  
Employment 1999

<b>Sector</b>	<b>New Jersey</b>	<b>Pinelands</b>	<b>Non-Pinelands</b>
Agriculture	1%	3%	2%
Mining	0%	0%	0%
Construction	4%	10%	4%
Manufacturing	14%	8%	12%
Transportation, Communication, & Utilities	8%	7%	5%
Wholesale	9%	6%	6%
Retail	19%	29%	24%
Finance, Insurance, & Real Estate	8%	6%	6%
Services	35%	31%	41%
Unclassified	2%		

## Update

Although Pinelands and Non-Pinelands trends cannot be effectively distinguished using county level data, county level data is discussed below for informational purposes due to the lack of current municipal data. Broad aggregates of employment, establishments, and wages are discussed, with some additional analysis regarding employment. The 2004 Municipal Factbook also provides a breakdown of business establishments by sector for each of the Pinelands municipalities. For more detailed information about the New Jersey labor market, please consult The New Jersey Department of Labor's website. The DOL provides detailed information and analysis of employment trends for all counties in New Jersey.

## *Employment*

Employment in the eight-county region of Southern New Jersey grew by 18.3% between 1991 and 2002, from 621,000 to 734,000 (Table E3a). The Southern New Jersey growth rate was slightly higher than the rate of growth for the state, which was 15.7% for the same period (from 2.83 million to 3.28 million). Employment in Southern New Jersey accounted for 22% of the state's total employment in 1991 and in 2002. Change in employment differed by county. Employment in Burlington, Gloucester, and Ocean grew by over 30%, and employment in Cape May grew by 20%. Employment in Atlantic and Camden grew more slowly, by 7% and 9% respectively, while Cumberland County experienced no change in employment. The Non-Pinelands county of Salem was the only county that suffered a loss of employment (a decline of 21%), due largely to job cuts in the manufacturing sector.

Employment was examined in greater detail by analyzing employment composition in 2002 by NAICS sectors (Tables E3d & E3e). The largest employment sectors in New Jersey in 2002 were Retail (14% of total employment), Healthcare (13%), and Manufacturing (11%). Retail (17%) and Healthcare (16%) were also the two largest employment sectors in Southern New Jersey, but Accommodation and Food Service (10%) was the third largest sector. All of the Southern New Jersey counties had Retail and Healthcare as two of the top three employment sectors. Atlantic, Cape May, and Ocean had Accommodation and Food Service among the top three, while the remaining five counties had Manufacturing among the top three. Atlantic County stands out from the other counties, as almost half of the county's employment base is in the Accommodation and Food Service Sector, which is tied to the casino industry. In the other seven counties, none of the employment sectors is large enough to account for even one-third of the county total.

In terms of the percentage of total employment, Salem and Cumberland have the largest percentage in the agricultural category with approximately 4%. In terms of total number of employees, Atlantic and Gloucester are significant employers in the agricultural sector. Burlington County leads in Finance and Insurance (9% of the total), while Camden has the largest percentage of employees in Professional and Technical Services and Administrative and Waste Services. Employment figures for the Mining and Utilities sectors have been suppressed under disclosure regulations due to the small number of establishments (less than three). Although employment figures are not available, sand and gravel mining are known to be important industries, particularly in the Pinelands. The Utilities sector is also a significant employer in Salem County.

## *Establishments*

The number of business establishments in Southern New Jersey grew from 43,640 in 1991 to 53,500 in 2002, an increase of 22.6% (Table E3b). This rate of increase was slower than the state's increase in establishments for the same period, which was an increase of 32.4% (from 191,000 establishments in 1991 to 252,850 in 2002). The Southern New Jersey counties that led in employment growth also led in establishment growth. Camden and Salem Counties were exceptions, as growth in establishments in both counties was significantly higher than their employment growth.

## *Wages*

The average annual wage in Southern New Jersey, after adjusting for inflation, grew by only 5.6% between 1991 and 2002 (Table E3c). The annual average inflation-adjusted wage was \$32,590 in 1991 and \$34,430 in 2002, an increase of \$1,840. The average annual wage for the state increased more quickly at 14.6%, growing from \$40,180 in 1991 to \$46,050 in 2002. The gap between the Southern New Jersey wage and the state wage increased from \$7,600 in 1999 to \$11,620 in 2002, an increase of over 50%. Salem and Burlington counties had the highest average annual wage (over \$40,000) while Cape May had the lowest wage (\$26,000). Burlington county had the largest percent increase in annual wage between 1991 and 2002 with an increase of 14%, while Salem and Atlantic counties had the lowest percent change with a 1% increase. Wages in the remaining five counties grew between 4% and 9%.

Table E3a County Private Sector Employment

County	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Change
Atlantic	112,525	111,791	113,476	116,307	116,500	117,772	119,816	121,158	121,707	121,119	121,152	120,733	7.3%
Burlington	118,820	118,679	121,807	125,979	131,266	135,619	141,175	147,181	151,691	152,700	159,309	162,231	36.5%
Camden	154,208	149,436	151,416	156,719	162,748	162,964	165,755	169,553	169,511	166,157	166,567	167,576	8.7%
Cape May	26,223	26,899	26,990	27,463	27,226	27,697	28,635	29,149	29,579	29,270	30,985	31,667	20.8%
Cumberland	44,719	43,823	42,501	43,525	44,180	44,051	44,842	44,548	44,360	43,819	44,335	44,700	0.0%
Gloucester	55,451	57,386	58,462	60,910	65,966	66,581	67,923	69,730	71,711	72,329	74,182	75,464	36.1%
Ocean	86,376	87,025	91,843	96,057	98,607	100,073	101,951	102,875	103,708	106,008	110,190	114,037	32.0%
Salem	22,472	22,573	23,239	22,454	18,666	18,677	17,727	17,192	17,759	14,918	17,434	17,774	-20.9%
SJ Total	620,794	617,612	629,734	649,414	665,159	673,434	687,824	701,386	710,026	706,320	724,154	734,182	18.3%

Table E3b County Private Sector Establishments

County	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Change
Atlantic	5,465	5,687	5,721	5,753	5,878	5,988	6,146	6,322	6,551	5,757	6,031	6,118	11.9%
Burlington	7,825	8,298	8,407	8,578	9,326	9,532	9,849	10,216	10,548	9,366	10,126	10,403	32.9%
Camden	10,363	10,767	10,908	11,034	12,089	12,282	12,666	12,957	13,235	11,601	12,303	12,452	20.2%
Cape May	3,560	3,784	3,765	3,812	3,784	3,851	3,982	4,073	4,232	3,668	3,965	3,982	11.9%
Cumberland	2,855	2,892	2,921	2,925	2,973	3,011	3,092	3,166	3,238	2,879	2,948	3,098	8.5%
Gloucester	4,280	4,523	4,661	4,730	5,076	5,184	5,339	5,523	5,707	5,052	5,243	5,463	27.6%
Ocean	8,124	8,594	8,807	9,011	9,467	9,787	10,164	10,537	10,996	9,627	10,372	10,701	31.7%
Salem	1,168	1,249	1,241	1,254	1,223	1,226	1,274	1,284	1,318	1,121	1,224	1,282	9.8%
SJ Total	43,640	45,794	46,431	47,097	49,816	50,861	52,512	54,078	55,825	49,071	52,212	53,499	22.6%

Table E3c County Private Sector Average Annual Wages

County	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Change
Atlantic	\$31,803	\$32,983	\$32,552	\$32,256	\$31,795	\$32,037	\$31,652	\$31,751	\$31,350	\$31,291	\$31,901	\$32,172	1.2%
Burlington	\$35,434	\$37,129	\$36,026	\$35,883	\$36,097	\$36,674	\$37,217	\$38,777	\$39,447	\$40,025	\$40,100	\$40,495	14.3%
Camden	\$34,796	\$36,007	\$35,149	\$34,912	\$34,705	\$34,966	\$35,386	\$35,767	\$36,312	\$36,311	\$36,620	\$37,296	7.2%
Cape May	\$24,607	\$24,740	\$24,398	\$24,678	\$24,242	\$24,248	\$24,272	\$24,643	\$24,983	\$25,087	\$25,067	\$25,753	4.7%
Cumberland	\$30,609	\$31,136	\$31,027	\$30,831	\$30,550	\$30,651	\$30,902	\$31,799	\$31,465	\$31,543	\$31,354	\$32,049	4.7%
Gloucester	\$32,280	\$32,832	\$32,234	\$32,062	\$31,665	\$32,000	\$32,652	\$33,217	\$33,412	\$33,151	\$33,403	\$33,623	4.2%
Ocean	\$28,004	\$28,846	\$28,575	\$28,175	\$27,879	\$28,038	\$28,257	\$29,544	\$29,724	\$30,313	\$30,076	\$30,519	9.0%
Salem	\$43,187	\$45,724	\$44,099	\$44,368	\$44,801	\$45,871	\$44,742	\$43,430	\$42,522	\$43,105	\$42,321	\$43,498	0.7%
SJ Average	\$32,590	\$33,675	\$33,007	\$32,896	\$32,717	\$33,061	\$33,135	\$33,616	\$33,652	\$33,853	\$33,855	\$34,426	5.6%

Table E3d 2002 County Private Sector Employment by NAICS Sector

Sector	NAICS	Atlantic	Burlington	Camden	Cape May	Cumberland	Gloucester	Ocean	Salem	South Jersey
11	Agriculture/Forestry/Fishing/Hunting	1,443	765	181	317	1,682	1,149	159	589	6,285
21	Mining	.	.	.	.	.	.	103	.	103
22	Utilities	733	.	424	.	.	.	1,120	.	2,277
23	Construction	6,177	7,481	9,115	2,290	2,136	5,882	7,922	1,074	42,077
31-33	Manufacturing	4,413	20,291	17,849	941	10,538	9,716	6,378	3,204	73,330
42	Wholesale Trade	2,550	11,413	10,757	475	2,039	7,438	3,326	277	38,275
44-45	Retail Trade	14,589	26,597	24,869	6,639	7,742	16,013	26,190	2,268	124,907
48-49	Transportation and Warehousing	2,187	7,796	6,799	501	2,047	1,986	2,212	652	24,180
51	Information	1,388	3,346	3,787	.	993	1,132	1,451	.	12,097
52	Finance and Insurance	2,193	14,720	7,099	1,056	1,593	1,874	3,951	479	32,965
53	Real Estate and Rental and Leasing	1,483	3,649	2,693	861	480	943	2,224	194	12,527
54	Professional and Technical Services	4,631	10,234	13,376	1,000	1,113	3,530	5,741	399	40,024
55	Management of Co. and Enterprises	578	1,745	1,165	138	377	71	242	.	4,316
56	Administrative and Waste Services	3,991	10,700	12,930	883	1,375	5,119	4,475	.	39,473
61	Educational Services	719	1,748	3,403	225	353	495	2,001	.	8,944
62	Health Care and Social Assistance	13,994	21,058	30,109	3,827	7,314	9,387	24,800	2,904	113,393
71	Arts, Entertainment, and Recreation	1,736	1,847	.	1,703	430	984	4,938	176	11,814
72	Accommodation and Food Services	54,862	11,639	11,962	8,422	2,592	6,375	11,384	1,364	108,600
81	Other Services, Except Public Admin	2,991	5,670	6,930	1,367	1,336	2,904	4,584	382	26,164
99	Unclassified Entities	.	834	1,660	319	335	.	839	158	4,145
	PRIVATE SECTOR TOTAL	120,733	162,231	167,576	31,667	44,700	75,464	114,037	17,774	734,182

Table E3e 2002 County Private Sector Employment by NAICS Sector as a % of Total Employment

Sector	NAICS DESCRIPTION	Atlantic	Burlington	Camden	Cape May	Cumberland	Gloucester	Ocean	Salem	South Jersey
11	Agriculture/Forestry/Fishing/Hunting	1.2%	0.5%	0.1%	1.0%	3.8%	1.5%	0.1%	4.2%	0.9%
21	Mining	.	.	.	.	.	.	0.1%	.	0.0%
22	Utilities	0.6%	.	0.3%	.	.	.	1.0%	.	0.3%
23	Construction	5.1%	4.6%	5.5%	7.4%	4.8%	7.8%	6.9%	7.6%	5.8%
31-33	Manufacturing	3.7%	12.6%	10.8%	3.0%	23.7%	13.0%	5.6%	22.7%	10.1%
42	Wholesale Trade	2.1%	7.1%	6.5%	1.5%	4.6%	9.9%	2.9%	2.0%	5.3%
44-45	Retail Trade	12.1%	16.5%	15.1%	21.4%	17.4%	21.4%	23.0%	16.1%	17.2%
48-49	Transportation and Warehousing	1.8%	4.8%	4.1%	1.6%	4.6%	2.6%	1.9%	4.6%	3.3%
51	Information	1.2%	2.1%	2.3%	.	2.2%	1.5%	1.3%	.	1.7%
52	Finance and Insurance	1.8%	9.1%	4.3%	3.4%	3.6%	2.5%	3.5%	3.4%	4.5%
53	Real Estate and Rental and Leasing	1.2%	2.3%	1.6%	2.8%	1.1%	1.3%	2.0%	1.4%	1.7%
54	Professional and Technical Services	3.8%	6.3%	8.1%	3.2%	2.5%	4.7%	5.0%	2.8%	5.5%
55	Management of Co. and Enterprises	0.5%	1.1%	0.7%	0.4%	0.8%	0.1%	0.2%	.	0.6%
56	Administrative and Waste Services	3.3%	6.6%	7.8%	2.9%	3.1%	6.8%	3.9%	.	5.4%
61	Educational Services	0.6%	1.1%	2.1%	0.7%	0.8%	0.7%	1.8%	.	1.2%
62	Health Care and Social Assistance	11.6%	13.0%	18.2%	12.4%	16.4%	12.5%	21.7%	20.6%	15.6%
71	Arts, Entertainment, and Recreation	1.4%	1.1%	.	5.5%	1.0%	1.3%	4.3%	1.2%	1.6%
72	Accommodation and Food Services	45.5%	7.2%	7.2%	27.2%	5.8%	8.5%	10.0%	9.7%	15.0%
81	Other Services, Except Public Admin	2.5%	3.5%	4.2%	4.4%	3.0%	3.9%	4.0%	2.7%	3.6%
99	Unclassified Entities	.	0.5%	1.0%	1.0%	0.8%	.	0.7%	1.1%	0.6%

## Retail Sales / Establishments

Updated

## Census of Retail Trade 1992, 1997

- Data from the 2002 Census of Retail Trade will become available in 2004 and 2005.

