

A NEW JERSEY NEWSLETTER

# POPULATION AND CENSUS

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Thomas H. Kean, Governor

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Issue 28

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## FOCUS: STATE DATA CENTER

### STF3 HAS ARRIVED

The third 1980 census summary tape file (STF3) for New Jersey has been received by the NJSDC. This file contains data from the sample questionnaires. Categories include income, poverty status, labor force status, educational level, transportation, and various housing characteristics. Additional detail on this file is provided in this newsletter in the section, "Census '80 and Data News."

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## NATIONAL SDC PROGRAM WINS AWARD

The national SDC program has won an "Exemplary Systems in Government Award" from the Urban & Regional Information Systems Association (URISA).

Announced at URISA's 20th annual conference in Minneapolis, the awards program recognized "extraordinary achievement by government agencies in the . . . effective application of computer technology . . . that can be measured in terms of improved government services and increased benefits to citizens."

URISA, founded in 1964, has a varied membership of federal, state, and local government officials, college and university professors, and business interested in the use of information systems technology in the public sector. The Census Bureau was one of six award winners in the 1982 competition.

"This award carries particular importance because it recognizes the U.S. Commerce Department's dedication to providing essential services at the least possible cost," said U.S. Commerce Secretary Malcolm Baldrige. "This is an excellent example of federal and state governments working together to make vital information readily and conveniently available for use by citizens and organizations in the private sector."

So far, 48 state governments, Puerto Rico, and District of Columbia have entered into agreements with the Census Bureau to establish State Data Centers. New Jersey joined the program February 29, 1980. The 50 centers currently work with approximately 1,200 affiliates.

## NATIONAL SDC 2nd ANNUAL MEETING

The Census Bureau sponsored the 2nd Annual SDC Meeting on October 12 and 13 in Washington, D.C. New Jersey was represented by Connie O. Hughes (NJSDC), Gert Lewis (Rutgers University) and Rick Bender (Princeton University). Approximately 35-40 SDCs were represented.

Topics discussed on the first day included SDC program status; census product update; STF1, 2, and 3 products and distribution; and, Census Bureau SDC promotion. During the afternoon, concurrent discussion sessions were held on CENSPAC; computer graphics; data exchange; user fees; as well as building an effective affiliate network.

On the second day, plans for the 1990 census, 1982 economic censuses, and population estimates and projections were discussed. And, afternoon workshops were conducted on the 1980 Public Use Microdata and other federal agency data access and use.

Minutes of the conference will be forthcoming from the Census Bureau and when available may be reviewed by contacting Connie O. Hughes, New Jersey State Data Center (609-984-2593).

## SDC PROGRAM NATIONWIDE

As of December, all but two states -- Maine & Wyoming -- in the nation have joined in the Census Bureau's SDC program. The District of Columbia and Puerto Rico are also members, and the Virgin Islands is in the process of becoming a member. While the organizational structures and activities of individual SDCs vary, the main objective is the same -- to provide localized access to and expertise in census and related data.

SDC contacts in New Jersey neighboring states are listed below:

### Connecticut

Comprehensive Planning Division  
Office of Policy and Management  
State of Connecticut  
80 Washington Street  
Hartford, CT 06115  
(203)566-3905

### Maryland

Maryland Department of State Planning  
301 West Preston Street  
Baltimore, MD 21201  
Mr. Arthur Benjamin  
(301)383-5664

### Delaware

Delaware Development Office  
Townsend Bldg., 3rd Floor  
P.O. Box 1401  
Dover, DE 19901  
Mr. Douglas M. Clendaniel  
(302)736-4271

### New York

Division of Economic Research & Statistics  
New York Department of Commerce  
Tivlin Towers, Room 1005  
99 Washington Avenue  
Albany, NY 12245  
Mr. Mike Batutis  
(518)474-6115

### District of Columbia

Data Services Division  
Mayor's Office of Planning & Dev.  
Room 458, Lansburgh Bldg.  
420 7th Street, N.W.  
Washington, D.C. 20004  
Mr. Albert Mindlin  
(202)727-6533

### Pennsylvania

Institute of State and Regional Affairs  
Pennsylvania State University  
Capitol Campus  
Middletown, PA 17057  
Mr. Bob Surridge  
(717)948-6336

## 3rd ANNUAL NJSDC CONFERENCE

The NJSDC sponsored its 3rd annual conference on November 10, 1982 at the Center for Health Affairs, Princeton, NJ. Almost 200 decision/policy makers, planners, researchers, and librarians from both the public and private sector attended.

The purpose of the conference was threefold: (1) to analyze the 1980 census data for New Jersey; (2) to provide training in the use of census data; and (3) to increase awareness of census data availability. Speakers included John Bell and Bill Hill (the Philadelphia and New York Census Bureau Regional Directors); Samuel Ehrenhalt (the Regional Commissioner of BLS); George Sternlieb (Director of the Rutgers University Center for Urban Policy Research); and representatives of the Department of Labor's Division of Planning and Research.

The proceedings of this conference will be published in early 1983, and may be obtained by completing the order form on the last page of this newsletter.

## CENSUS '80 AND DATA NEWS

### REVISIONS TO 1980 CENSUS COUNTS: NJ

The total populations of Essex County and East Orange were revised and certified as of October 18, 1982 by Bruce Chapman, the Census Bureau Director. These changes will not be incorporated into 1980 census data products, such as the STF tabulations.

<u>Area</u>	<u>April 1, 1980 Population (revised)</u>
Essex County	851,304
East Orange	77,878

### DATA FROM THE 1980 CENSUS

Questions asked in the 1980