## Per Capita Retail Sales

COUNTY	1997 Per Capita Sales	1992 Per Capita Sales	Change
Atlantic	\$12,231	\$10,264	19.2%
Burlington	\$12,123	\$10,045	20.7%
Camden	\$10,509	\$8,304	26.5%
Cape May	\$11,284	\$10,970	2.9%
Cumberland	\$10,006	\$8,275	20.9%
Gloucester	\$11,418	\$10,118	12.8%
Ocean	\$11,273	\$9,171	22.9%
Salem	\$7,074	\$6,395	10.6%
South Jersey	\$11,173	\$9,291	20.3%
State	\$11,406	\$9,738	17.1%
Pinelands <sup>14</sup>	\$9,342	\$7,593	23%
Non-Pinelands	\$14,007	\$12,280	14.1%

**Description:** The Census of Retail Trade is conducted every 5 years as part of the Economic Census. The Census Bureau began using a different industrial classification system in 1997, with the largest change being the removal of the eating and drinking establishments classification from the 1997 data. To adjust for this, sales for eating and drinking establishments were removed from the 1992 data. The resulting numbers are suitable for a rough comparison.<sup>15</sup> Values are adjusted for inflation and shown in 2003 dollars, and sales are presented per capita, based on 1992 and 1997 population estimates.

**Unit of Analysis:** Retail sales data are obtained at the county level and aggregated to yield totals for the southern eight-county region and the entire State (see Appendix for Pinelands acreage by county). Partial data for the Pinelands and Non-Pinelands region are available as the Census also collects data at the "place" level, which includes the most populous municipalities (115 out of 202 municipalities are available, 28 in the Pinelands and 87 outside the Pinelands).

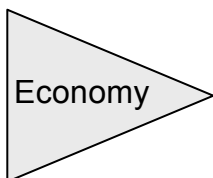
#### Summary of Previous Findings

Per capita retail sales rose in Southern New Jersey between 1992 and 1997, with an increase of 20.3%. The change in sales was generally more significant in the more densely populated counties, while the southern counties experienced smaller increases. Per capita sales are higher for the state as a whole compared to Southern New Jersey, but South Jersey sales have increased at a faster rate. Per capita retail sales for the 28 Pinelands municipalities increased by 23%, while sales for the 87 Non-Pinelands municipalities rose by 14.1%.

Another useful indicator of retail health is the number of retail establishments per resident. This indicates the presence of commercial ratables as well as relative shopping convenience. According to the New Jersey Department of Labor Employer Listing Database, there were 10,683 retail establishments in Southern New Jersey in 2001. Per capita, there was one store for every 212 residents. There were 2,147 establishments in the Pinelands and 8,537 in the Non-Pinelands region. There were fewer stores per person in the Pinelands (1 store for every 287 residents) compared to the Non-Pinelands (1 store for every 193 residents).

<sup>14</sup> The categories for Pinelands and Non-Pinelands represent the number of municipalities for which the data is available. Data is available for 28 of the 47 Pinelands municipalities, and 87 of the 155 Non-Pinelands municipalities.

<sup>15</sup> Other noteworthy changes include the reclassification of pawn shops to the Finance and Insurance sector, and of bakeries to the Manufacturing sector, and the addition of Wholesale Trade establishments that have facilities which cater to the general public. The numbers in this report have not been adjusted to reflect these changes.



5

# Assessed Farmland Acreage

☒ Updated

## New Jersey Agricultural Statistics Service 1980 – 2001\*

\* Data from 1985 is not available.

- The Pinelands share of South Jersey's total assessed farmland acreage has been increasing.

### Average Assessed Acres of Farmland

	Avg Acres 1980 - 1984	Avg Acres 1986 – 1991	Avg Acres 1992 – 1996	Avg Acres 1997 – 2001
Pinelands	185,405 (34%)	184,377 (35%)	195,969 (36%)	212,610 (39%)
Non-Pinelands	353,915 (66%)	344,557 (65%)	341,976 (64%)	333,036 (61%)
South Jersey	539,320 (100%)	528,934 (100%)	537,945 (100%)	545,646 (100%)

**Description:** Agriculture is recognized in federal and state Pinelands legislation as an industry of special significance and, therefore, receives a more detailed examination using three variables. The first variable, farmland assessed acreage, is compiled from FA-1 forms, which are completed by landowners and indicate acreage devoted to various crops and pasture as well as livestock. To qualify for farmland assessment, a landowner must have a minimum of five contiguous acres devoted to agricultural or horticultural use, and generate a minimum of \$500 in sales (plus an additional \$5 per acre for every acre of agricultural land beyond the first five acres or \$0.50 per acre for every acre of woodland land beyond the first five acres).

**Unit of Analysis:** Farmland assessment data is compiled at the municipal level and aggregated to examine Pinelands and county totals.

### Update

In addition to an update for 2001, paper records were obtained and data was extracted for the years 1980 to 1984. Five or six year averages for Pinelands and Non-Pinelands municipalities were calculated (delineations were created using the natural breaks method) in order to limit random variation that affects the data when it is examined on a yearly basis. The average acreage has been increasing in the Pinelands and decreasing in the Non-Pinelands. As a result, the Pineland's share of total Southern New Jersey assessed farmland acreage has risen from 34% in the early 1980s to 39% in the late 1990s.

Burlington County has the largest amount of farm acreage in the Pinelands, while the overwhelming majority of Atlantic, Camden, and Ocean Counties' assessed farmland falls inside the Pinelands. The amount of assessed acreage in the Pinelands has increased over the twenty-one year period for all counties except for Atlantic and Burlington which had no change. The overall amount of assessed acres in the Non-Pinelands region decreased, particularly in Burlington, Camden, Cape May, and Gloucester counties.

Table E5 Farmland Assessed Acreage

<b>Average Farmland Assessed Acreage in the Pinelands Municipalities</b>					
County	1980-1984 Average	1986-1991 Average	1992-1996 Average	1997- 2001 Average	Change between 80-84 and 97-01
Atlantic	42,219	40,338	41,443	42,153	0%
Burlington	91,393	86,956	90,728	91,446	0%
Camden	10,402	10,156	10,372	11,002	6%
Cape May	5,478	7,500	7,171	7,048	29%
Cumberland	4,229	7,802	5,724	11,405	170%
Gloucester	19,568	19,265	22,364	22,338	14%
Ocean	12,117	12,360	18,169	27,219	125%
<b>Average Farmland Assessed Acreage in the Non-Pinelands Municipalities</b>					
County	1980-1984 Average	1986-1991 Average	1992-1996 Average	1997- 2001 Average	Change between 80-84 and 97-01
Atlantic	81	226	291	277	242%
Burlington	76,415	68,314	64,762	60,669	-21%
Camden	4,989	3,498	2,779	2,318	-54%
Cape May	7,520	6,695	5,468	5,348	-29%
Cumberland	78,284	77,674	83,651	84,352	8%
Gloucester	66,414	63,548	60,071	56,139	-15%
Ocean	937	815	724	696	-26%
Salem	119,275	123,787	124,230	123,236	3%
<b>Percentage of Total Average Farmland Assessed Acreage in the Pinelands Municipalities</b>					
County	1980-1984 Average	1986-1991 Average	1992-1996 Average	1997- 2001 Average	Change between 80-84 and 97-01
Atlantic	100%	99%	99%	99%	-1%
Burlington	54%	56%	58%	60%	6%
Camden	68%	74%	79%	83%	15%
Cape May	42%	53%	57%	57%	15%
Cumberland	5%	9%	6%	12%	7%
Gloucester	23%	23%	27%	28%	6%
Ocean	93%	94%	96%	98%	5%

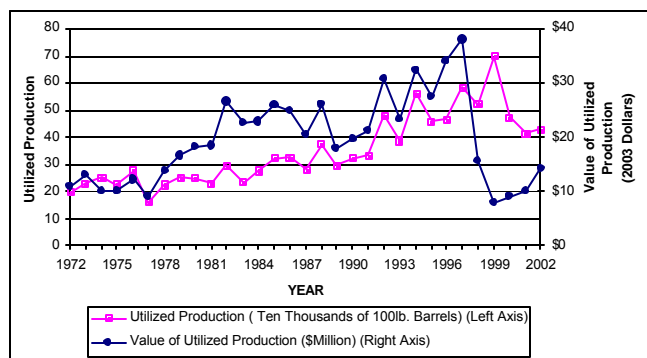
# Cranberry and Blueberry Production

NJ Agricultural Statistics Service 1972 - 2002

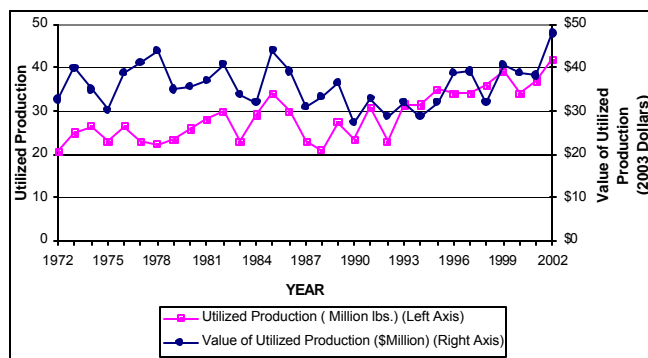
☒ Updated

- Cranberry and blueberry prices rose in 2002.

NJ Cranberry Production, Value and Volume



NJ Blueberry Production, Value and Volume



**Description:** Agriculture is recognized in federal and state Pinelands legislation as an industry of special significance and, therefore, receives a more detailed examination using three variables. The second indicator, *cranberry and blueberry production*, measures a critical component of Pinelands agriculture. Cash values are expressed in 2003 dollars.

**Unit of Analysis:** Cranberry and blueberry data are only available at the State level, but because these crops are found almost exclusively within the Pinelands, statewide figures provide sufficient information for the purposes of this analysis.

## Summary of Previous Findings

Examination of two key Pinelands crops, cranberries and blueberries, revealed that cranberry production grew significantly from 1972 to 1996 but plummeted precipitously from 1997 to 1999 due to increased production (growers developed more efficient bogs to take advantage of good cranberry prices) without increased demand. Nationally, increased production combined with steady demand created a surplus of frozen cranberries. Increased foreign production of cranberries also may have been a contributing factor. A small recovery in cranberry farming began in 2000, which may have been aided by actions such as nationwide production cutbacks and USDA surplus. Production has decreased by 45% between 1999 and 2001. The value of production increased slightly, growing five percent between 1999 and 2001, while the price of cranberries increased more substantially, climbing from \$11.19 per 100 lbs in 1999 to \$24.02 per 100 lbs in 2001, an increase of 79%. Despite this increase, prices remain well below their peak of \$73 per 100 lbs in 1996.

The value of utilized production for blueberries remained fairly steady with yearly fluctuations over the period 1972-2001. Overall production decreased by 5% between 1999 and 2001. The value of production decreased consistently over this two-year period, falling by 6%, while the sale price fell by 1%. (Figure E6). Like cranberries, the blueberry market has suffered from a combination of increasing production and steady demand. To respond to poor market conditions, the blueberry industry created a blueberry council to increase promotional activities and strengthen demand for blueberries.

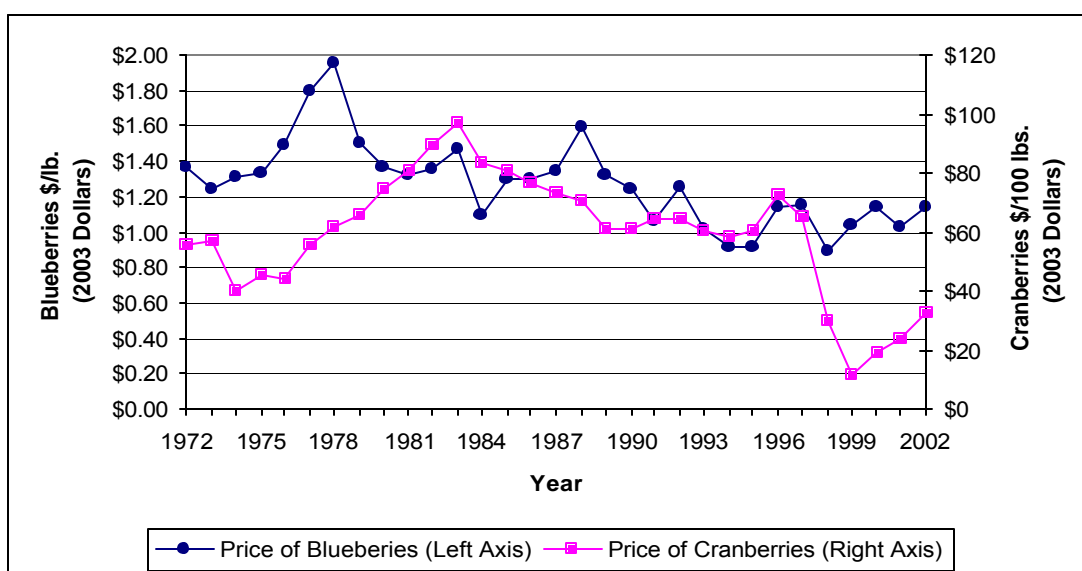
## Update

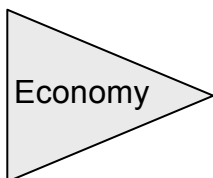
The recovery in cranberry farming gained strength in 2003 as the sale price of cranberries increased by 37% to \$32.84 per 100 lbs. Production increased by 4% while the value of utilized production grew by 43%, to \$14.1 million. Blueberries also did well in 2003, as the sale price for a pound went up eleven cents to \$1.14, an increase of 11%. Utilized production increased by 14% and the value of production increased by 27%, to \$48 million.

Table E6 Sales of New Jersey Farm Products

Year	Sales			Annual % Change		
	Cranberry	Blueberry	New Jersey	Cranberry	Blueberry	New Jersey
1992	30,692	28,711	849,471			
1993	23,275	31,944	896,436	-24.2%	11.3%	5.5%
1994	24,916	28,904	949,086	7.1%	-9.5%	5.9%
1995	27,497	32,099	923,890	10.4%	11.1%	-2.7%
1996	33,955	38,836	941,527	23.5%	21.0%	1.9%
1997	37,889	39,084	918,534	11.6%	0.6%	-2.4%
1998	15,518	32,118	915,843	-59.0%	-17.8%	-0.3%
1999	7,834	40,542	820,167	-49.5%	26.2%	-10.4%
2000	8,999	38,699	904,624	14.9%	-4.5%	10.3%
2001	9,898	38,199	870,349	10.0%	-1.3%	-3.8%
2002	14,119	48,011	878,061	42.7%	25.7%	0.9%

Figure E6 Cranberry and Blueberry Prices





# Census of Agriculture



## US Census of Agriculture 1982, 1987, 1992, 1997

- Data from the 2002 Agricultural Census will become available in 2004 and 2005.

**Description:** Agriculture is recognized in federal and state Pinelands legislation as an industry of special significance and, therefore, receives a more detailed examination using three variables. The third indicator is actually a collection of indicators from the Agricultural Census, which is taken every five years.

**Unit of Analysis:** Agricultural Census data is limited to the county level and consequently inside/outside Pinelands trends cannot be distinguished.

### Summary of Previous Findings

The seven Pinelands counties contained nearly 34% (287,000 acres) of the roughly 847,000 farm acres reported for New Jersey in the 1992 Census of Agriculture. From 1982-1992, the State lost 7.5% of its farm base, with Pinelands counties experiencing a 9.5% decline and Non-Pinelands counties experiencing a 6.4% loss. From 1982-1997, the State lost 9.1% of its farm base, with Pinelands counties experiencing an 8.7% decline and Non-Pinelands counties experiencing a 9.5% loss. However, from 1992-1997, farm acres in Pinelands counties increased by roughly 1% to 289,435 acres, almost 35% of the State's 832,600 farm acres. Cape May County continued to have high rates of decline in its farm base from 1992 to 1997. In contrast, Atlantic, Burlington, Camden and Ocean Counties experienced gains in farmland acreage over the same period.

The number of farms from 1992-1997 remained relatively constant for Pinelands counties, Non-Pinelands counties and the State. The average farm size increased slightly for Pinelands counties from 1992-1997. However, the average farm size for Non-Pinelands counties and the State continued to decrease over the same period.

With respect to agricultural sales, Pinelands counties contributed nearly 48% of total sales statewide in 1992. Similarly, Pinelands counties contributed 45% of total agricultural sales statewide in 1982 while accounting for only 35% of farm acreage. From 1992-1997 agricultural sales in Pinelands counties increased 18.4% while agricultural sales in Non-Pinelands counties increased by 10.7%. Pinelands counties contributed 49.4% of total sales statewide in 1997; a high value relative to its 34.8% share of total State agricultural acreage.

In terms of net cash returns, farms in the Pinelands counties accounted for 57.4% of statewide net returns in 1997, up 3% from 1992. Burlington County's share of statewide returns increased from 11% in 1992 to 13.5% in 1997. Comparison of total net cash returns over the monitoring period (1987-1997) clearly demonstrates the influence of economic conditions on the State's farm sector. The effect of the recession can be seen as statewide returns dropped 24.2% over from 1987-1992, with Non-Pinelands counties experiencing a steeper decline of 32.4% and Pinelands counties a more moderate decline of 15.6%. Aggregate trends, however, were shown to be misleading with the Pinelands county returns dropping 29% when Cumberland County's contribution was removed. The economic upswing can be seen as statewide returns increased 60.5% from 1992-1997, with Pinelands counties experiencing a greater increase of 69.6% and Non-Pinelands counties a more moderate increase of 49.8%.

Net cash return per farm in Pinelands counties also increased at a faster rate than the remainder of the State and remained at overall higher levels. Net cash return per farm in Pinelands counties increased 70.1% from 1992-1997, while Non-Pinelands counties increased by 49.3% over the same period.

More than half of New Jersey's farms lost money in 1987, 1992, and 1997 while the proportion of farms losing money grew each year. Almost 55% of farmers statewide lost money in 1997, up 1.5% from 1992. However, farmers in Pinelands counties continued to fare better than farmers in Non-Pinelands counties. The percentage of farmers in Pinelands counties that lost money in 1997 was 45.6%, down almost 2% from 1992.

**Table E7a Land in Farming**

County	Land in Farming (acres)				Percentage Change			
	1982	1987	1992	1997	'82-'87	'87-'92	'92-'97	'82-'97
Atlantic	27,504	29,423	29,606	31,050	7.0%	0.6%	4.9%	12.9%
Burlington	112,689	103,224	97,186	103,667	-8.4%	-5.8%	6.7%	-8.0%
Camden	11,690	10,033	7,799	9,007	-14.2%	-22.3%	15.5%	-23.0%
Cape May	13,992	13,553	11,644	9,669	-3.1%	-14.1%	-17.0%	-30.9%
Cumberland	75,189	72,406	68,627	66,288	-3.7%	-5.2%	-3.4%	-11.8%
Gloucester	66,133	62,128	61,748	58,373	-6.1%	-0.6%	-5.5%	-11.7%
Ocean	9,960	8,820	10,365	11,381	-11.4%	17.5%	9.8%	14.3%
<b>Pinelands Counties</b>	<b>317,157</b>	<b>299,587</b>	<b>286,975</b>	<b>289,435</b>	<b>-5.5%</b>	<b>-4.2%</b>	<b>0.9%</b>	<b>-8.7%</b>
Non-Pinelands Counties	599,174	594,839	560,620	542,548	-0.7%	-5.8%	-3.2%	-9.5%
State Total	916,331	894,426	847,595	832,600	-2.4%	-5.2%	-1.8%	-9.1%

County	Number of Farms				Percentage Change			
	1982	1987	1992	1997	'82-'87	'87-'92	'92-'97	'82-'97
Atlantic	379	384	391	424	1.3%	1.8%	8.4%	11.9%
Burlington	743	834	816	857	12.2%	-2.2%	5.0%	15.3%
Camden	152	177	188	211	16.4%	6.2%	12.2%	38.8%
Cape May	117	124	163	149	6.0%	31.5%	-8.6%	27.4%
Cumberland	609	612	609	573	0.5%	-0.5%	-5.9%	-5.9%
Gloucester	687	681	704	652	-0.9%	3.4%	-7.4%	-5.1%
Ocean	203	206	233	235	1.5%	13.1%	0.9%	15.8%
<b>Pinelands Counties</b>	<b>2,890</b>	<b>3,018</b>	<b>3,104</b>	<b>3,101</b>	<b>4.4%</b>	<b>2.8%</b>	<b>-0.1%</b>	<b>7.3%</b>
Non-Pinelands Counties	5,387	6,014	5,975	6,000	11.6%	-0.6%	0.4%	11.4%
State Total	8,277	9,032	9,079	9,101	9.1%	0.5%	0.2%	10.0%

County	Average Farm Size (acres)				Percentage Change			
	1982	1987	1992	1997	'82-'87	'87-'92	'92-'97	'82-'97
Atlantic	73	77	76	73	5.6%	-1.2%	-3.3%	0.9%
Burlington	152	124	119	121	-18.4%	-3.8%	1.6%	-20.2%
Camden	77	57	41	43	-26.3%	-26.8%	2.9%	-44.5%
Cape May	120	109	71	65	-8.6%	-34.6%	-9.2%	-45.7%
Cumberland	123	118	113	116	-4.2%	-4.8%	2.7%	-6.3%
Gloucester	96	91	88	90	-5.2%	-3.9%	2.1%	-7.0%
Ocean	49	43	44	48	-12.7%	3.9%	8.9%	-1.3%
<b>Pinelands Counties</b>	<b>110</b>	<b>99</b>	<b>92</b>	<b>93</b>	<b>-9.5%</b>	<b>-6.9%</b>	<b>1.0%</b>	<b>-15.0%</b>
Non-Pinelands Counties	111	99	94	90	-11.1%	-5.1%	-3.6%	-18.7%
State Total	111	99	93	91	-10.5%	-5.7%	-2.0%	-17.4%

**Table E7b      Agricultural Sales**  
(2003 Dollars)

	<b>Agricultural Sales (\$1,000s)</b>				<b>Percentage Change</b>				<b>Agricultural Sales as % of New Jersey</b>			
<b>County</b>	<b>1982</b>	<b>1987</b>	<b>1992</b>	<b>1997</b>	<b>'82-'87</b>	<b>'87-'92</b>	<b>'92-'97</b>	<b>'82-'97</b>	<b>1982</b>	<b>1987</b>	<b>1992</b>	<b>1997</b>
Atlantic	66,574	60,551	57,164	73,002	-9.0%	-5.6%	27.7%	9.7%	8.0%	7.5%	8.2%	9.1%
Burlington	96,719	90,218	84,952	100,683	-6.7%	-5.8%	18.5%	4.1%	11.6%	11.2%	12.1%	12.6%
Camden	19,446	12,875	10,763	20,097	-33.8%	-16.4%	86.7%	3.4%	2.3%	1.6%	1.5%	2.5%
Cape May	8,649	7,478	7,387	7,829	-13.5%	-1.2%	6.0%	-9.5%	1.0%	0.9%	1.1%	1.0%
Cumberland	95,742	94,632	96,044	108,294	-1.2%	1.5%	12.8%	13.1%	11.5%	11.7%	13.7%	13.5%
Gloucester	81,257	75,385	71,810	77,031	-7.2%	-4.7%	7.3%	-5.2%	9.7%	9.4%	10.2%	9.6%
Ocean	7,950	7,989	6,640	9,397	0.5%	-16.9%	41.5%	18.2%	1.0%	1.0%	0.9%	1.2%
<b>Pinelands Counties</b>	<b>376,337</b>	<b>349,128</b>	<b>334,759</b>	<b>396,334</b>	<b>-7.2%</b>	<b>-4.1%</b>	<b>18.4%</b>	<b>5.3%</b>	<b>45.1%</b>	<b>43.3%</b>	<b>47.7%</b>	<b>49.4%</b>
Non-Pinelands Counties	457,666	450,476	366,548	405,793	-1.6%	-18.6%	10.7%	-11.3%	54.9%	55.9%	52.3%	50.6%
State Total	834,003	806,005	701,306	802,126	-3.4%	-13.0%	14.4%	-3.8%	100.0%	100.0%	100.0%	100.0%

**Table E7c      Net Cash Return for New Jersey Farms**  
(2003 Dollars)

	<b>Total Net Cash Return (1,000's)</b>			<b>Percentage Change</b>			<b>Total Net Cash Return as Pct. of NJ</b>		
<b>County</b>	<b>1987</b>	<b>1992</b>	<b>1997</b>	<b>'87-'92</b>	<b>'92-'97</b>	<b>'87-'97</b>	<b>1987</b>	<b>1992</b>	<b>1997</b>
Atlantic	\$18,640	\$13,563	\$17,087	-27.2%	26.0%	-8.3%	11.2%	10.8%	8.4%
Burlington	\$18,085	\$13,857	\$27,224	-23.4%	96.5%	50.5%	10.9%	11.0%	13.5%
Camden	\$3,666	\$2,513	\$9,023	-31.4%	259.0%	146.1%	2.2%	2.0%	4.5%
Cape May	\$1,747	\$1,284	\$2,228	-26.5%	73.5%	27.5%	1.1%	1.0%	1.1%
Cumberland	\$16,255	\$22,421	\$33,779	37.9%	50.7%	107.8%	9.8%	17.8%	16.7%
Gloucester	\$19,996	\$13,808	\$23,709	-30.9%	71.7%	18.6%	12.0%	11.0%	11.7%
Ocean	\$2,694	\$995	\$3,034	-63.1%	205.0%	12.6%	1.6%	0.8%	1.5%
<b>Pinelands Counties</b>	<b>\$81,083</b>	<b>\$68,441</b>	<b>\$116,085</b>	<b>-15.6%</b>	<b>69.6%</b>	<b>43.2%</b>	<b>48.8%</b>	<b>54.3%</b>	<b>57.4%</b>
Non-Pinelands Counties	\$85,181	\$57,572	\$86,233	-32.4%	49.8%	1.2%	51.2%	45.7%	42.6%
New Jersey	\$166,267	\$126,015	\$202,318	-24.2%	60.6%	21.7%	100.0%	100.0%	100.0%

**Table E7d Net Cash Return per Farm**  
(2003 Dollars)

County	Net Cash Return per Farm			Percentage Change		
	1987	1992	1997	'87-'92	'92-'97	'87-'97
Atlantic	\$48,540	\$34,687	\$40,491	-28.5%	16.7%	-16.6%
Burlington	\$21,686	\$16,961	\$31,804	-21.8%	87.5%	46.7%
Camden	\$20,716	\$13,296	\$43,173	-35.8%	224.7%	108.4%
Cape May	\$13,977	\$7,925	\$14,949	-43.3%	88.6%	7.0%
Cumberland	\$26,605	\$36,756	\$58,849	38.2%	60.1%	121.2%
Gloucester	\$29,320	\$19,587	\$36,419	-33.2%	85.9%	24.2%
Ocean	\$13,080	\$4,286	\$12,855	-67.2%	200.0%	-1.7%
<b>Pinelands Counties</b>	<b>\$26,857</b>	<b>\$22,035</b>	<b>\$37,483</b>	<b>-18.0%</b>	<b>70.1%</b>	<b>39.6%</b>
Non-Pinelands Counties	\$14,161	\$9,632	\$14,379	-32.0%	49.3%	1.5%
New Jersey	\$18,405	\$13,874	\$22,247	-24.6%	60.4%	20.9%

**Table E7e Farms with Net Losses**

County	Farms with Net Losses			Percentage of All Farms with Net Losses		
	1987	1992	1997	1987	1992	1997
Atlantic	139	162	227	36.2%	41.4%	53.5%
Burlington	427	431	369	51.2%	52.8%	43.1%
Camden	86	91	94	48.6%	48.4%	44.5%
Cape May	71	75	75	57.3%	46.0%	50.3%
Cumberland	286	219	248	46.7%	36.0%	43.3%
Gloucester	305	337	286	44.8%	47.9%	43.9%
Ocean	98	159	114	47.6%	68.2%	48.5%
<b>Pinelands Counties</b>	<b>1,412</b>	<b>1,474</b>	<b>1,413</b>	<b>46.8%</b>	<b>47.5%</b>	<b>45.6%</b>
Non-Pinelands Counties	3,356	3,375	3,582	55.8%	56.5%	59.7%
New Jersey	4,768	4,849	4,995	52.8%	53.4%	54.9%

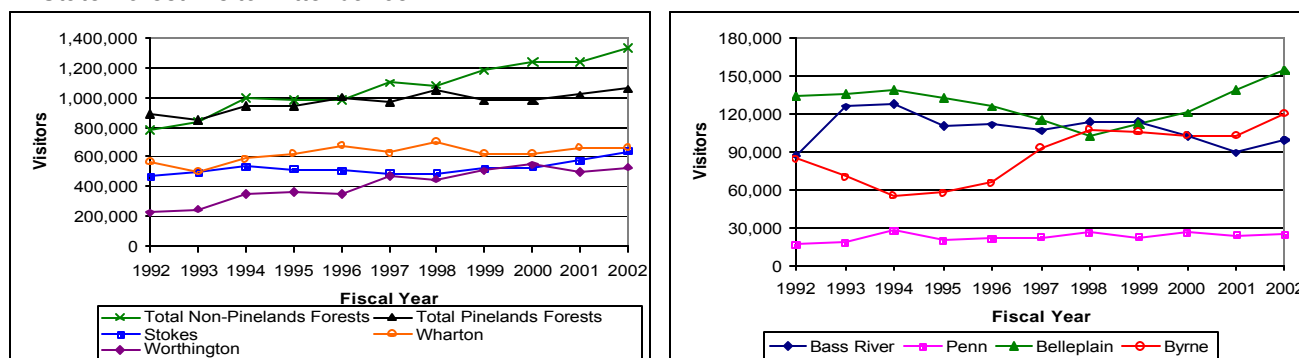
# State Forest Visitor Attendance

NJ DEP, Div Parks and Forestry 1992 - 2002

[X] Updated

- The number of visitors to state forests in the Pinelands increased by 19% between 1992 and 2002. On average, there are approx 966,000 visits to Pinelands forests each year.

State Forest Visitor Attendance



**Description:** The NJ Division of Parks and Forestry (NJ DPF) tracks and publishes visitor attendance in an annual report. The NJ DPF defines a visit as "The entry of one person to the recreational areas we administer, non-recreational visits such as commuter or thru traffic are generally not considered. Off area educational programs and outreach contacts by park service employees are also not counted as visits." Visits are calculated by actual counting in areas where visitors must pass through a gate or booth, and by informal estimates in other areas. Park rangers occasionally count cars in parking lots and multiply each car by some factor to calculate the number of visitors on a given day. Due to the informal nature of data collection, these figures should be regarded cautiously as approximations. Inclement weather, staff shortages, or the closing of a site for construction are examples that could explain sudden shifts in visitor attendance from year to year. Despite these caveats, the data is the best source that is readily available for measuring recreation / tourism in Pinelands forests.

**Unit of Analysis:** Data from the eleven state forests in New Jersey was selected and aggregates were created for Pinelands and Non-Pinelands forests. State Parks were not considered, as there is only one park in the Pinelands and the parks are not comparable to forests. Five of the forests fall almost entirely within the Pinelands boundary, while the remaining six are located in Northwestern New Jersey. Due to differences in size, location, and amenities, it is difficult to make a comparison between Pinelands and Non-Pinelands forests. The attendance numbers are reported here more for informational purposes rather than analysis.

## Supplemental Data

The eleven state forests in New Jersey (five in the Pinelands, six in the northwest) occupy approximately 236,900 acres. The number of visits to the state forests has increased by 43% in the last eleven years, from 1.7 million in 1992 to 2.4 million in 2002. The average number of visits during this time was 2 million per year, which equals 8.6 visitors per acre of forest.

Eighty-four percent of the state's forest acreage is in the Pinelands; 199,900 acres in the Pinelands compared to 37,000 in the Non-Pinelands. Despite this fact, the average number of visitors to the Pinelands forests is lower than the Non-Pinelands (966,900 visits in the Pinelands versus 1.1 million visits in the Non-Pinelands) and the number of visitors per acre is much lower in the Pinelands (4.8 visitors per acre compared to 28.8 visitors in the Non-Pinelands). This could be due to a number of factors, the primary ones being the proximity of the Non-Pinelands forests to a much larger concentration of people and proximity to other recreation centers in the Pocono Mountains. The number of visits to Pinelands forests has increased by 19% between 1992 and 2002, while the number of visits to Non-Pinelands forests has increased by 69.6%.

Wharton State Forest is the largest forest in the state, and had the most visits out of the five Pinelands forests (approximately 60% of the total visits each year). The number of visits has fluctuated over time, influenced by factors such as the weather, but has generally increased. Penn and Byrne forests had the largest percent increase over time in the Pinelands (54.5% and 40.9% respectively), while Bass River had the smallest percent increase (13.8%). The

number of visits to Bass River has been declining in recent years, while the number of visits to Belleplain and Byrne has been steadily increasing. The NJ DPF attributed this increase in visits to Byrne (formerly known as Lebanon State Forest) in 1997 to an increase in public events sponsored by the Whitesbog Preservation Trust. Based on the average number of visits per year in the eleven-year period, Penn and Belleplain have the largest number of visits per acre with 6.7 and 6.2 visits per acre respectively, while Byrne had the lowest number with 2.5 visits per acre.

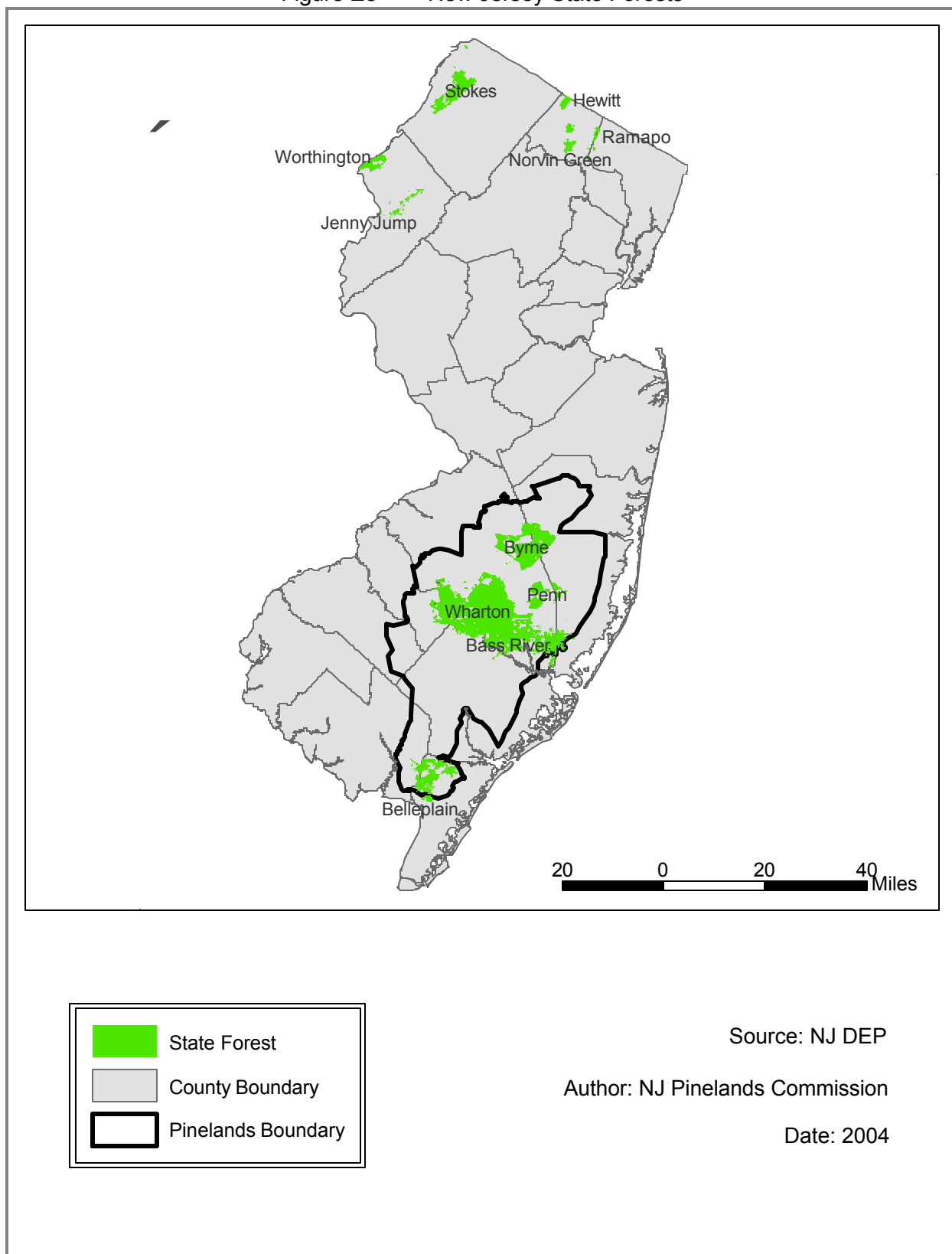
Table E8a Visitors to Pinelands State Forests

Year	Bass River	Belleplain	Byrne (Lebanon)	Penn	Wharton	Pinelands Forests Total
1992	86,775	134,296	84,707	15,864	560,966	882,608
1993	125,814	134,692	69,761	17,949	495,497	843,713
1994	127,656	139,293	54,921	28,090	591,231	941,191
1995	109,883	131,943	57,714	19,803	622,817	942,160
1996	111,149	125,430	65,535	21,316	675,322	998,752
1997	106,393	114,874	92,879	21,951	626,067	962,164
1998	112,803	102,867	107,021	25,529	697,263	1,045,483
1999	112,508	112,214	105,626	22,385	622,747	975,480
2000	102,813	120,377	102,548	25,917	620,537	972,192
2001	89,341	138,627	102,482	23,654	658,918	1,013,022
2002	98,789	154,413	119,346	24,516	656,454	1,053,518
Sum	1,183,924	1,409,026	962,540	246,974	6,827,819	10,630,283
Avg Per Year	107,629	128,093	87,504	22,452	620,711	966,389
Change 92-02	13.8%	15.0%	40.9%	54.5%	17.0%	19.4%
Acreage	26,537	20,749	34,725	3,366	114,557	199,934
Avg # Visitors per Acre	4.1	6.2	2.5	6.7	5.4	4.8

Table E8b Visitors to Non-Pinelands State Forests

Year	Hewitt	Jenny Jump	Norvin Green	Ramapo Mtn	Stokes	Worthington	Non- Pinelands Forests Total
1992	6,523	30,059	25,636	30,689	465,227	225,117	783,251
1993	6,124	29,827	24,245	28,451	498,245	253,423	840,315
1994	7,920	31,923	26,800	32,738	537,919	352,463	989,763
1995	8,054	37,327	27,568	33,865	518,419	359,654	984,887
1996	7,990	41,176	29,332	41,840	508,386	353,227	981,951
1997	7,992	48,789	31,410	41,204	488,333	478,053	1,095,781
1998	4,219	54,914	33,159	43,257	490,089	452,153	1,077,791
1999	4,368	61,403	35,396	44,964	521,314	510,005	1,177,450
2000	4,980	59,894	36,671	47,090	530,154	548,452	1,227,241
2001	4,811	62,405	36,775	48,921	580,601	496,264	1,229,777
2002	5,046	70,335	38,673	49,737	635,883	528,864	1,328,538
Sum	68,027	528,052	345,665	442,756	5,774,570	4,557,675	11,716,745
Avg Per Year	6,184	48,005	31,424	40,251	524,961	414,334	1,065,159
Change 92-02	-22.6%	134.0%	50.9%	62.1%	36.7%	134.9%	69.6%
Acreage	2,001	4,239	4,365	4,200	15,947	6,233	36,985
Avg # Visitors per Acre	3.1	11.3	7.2	9.6	32.9	66.5	28.8

Figure E8 New Jersey State Forests



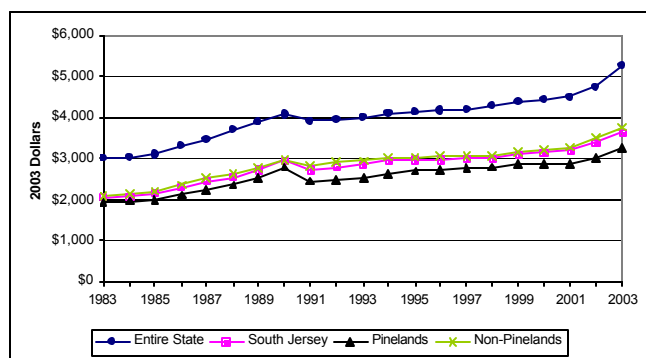
# Avg Residential Property Tax Bill ☒ Updated

NJ Dept of Treasury, Division of Taxation 1983 - 1999

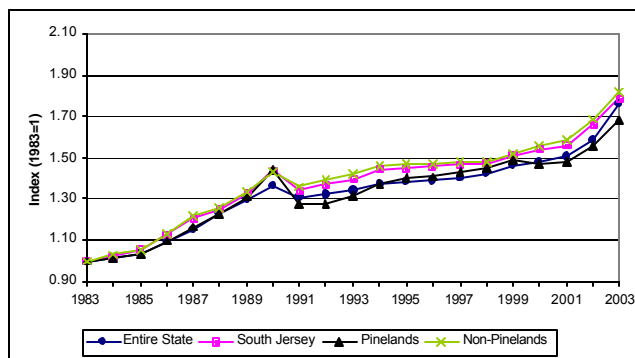
NJ Dept of Community Affairs, Div LGS 2000 - 2003

- The average tax bill increased at a greater rate this year than in previous years.

Average Residential Property Tax Bill



Index of Average Residential Property Tax Bill



**Description:** The average residential property tax bill measures the impact of property taxes on municipal residents. It is calculated by dividing the average residential property value by 100 and multiplying the result by the general tax rate. Values are adjusted for inflation and shown in 2003 dollars.

**Unit of Analysis:** Average residential property tax data are compiled at the municipal level and aggregated to allow for inside/outside Pinelands, regional, and statewide analyses.

## Summary of Previous Findings

Average residential property tax bills in New Jersey demonstrated a gradual but steady pattern of increase throughout the 1980's to a peak in 1990, followed by a decline in 1991 and a subsequent slow, continued increase. The annual rate of change over the monitoring period was virtually the same for all geographic areas. By 1998, average residential tax bills in all areas surpassed their previous 1990 peaks. Tax bills began accelerating at a greater rate in 2001.

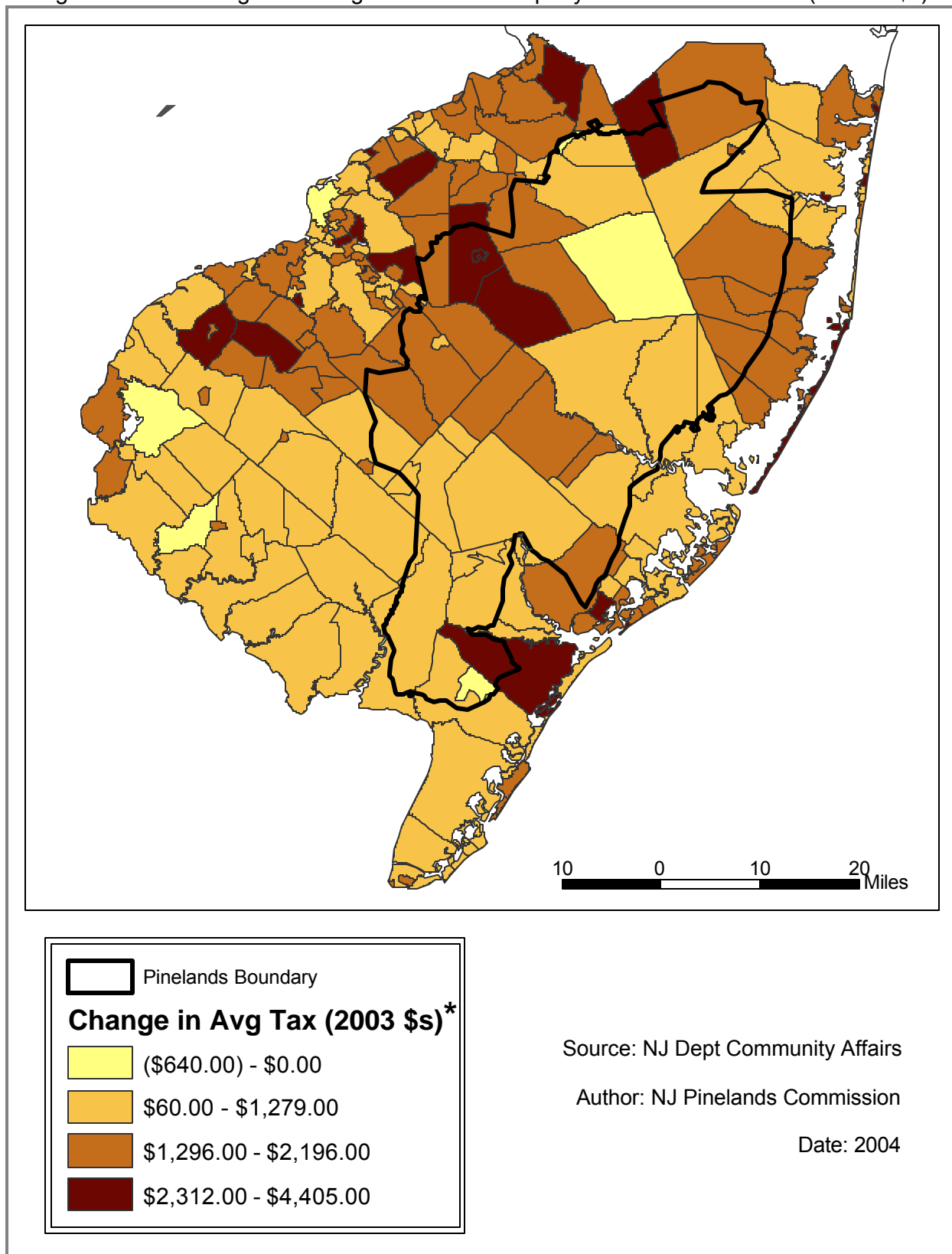
## Update

The average residential property tax bill continued to increase in all regions of the state in 2003, but at a higher rate of increase. The average tax bill increased by 7.7% in the Pinelands and 7.6% in the Non-Pinelands between 2002 and 2003, compared to increases of 5.3% and 6.9% respectively between 2001 and 2002. The upturn in property taxes after 2001 reflects, in large part, increased property values. As property values are increasing at a much greater rate, the average property tax bill is increasing at a greater rate. The average property tax bill in the Pinelands was \$3,240 in 2003, remaining \$500 lower than the average Non-Pinelands bill and \$2,000 lower than the average state bill.

The average residential property tax bill in New Jersey, adjusted for inflation, has increased by 76% between 1983 and 2003, from \$3,000 to \$5,270. The average Southern New Jersey bill increased by 79%. Within Southern New Jersey, the average Pinelands bill increased by 68% (from \$1,930 to \$3,240) while the average Non-Pinelands bill increased by 82% (from \$2,080 to \$3,770).

The rapidly growing ring of 2<sup>nd</sup> ring suburbs surrounding the Philadelphia metropolitan area experienced the highest increases in average residential property taxes in the twenty-year period from 1983 to 2003. Smaller concentrations of increasing tax bills exist in Ocean County and along the shore. The southern, rural municipalities had the smallest increases in property tax bills. Of the 202 municipalities in South Jersey, 195 had increases in residential property tax bills, six had decreases, and one had no change. (Figure F1). Five Pinelands municipalities appear in the upper range with an increase of over \$2,300 in 20 years (Medford, Medford Lakes, Upper, Plumsted, and Shamong) while three Pinelands towns had decreasing tax bills (Woodland, Woodbine, and Wrightstown).

Figure F1 Change in Average Residential Property Tax Bill 1983 to 2003 (In 2003 \$s)



\* Range excludes outliers Tavistock Borough and Mantoloking Borough.

# State Equalized Valuation

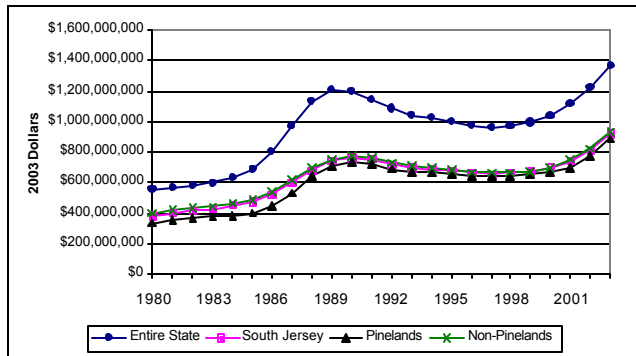
☒ Updated

NJ Dept of Community Affairs, Div LGS 1980 - 1993

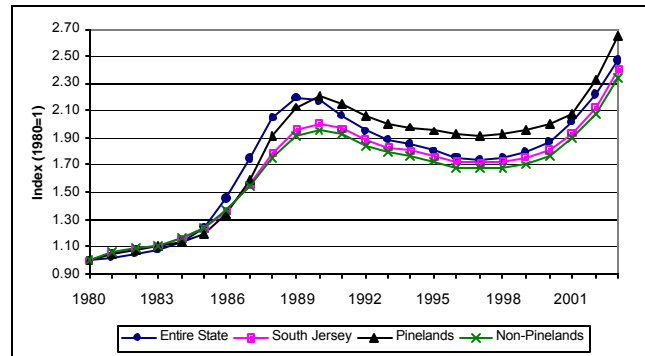
NJ Dept of Treasury, Division of Taxation 1994 - 2003

- Change in valuation in the Pinelands outpaced the Non-Pinelands in 2003.

Average State Equalized Valuation (2003 Dollars)



Index of State Equalized Valuation



**Description:** Equalized property value is the total assessed value of all property in a municipality adjusted for different municipal assessment biases in order to make values across New Jersey municipalities comparable to one another. It is useful as a measurement of the wealth of one municipality relative to other municipalities. Values are adjusted for inflation and shown in 2003 dollars.

**Unit of Analysis:** State equalized valuation data are compiled at the municipal level and aggregated to allow for inside/outside Pinelands, regional, and statewide analyses.

## Summary of Previous Findings

Equalized property valuation in New Jersey rose throughout the 1980's, with most of the growth concentrated in the latter part of the decade. Average municipal valuation in the Pinelands tracked closely with average valuation outside the Pinelands. While average valuation in the Pinelands was lower than average valuation outside of the Pinelands over the monitoring period, the gap progressively narrowed. Conversely, while average valuation in Southern New Jersey remained lower than average valuation in the entire State, the differential did not diminish over the monitoring period. Following a peak in 1989, statewide average valuation experienced a steeper decline than average valuation throughout Southern New Jersey. From 1990 to 1997, average equalized valuation declined across all areas of the State. This trend reversed after 1997 as average equalized property valuations rose between 1998 and 2002 in all regions.

## Update

Average equalized property valuations rose in all regions in 2003, continuing the rising trend which began in 1998. Average equalized property valuations in the Pinelands region rose slightly more than other regions of the State in 2003, just as they did in 2002. The change in valuation is driven by increased property values. Valuation rose by 14.0% in the Pinelands, by 12.4% in the Non-Pinelands, and by 11.2% for the state between 2002 and 2003. Increases in valuation in 2003 outpaced the increases of 2002. The valuation for the average Pinelands municipality was \$885.6 million in 2003, compared to an average of \$919.7 million for the average Non-Pinelands municipality. The gap in valuation between Pinelands and Non-Pinelands municipalities continues to narrow.

More populated municipalities tend to have higher equalized values, as more structures and higher densities push up property values. Per Capita equalized values can be used to make more equal comparisons by accounting for the relative wealth of inhabitants for particular jurisdictions. Total 2003 equalized values were divided by 2002 population estimates for each region. The results show that the state has a higher equalized value per capita than Southern New Jersey (\$95,920 versus \$85,000), while the Pinelands region has a much lower per capita value compared to the Non-Pinelands region (\$69,240 versus \$91,060). The Pinelands municipalities exhibit a great deal of variation, as approximately half of the municipalities have a per capita value higher than \$69,000 and half a value lower than that (Table F2).

Table F2 2003 Equalized Value and Equalized Value Per Capita

County	Municipality	Population Est 2002	Equalized Value 2003*	Eq Value Per Capita*
Ocean	Stafford	23,785	\$2,785,000,000	\$117,100
Burlington	Washington	633	\$72,000,000	\$113,400
Cape May	Upper	12,032	\$1,189,000,000	\$98,800
Burlington	Medford	23,047	\$2,250,000,000	\$97,600
Ocean	Lacey	26,170	\$2,533,000,000	\$96,800
Ocean	Berkeley	41,946	\$3,794,000,000	\$90,400
Ocean	Ocean	6,726	\$595,000,000	\$88,500
Burlington	Evesham	44,555	\$3,763,000,000	\$84,500
Ocean	Eagleswood	1,501	\$126,000,000	\$84,000
Cape May	Dennis	6,400	\$537,000,000	\$83,900
Ocean	Jackson	47,580	\$3,978,000,000	\$83,600
Burlington	Woodland	1,336	\$110,000,000	\$82,500
Atlantic	Port Republic	1,058	\$85,000,000	\$80,300
Ocean	Little Egg Harbor	17,695	\$1,386,000,000	\$78,400
Burlington	Shamong	6,634	\$514,000,000	\$77,400
Burlington	Medford Lakes	4,189	\$318,000,000	\$76,000
Burlington	Southampton	10,730	\$807,000,000	\$75,200
Ocean	Plumsted	7,920	\$591,000,000	\$74,600
Atlantic	Estell Manor	1,631	\$121,000,000	\$74,500
Atlantic	Egg Harbor Twp	33,382	\$2,476,000,000	\$74,200
Burlington	Tabernacle	7,270	\$515,000,000	\$70,900
Camden	Berlin Twp	5,331	\$363,000,000	\$68,100
Ocean	Barneгат	16,405	\$1,111,000,000	\$67,700
Atlantic	Hamilton	21,968	\$1,368,000,000	\$62,300
Atlantic	Hammonton	12,840	\$783,000,000	\$61,000
Ocean	Manchester	41,431	\$2,525,000,000	\$60,900
Atlantic	Galloway	33,593	\$2,003,000,000	\$59,600
Burlington	Bass River	1,538	\$91,000,000	\$59,400
Atlantic	Folsom	1,974	\$114,000,000	\$57,900
Atlantic	Mullica	5,977	\$339,000,000	\$56,600
Ocean	Beachwood	10,628	\$592,000,000	\$55,700
Gloucester	Monroe	29,522	\$1,546,000,000	\$52,400
Camden	Waterford	10,627	\$533,000,000	\$50,200
Gloucester	Franklin	15,809	\$788,000,000	\$49,900
Atlantic	Buena Vista	7,512	\$353,000,000	\$47,000
Atlantic	Buena	3,841	\$179,000,000	\$46,700
Atlantic	Weymouth	2,301	\$107,000,000	\$46,500
Camden	Winslow	34,954	\$1,520,000,000	\$43,500
Ocean	Lakehurst	2,564	\$105,000,000	\$40,900
Ocean	South Toms River	3,678	\$140,000,000	\$38,100
Atlantic	Egg Harbor City	4,498	\$167,000,000	\$37,200
Burlington	Wrightstown	748	\$27,000,000	\$35,800
Burlington	Pemberton Twp	28,772	\$963,000,000	\$33,500
Cape May	Woodbine	2,683	\$84,000,000	\$31,400
Camden	Chesilhurst	1,665	\$49,000,000	\$29,300
Cumberland	Maurice River	7,565	\$176,000,000	\$23,300
Burlington	New Hanover	9,741	\$48,000,000	\$4,900
<i>"Outside" Municipalities</i>				
Burlington	Springfield	3,421	\$324,000,000	\$94,600
Camden	Berlin Borough	6,759	\$461,000,000	\$68,100
Atlantic	Corbin City	505	\$29,000,000	\$56,600
Cumberland	Vineland	56,340	\$2,299,000,000	\$40,800
Burlington	North Hanover	7,487	\$268,000,000	\$35,700

\* Values have been rounded. Shown in current 2003 dollars.

# Effective Tax Rate

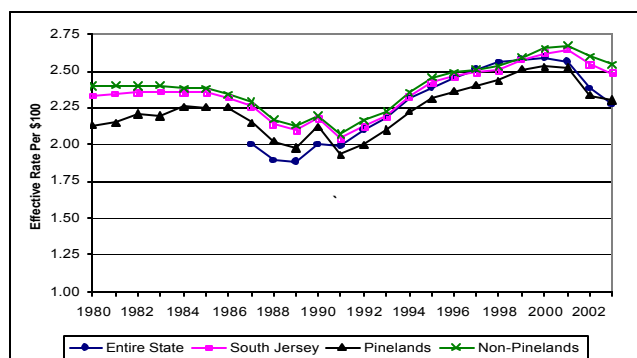
Updated

NJ Dept of Treasury, Division of Taxation 1994 - 2001

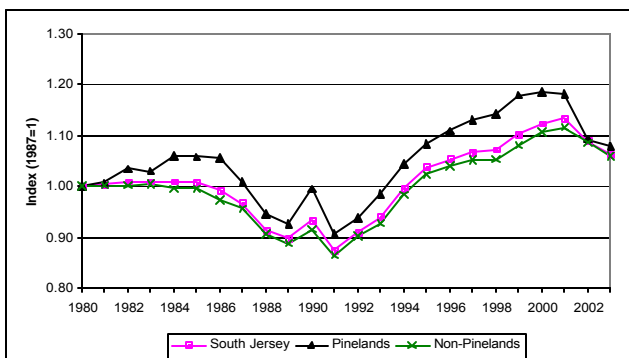
NJ Dept of Community Affairs, Div LGS 1980 - 93, 2002 - 03

- Effective Tax Rates decreased for all regions of the state in 2003.

Effective Tax Rate (Per \$100 State Equalized Valuation)



Index of Effective Tax Rate



**Description:** The effective tax rate measures the ratio of taxes to property value. The effective tax rate is the rate at which the municipality taxes the (equalized) assessed value of property, and is equal to the general property tax adjusted by the municipality's equalization ratio as calculated by the NJ Dept of the Treasury, Division of Taxation.

**Unit of Analysis:** Average effective tax rate data are compiled at the municipal level and aggregated to allow for inside/outside Pinelands, regional, and statewide analyses.

## Summary of Previous Findings

Effective tax rates in all regions remained steady or increased slightly in the early 1980's before beginning a period of decline in 1986. Although statewide data were not available until 1987, statewide effective tax rates were below rates outside of the Pinelands, but surpassed rates inside of the Pinelands in 1991. Effective tax rates have gradually increased in all regions since the early 1990's and surpassed earlier highs set in the 1980's. Pinelands effective tax rates continue to remain lower than all other regions of New Jersey. Rates began falling in 2001 and continued to fall in 2002.

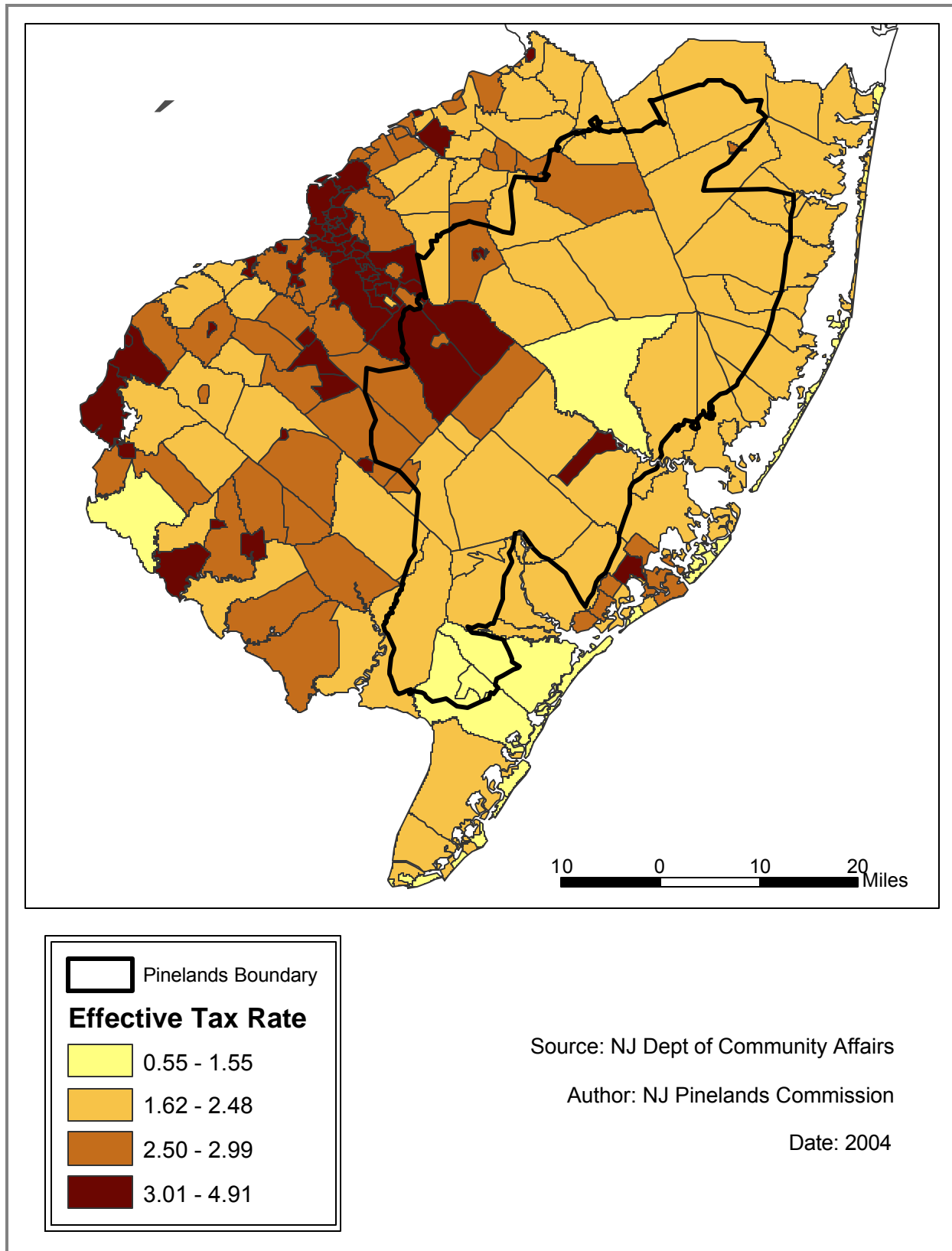
## Update

Effective tax rates fell again in 2003, but the percent decrease was less than it was in 2002. Effective rates fell by 4.6% for the state as a whole to 2.27, and decreased by 1.3% for the Pinelands to 2.30 and by 2.3% for the Non-Pinelands region to 2.54. The average municipal effective rate for Southern New Jersey fell by 2.4% to 2.48. Effective tax rates continued to be lower in the Pinelands region than in the Non-Pinelands region, and the gap between the two has remained relatively unchanged. The decrease in effective tax rates is linked to an increase in home sale price and a corresponding increase in equalized valuation. A detailed explanation of how effective tax rates are computed and the synergy between home sale prices, equalized value, and effective tax rates can be found in the 2003 Annual Report.

Studies have suggested that effective tax rates above 3.00 indicate municipal fiscal stress.<sup>16</sup> Egg Harbor City, Medford Lakes, Berlin Township, Waterford, and Winslow are Pinelands municipalities with rates higher than 3.00. The majority of municipalities with rates above 3.00 are clustered in Camden County (Figure RE3).

16 See "The Property Tax Trouble Zone Moves Beyond Big Cities" by Coleman, *New Jersey Municipalities*, Dec 2002, p. 66-69

Figure F3 Effective Tax Rates 2003



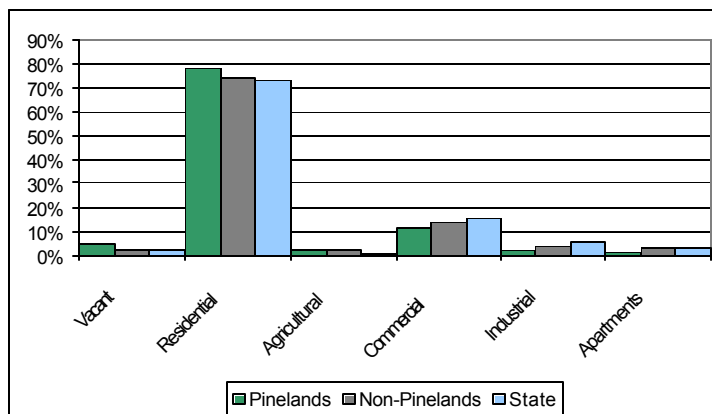
# Assessment Class Proportions in Municipal Tax Revenues

☐ Updated

NJ Dept of Community Affairs, Div LGS Labor 1980 – 1994, 2002

- The vacant land category in the Pinelands has declined from 10.9% of total assessment in 1986 to 5.0% in 2002.

Assessment Class Proportions in  
Municipal Tax Revenue 2002



**Description:** The relative contribution of the different assessment classes (e.g., commercial, residential, and vacant land) to the tax revenue of each municipality measures the reliance of the municipality on different types of land uses for tax revenues.

**Unit of Analysis:** Data for assessment class proportions are compiled at the municipal level and aggregated to allow for inside/outside Pinelands, regional, and statewide analyses.

## Summary of Previous Findings

Updates for this variable have been unavailable for quite some time, due to changes in data collection and publication at the NJ DCA. An update for 2002 was available, but all data from the intervening period between 1994 and 2002 is still unavailable. Because a time series is unavailable, this section examines changes in assessment class proportions for 1986, 1994, and 2002 (Since there is an eight year interval between 1994 and 2002, 1986 was chosen to make an equal comparison in terms of years). For times series data covering the period 1980 to 1994, consult any annual report published prior to 2003.

The Pinelands has a higher percentage of assessed property in the vacant and residential categories than the Non-Pinelands, and has generally had lower percentages in the remaining categories compared to the Non-Pinelands, particularly in the industrial and apartment categories. The predominant trend in the Pinelands is the decrease in the vacant assessment category as a percentage of total assessment and an increase in the residential category. Vacant land comprised 10.9% of total Pinelands assessed value in 1986, but dropped to 8.0% in 1994 and declined even further to 5.0% in 2002. Possible explanations include the development of vacant land, an increase in the value of developed land at a higher rate than that of vacant land, and/or a decrease in the value of vacant land. Meanwhile, the percent total of residential land increased from 71.1% in 1986, to 74.1% in 1994, to 78.2% in 2002. The percentage of assessment in agricultural and commercial land has remained relatively steady between 1994 and 2002, while the percentage of industrial assessed value has decreased.

The Pinelands municipalities of Medford Lakes, Beachwood, Tabernacle, Berkeley Shamong, and Port Republic have the highest percentage of assessed value in the residential category (above ninety percent) in the Pinelands. Wrightstown, Berlin Township, Woodbine, and Hamilton have the lowest percentage of assessed value in the residential category (below sixty percent).

Table F4a Assessment Class Proportions in Municipal Valuations

	1986	1994	2002
<b>Pinelands</b>			
Vacant	10.9%	8.0%	5.0%
Residential	71.1%	74.1%	78.2%
Agricultural	3.1%	2.2%	2.3%
Commercial	10.9%	11.7%	11.5%
Industrial	2.0%	2.4%	1.6%
Apartments	1.9%	1.6%	1.4%
<b>Non-Pinelands</b>			
Vacant	4.0%	3.4%	2.7%
Residential	69.5%	72.1%	74.4%
Agricultural	4.0%	3.1%	2.7%
Commercial	13.7%	13.5%	13.3%
Industrial	4.9%	4.4%	3.8%
Apartments	3.2%	2.8%	3.1%
<b>State</b>			
Vacant	3.9%	3.3%	2.3%
Residential	67.2%	70.0%	73.4%
Agricultural	1.0%	0.9%	0.9%
Commercial	15.9%	15.9%	15.4%
Industrial	8.3%	7.1%	5.3%
Apartments	3.7%	2.9%	2.8%

# Local Municipal Purpose Revenues

NJ Dept of Community Affairs, Div LGS 1998 - 2003  
Individual SJ County Tax Divisions 1995 - 1997

☒ Updated

- The total local municipal budget of Pinelands municipalities is increasing faster than the Non-Pinelands municipal budget, but revenue per capita is lower in the Pinelands.

	Local Municipal Budget*	Budget Per Capita	Population Estimate	State Aid	State Aid Per Capita
Pinelands 1995	\$378,839,456	\$648	584,232	NA	NA
Pinelands 1999	\$389,942,485	\$638	610,785	\$106,163,122	\$174
Pinelands 2003	\$425,122,988	\$660	644,385	\$103,115,946	\$160
Change	12.2%	1.7%	10.3%	-2.9%	-7.9%
Non-Pinelands 1995	\$1,518,598,702	\$948	1,601,776	NA	NA
Non-Pinelands 1999	\$1,541,008,950	\$940	1,639,053	\$302,842,900	\$185
Non-Pinelands 2003	\$1,625,377,636	\$969	1,678,199	\$289,061,731	\$172
Change	7.0%	2.2%	4.8%	-4.6%	-6.8%

\* = Local Municipal Purposes + Total of Miscellaneous Revenues. Does not include school budget.

**Description:** Per capita revenues provide insight into the level or amount of service a municipality can provide. Money budgeted for local municipal purposes is used for maintaining all services within a municipality other than schools or infrastructure maintained by the county or state (such as roads). Local municipal purpose monies are raised largely through property taxes. Miscellaneous revenues have been added to local purpose monies and include: surplus revenues apportioned, receipts from delinquent taxes and liens, and other miscellaneous revenues anticipated such as user or license fees. Per capita rates were calculated by using: intercensal estimates from 1995 to 1999, the 2000 Census in 2000, and municipal estimates for 2001 to 2003. The population estimate for 2002 was used to calculate per capita figures for 2003, as 2003 municipal estimates were not available when this report was prepared. Per capita figures for 2003 may be slightly inflated as a result of using the 2002 population estimate.

**Unit of Analysis:** Municipal level data are aggregated to allow for inside/outside Pinelands analysis. Aggregates are sums, not averages.

## Supplemental Data:

As a whole, the local municipal budget of Pinelands municipalities has increased faster than the Non-Pinelands from 1995 to 2003. The Pinelands municipal budget increased by 12% during this period, compared to 7% for the Non-Pinelands. Within the local budget, monies raised through local municipal purposes increased substantially (by 40% in the Pinelands and 14% in the Non-Pinelands) while monies raised through miscellaneous revenues was relatively stable (a decrease of 2% in the Pinelands and an increase of 1.5% in the Non-Pinelands).

While municipal revenues are increasing both inside and outside the Pinelands, the amount of revenue collected per person has remained relatively the same. As a whole, the Pinelands municipalities collected \$648 in municipal revenues per capita in 1995 and \$660 per capita in 2003, an increase of 1.7%. The Non-Pinelands municipalities collected \$948 per capita in 1995 versus \$969 in 2003, an increase of 2.2%. The increase in revenues corresponds with population increases. As the population increases, the ability to raise additional revenues increases. Per capita revenues have remained rather constant, as additional citizens require additional services, which require additional expenditures. It is interesting to note that the increase in per capita revenues has not been consistent over time. Per capita revenues declined in both the Pinelands and Non-Pinelands in 1995. Per Capita revenues did not surpass 1995 levels until 2002 in the Non-Pinelands and 2003 in the Pinelands (Table F5a)

The Pinelands municipalities collected approximately \$310 less per person in 2003 compared to the Non-Pinelands. This difference is due to the fact that the Pinelands has lower tax rates than the Non-Pinelands (see sections F1 through F3) and because Pinelands municipalities tend to offer less in terms of municipal services. For example, 36% of Pinelands municipalities have no local police force, compared to 15% of Non-Pinelands municipalities (see 2003 Annual Report).

Municipalities also rely on the state for aid to supplement local revenues. The earliest year available for state aid figures (in digital format) was 1999. Since 1999, state aid has decreased by 3% to Pinelands municipalities and by

5% to Non-Pineland municipalities. Per capita rates decreased by 8% in the Pines and 7% in the Non-Pines. While there is quite a gulf between Pinelands and Non-Pinelands municipalities in terms of municipal revenues per capita, both regions receive a comparable amount of state aid. The Pinelands municipalities received \$160 per capita in state aid in 2003 while the Non-Pinelands municipalities received \$172 per capita.

There is a large degree of variation among the Pinelands municipalities in terms of local municipal revenues and state aid. Municipal revenues per capita in 2003 ranged from a high of \$2,823 in Washington Township, Burlington County, to a low of \$188 in New Hanover Township. Both townships are outliers, as Washington is very large in land area but is sparsely populated, and New Hanover is composed almost entirely of federal military installations. The average per capita revenue for the Pinelands was \$758, with a median of \$693. State aid ranges from a high of \$1,980 per capita in Washington Township to lows in Plumsted and Beachwood of \$82 per capita. The average amount of state aid to the Pinelands was \$226 per capita and the median was \$139.

When per capita revenues and per capita state aid are viewed as averages (average per capita figures for all municipalities within a region, as opposed to a per capita figure for the entire region), different patterns emerge. The average per capita revenue in the Pinelands is \$758 compared to \$1,419 in the Non-Pinelands, and the average amount of state aid to the Pinelands is \$226 versus \$182 to the Non-Pinelands. When compared as regions (using aggregates illustrated in Table F5a), the Pinelands has lower per capita revenue and receives slightly less state aid per capita than the Non-Pinelands. When municipal averages for each of the aggregates are compared, the Pinelands has a substantially lower per capita revenue and receives more state aid per capita compared to the Non-Pinelands.

Table F5a Local Municipal Purpose Revenues and State Aid for Pinelands and Non-Pinelands Regions (In 2003 \$s)

Region	Year	Local Municipal Purpose	Misc Revenues	Total Municipal Budget	Budget Per Capita	Population Estimate	State Aid	Aid Per Capita
Pines	1995	\$128,488,635	\$250,350,820	\$378,839,456	\$648	584,232		
Pines	1996	\$132,519,902	\$248,261,366	\$380,781,265	\$644	591,420		
Pines	1997	\$136,712,293	\$248,085,607	\$384,797,899	\$644	597,454		
Pines	1998	\$141,470,493	\$247,409,424	\$388,879,917	\$643	604,928		
Pines	1999	\$147,967,579	\$241,974,906	\$389,942,485	\$638	610,785	\$106,163,122	\$174
Pines	2000	\$150,825,246	\$240,347,466	\$391,172,712	\$635	615,984	\$103,382,641	\$168
Pines	2001	\$162,137,245	\$245,623,441	\$407,760,687	\$647	630,550	\$105,991,276	\$168
Pines	2002	\$169,079,526	\$248,797,021	\$417,876,546	\$648	644,385	\$100,029,195	\$155
Pines	2003	\$180,080,669	\$245,042,319	\$425,122,988	\$660	644,385	\$103,115,946	\$160
NonPines	1995	\$691,873,338	\$826,725,361	\$1,518,598,702	\$948	1,601,776		
NonPines	1996	\$692,291,138	\$817,124,142	\$1,509,415,284	\$936	1,612,610		
NonPines	1997	\$693,900,659	\$820,103,464	\$1,514,004,123	\$933	1,622,388		
NonPines	1998	\$704,900,649	\$839,431,042	\$1,544,331,691	\$947	1,630,733		
NonPines	1999	\$719,539,758	\$821,469,192	\$1,541,008,950	\$940	1,639,053	\$302,842,900	\$185
NonPines	2000	\$718,840,068	\$828,550,485	\$1,547,390,553	\$939	1,647,532	\$296,499,090	\$180
NonPines	2001	\$715,253,443	\$827,682,995	\$1,542,936,438	\$929	1,660,123	\$298,765,363	\$180
NonPines	2002	\$755,406,546	\$844,163,556	\$1,599,570,102	\$953	1,678,199	\$299,856,883	\$179
NonPines	2003	\$786,602,372	\$838,775,264	\$1,625,377,636	\$969	1,678,199	\$289,061,731	\$172
Pines	95-03	\$51,592,033	\$(5,308,501)	\$46,283,532	\$11	60,153		
NonPines	95-03	\$94,729,034	\$12,049,903	\$106,778,934	\$20	76,423		
Pines	95-03	40.2%	-2.1%	12.2%	1.7%	10.3%		
NonPines	95-03	13.7%	1.5%	7.0%	2.2%	4.8%		
Pines	99-03	\$32,113,090	\$3,067,414	\$35,180,503	\$21	33,600	\$(3,047,176)	\$(14)
NonPines	99-03	\$67,062,614	\$17,306,072	\$84,368,686	\$28	39,146	\$(13,781,169)	\$(13)
Pines	99-03	21.7%	1.3%	9.0%	3.3%	5.5%	-2.9%	-7.9%
NonPines	99-03	9.3%	2.1%	5.5%	3.0%	2.4%	-4.6%	-6.8%

Table F5b Local Municipal Purpose Revenues and State Aid for Pinelands Municipalities in 2003

County	Municipality	Population Est 2002	Municipal Budget*	State Aid	Budget Per Capita	Aid Per Capita
Burlington	Washington	633	\$1,786,921	\$1,253,233	\$2,823	\$1,980
Burlington	Wrightstown	748	\$906,439	\$520,555	\$1,212	\$696
Camden	Chesilhurst	1,665	\$1,985,384	\$859,245	\$1,192	\$516
Ocean	Stafford	23,785	\$26,023,982	\$3,181,335	\$1,094	\$134
Atlantic	Egg Harbor City	4,498	\$4,589,326	\$627,219	\$1,020	\$139
Atlantic	Estell Manor	1,631	\$1,627,429	\$425,767	\$998	\$261
Cape May	Woodbine	2,683	\$2,626,064	\$457,111	\$979	\$170
Camden	Berlin Township	5,331	\$5,168,308	\$1,560,219	\$969	\$293
Ocean	Eagleswood	1,501	\$1,444,429	\$252,578	\$962	\$168
Ocean	Lakehurst	2,564	\$2,440,334	\$411,535	\$952	\$161
Cape May	Upper	12,032	\$11,148,913	\$6,603,825	\$927	\$549
Ocean	Ocean	6,726	\$6,110,130	\$803,260	\$908	\$119
Burlington	Bass River	1,538	\$1,380,000	\$313,412	\$897	\$204
Atlantic	Port Republic	1,058	\$947,989	\$226,094	\$896	\$214
Burlington	Woodland	1,336	\$1,105,746	\$478,157	\$828	\$358
Ocean	Little Egg Harbor	17,695	\$14,444,709	\$1,870,206	\$816	\$106
Gloucester	Monroe	29,522	\$22,579,059	\$5,263,926	\$765	\$178
Ocean	Lacey	26,170	\$19,397,985	\$11,982,480	\$741	\$458
Camden	Waterford	10,627	\$7,655,836	\$1,741,692	\$720	\$164
Burlington	Medford Lakes	4,189	\$2,991,767	\$415,047	\$714	\$99
Burlington	Medford	23,047	\$16,195,181	\$2,598,370	\$703	\$113
Atlantic	Hamilton	21,968	\$15,416,500	\$3,702,414	\$702	\$169
Atlantic	Egg Harbor Township	33,382	\$23,355,366	\$6,985,631	\$700	\$209
Ocean	Berkeley	41,946	\$29,076,126	\$5,522,501	\$693	\$132
Atlantic	Hammonton	12,840	\$8,889,990	\$1,678,894	\$692	\$131
Atlantic	Mullica	5,977	\$4,077,038	\$689,731	\$682	\$115
Ocean	Barneгат	16,405	\$11,096,297	\$1,378,683	\$676	\$84
Atlantic	Buena	3,841	\$2,562,203	\$609,260	\$667	\$159
Cape May	Dennis	6,400	\$4,205,287	\$1,947,865	\$657	\$304
Ocean	Jackson	47,580	\$30,294,546	\$4,484,415	\$637	\$94
Burlington	Pemberton Township	28,772	\$18,260,824	\$3,670,140	\$635	\$128
Ocean	South Toms River	3,678	\$2,335,571	\$448,270	\$635	\$122
Camden	Winslow	34,954	\$20,843,280	\$7,815,703	\$596	\$224
Atlantic	Folsom	1,974	\$1,145,097	\$267,304	\$580	\$135
Ocean	Beachwood	10,628	\$6,094,853	\$874,887	\$573	\$82
Ocean	Manchester	41,431	\$22,207,398	\$4,223,009	\$536	\$102
Gloucester	Franklin	15,809	\$8,472,435	\$1,910,695	\$536	\$121
Atlantic	Buena Vista	7,512	\$3,939,070	\$966,326	\$524	\$129
Burlington	Evesham	44,555	\$23,280,326	\$4,149,496	\$523	\$93
Atlantic	Galloway	33,593	\$17,491,393	\$3,374,862	\$521	\$100
Ocean	Plumsted	7,920	\$3,901,448	\$651,840	\$493	\$82
Atlantic	Weymouth	2,301	\$1,079,874	\$384,095	\$469	\$167
Cumberland	Maurice River	7,565	\$3,354,737	\$1,196,701	\$443	\$158
Burlington	Tabernacle	7,270	\$2,848,979	\$905,846	\$392	\$125
Burlington	Southampton	10,730	\$4,136,098	\$1,514,738	\$385	\$141
Burlington	Shamong	6,634	\$2,371,220	\$859,862	\$357	\$130
Burlington	New Hanover	9,741	\$1,831,101	\$1,057,515	\$188	\$109
<i>"Outside" Municipalities</i>						
Atlantic	Corbin City	505	\$699,707	\$158,418	\$1,386	\$314
Burlington	Springfield	3,421	\$2,850,428	\$574,339	\$833	\$168
Camden	Berlin Borough	6,759	\$5,031,925	\$984,077	\$744	\$146
Cumberland	Vineland	56,340	\$39,202,639	\$7,952,438	\$696	\$141
Burlington	North Hanover	7,487	\$2,775,154	\$1,073,333	\$371	\$143

\* Municipal budget = Local Municipal Purpose Revenues + Miscellaneous Revenues

## 5. Recommendations for Future Study

- Continue to investigate 2000 Census data at the block-group level in order to refine the analysis of current variables (per capita income) and to add new supplemental variables (place of work, housing, etc.) to subsequent reports.
- Obtain sub-municipal census data (census block group) back to 1980, so a thorough examination of the change in population, housing, and land use within the Pinelands boundary can be conducted. Such an exercise could evolve as a special study.
- Collect data prior to 1980, i.e. back to 1970. The collection and analysis of this data would enable a comparison of trends before and after the adoption of the CMP. This analysis could also evolve as a special study.
- Obtain sub-municipal data for non-Census indicators, such as employment establishments and real estate transactions, that have address information associated with them. These addresses can be used to pinpoint establishments and transactions to their specific locations inside and outside the Pinelands boundary by using a GIS roads data layer. Addresses of establishments and transactions are matched to addresses in the roads layer. Work on this process began in 2003 when a GIS roads layer was acquired, but technical and quality control problems were encountered. Work should continue into the future.
- Supplemental data for population estimates and municipal revenues per capita were included in the 2004 report. These data sets are extremely useful and should be considered for inclusion as core indicators. The time series for each data set should be extended back to 1980 if possible.
- A fresh analysis of retail and agricultural census data should be included in the 2005 Annual Report. New data from the 2002 Retail Census and the 2002 Agricultural Census should be available by that time.
- Investigate using other statistical measures, such as median values and per capita figures, for some of the core variables.
- Explore the possibilities for obtaining recent municipal employment data.
- Continue work on the replacement for the comparables analysis, which was discontinued in 2002. A new analysis would entail the creation of sub-regions consisting of Pinelands and Non-Pinelands municipalities that share similar socio-economic, cultural, historical, political, and physical characteristics.
- Continue work on the Land Value Study and complete the Municipal Health study.

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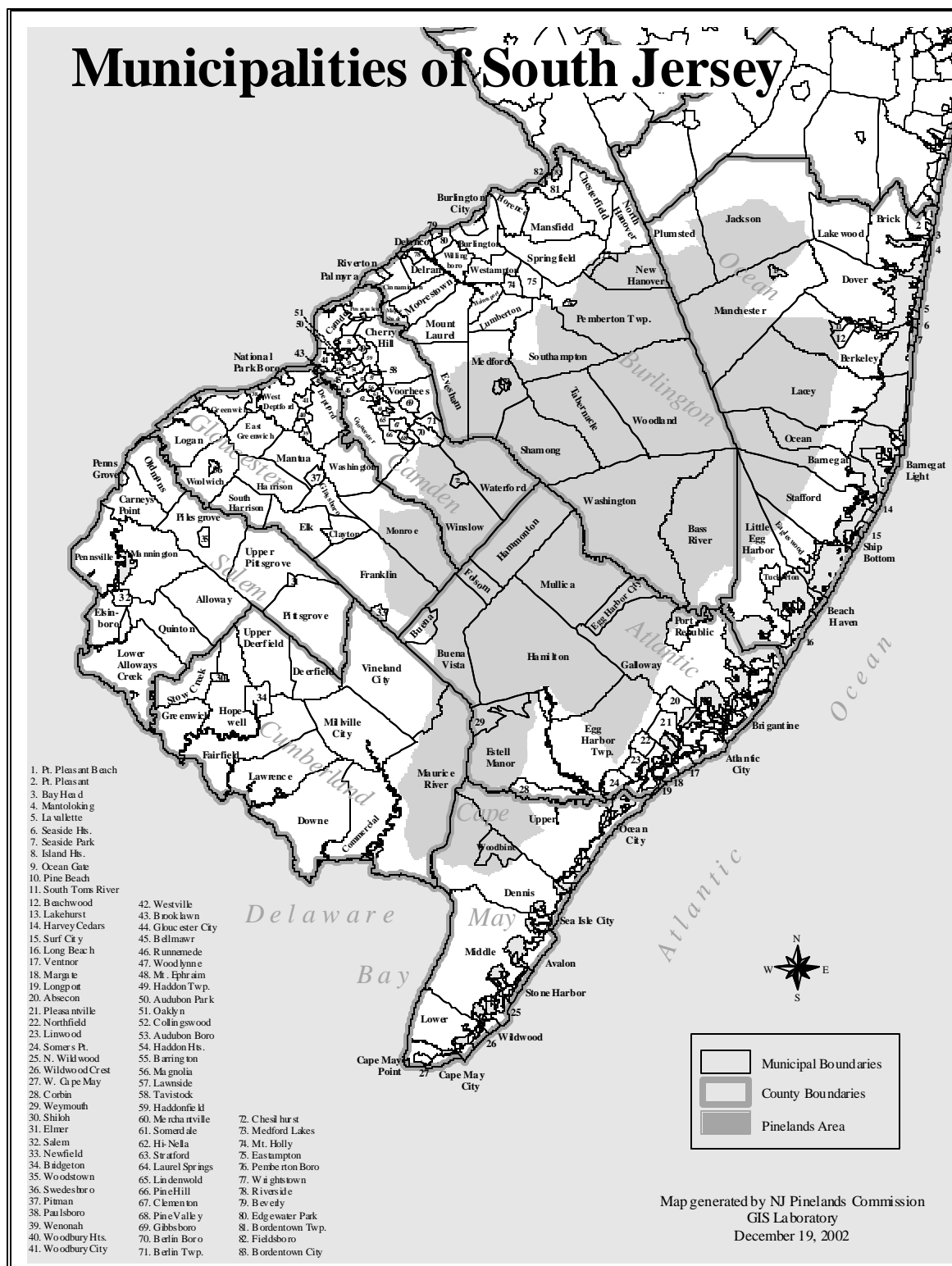
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## Appendix B. Pinelands and Non-Pinelands Acreage by County

County	Total Acreage	Acreage Inside the Pinelands	Acreage Outside the Pinelands	Proportion in the Pinelands	County Pinelands Acreage as a % of Total Pinelands Acreage	County Acreage as a Share of Total South Jersey Acreage
Atlantic	391,134	247,877	143,257	63.4%	26.4%	17.3%
Burlington	524,166	334,187	189,979	63.8%	35.6%	23.1%
Camden	145,593	54,915	90,678	37.7%	5.9%	6.4%
Cape May	182,633	34,807	147,826	19.1%	3.7%	8.1%
Cumberland	321,645	45,356	276,289	14.1%	4.8%	14.2%
Gloucester	215,616	33,580	182,036	15.6%	3.6%	9.5%
Ocean	485,569	187,490	298,079	38.6%	20.0%	21.4%
Total	2,266,357	938,212	1,328,145	41.4%	100.0%	100.0%

Source: NJ DEP Land Use / Land Cover data 1995/97

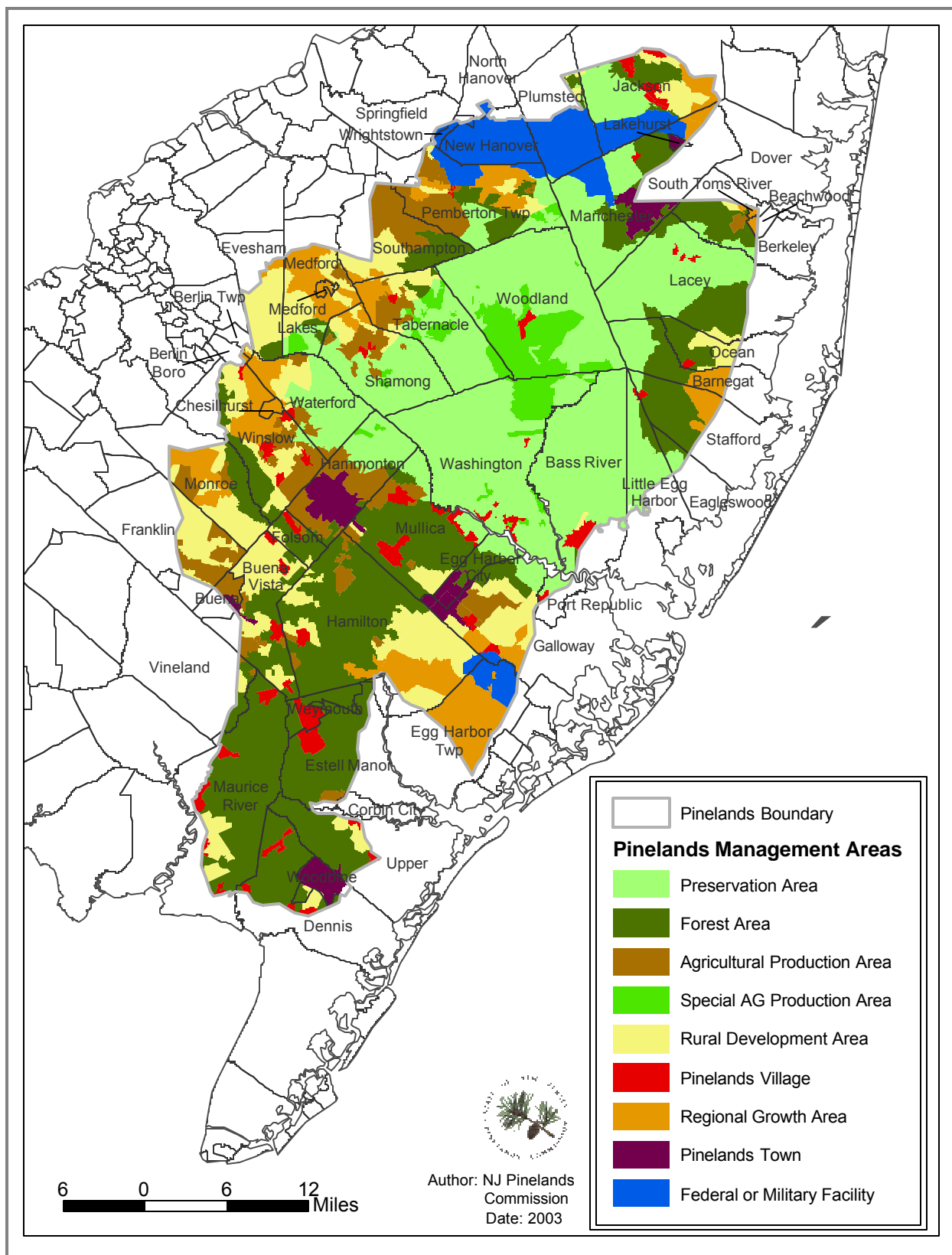
## Appendix C. Municipalities of South Jersey



## Appendix D Pinelands Management Areas

Management Areas	Description	Permitted Uses	
		Residential	Non-residential
Preservation Area District	Core of the Pinelands environment and the most critical ecological region; a large, contiguous wilderness area of forest which supports diverse plant and animal communities, many of which are threatened and endangered species.	None except 1 acre lots in designated infill areas	Limited commercial uses in designated infill areas
Special Agricultural Production Area	Discrete areas within the Preservation Area primarily used for berry agriculture and horticulture of native Pinelands plants.	Farm-related housing on 40 acres	Expansion of existing uses only
Forest Area	Similar to the Preservation Area District in terms of ecological value; a largely undeveloped area which is an essential element of the Pinelands environment, contains high quality water resources and wetlands and provides suitable habitat for many threatened and endangered species.	5 to 25 acre lots	Roadside retail within 300 feet of pre-existing use
Agricultural Production Area	Areas of active agricultural use, generally upland field agriculture and row crops, together with adjacent areas with soils suitable for expansion of agricultural operations.	Farm-related housing on 10 acres, non-farm housing on 40 acres	Agricultural commercial; roadside retail within 300 feet of pre-existing use
Rural Development Area	Areas which are slightly modified and suitable for limited future development; represents a balance of environmental and development values that is intermediate between Forest Areas and existing growth areas.	3.2 to 6.0 acre lots	Small scale community commercial and light industrial uses on septic systems
Pinelands Village	Small, existing, spatially discrete settlements which are appropriate for infill residential, commercial, and industrial development compatible with their existing character.	1 to 5 acre lots if not sewered	Commercial and industrial uses compatible with existing character
Pinelands Town	Large, existing spatially discrete settlements.	2 to 4 homes per acre with sewers	Commercial and industrial uses
Regional Growth Area	Areas of existing growth and adjacent lands capable of accommodating regional growth influences while protecting the essential character and environment of the Pinelands	2 to 4 homes per acre with sewers	Commercial and industrial uses
Military and Federal Installation Area	Federal enclaves within the Pinelands.	Not Applicable	Uses associated with function of the installation or other public purpose uses

## Appendix E. State-Designated Pinelands Management Areas



## Appendix F

### Southern New Jersey Housing Unit Construction Percentage of Total Housing in 2000 Built in Each Decade

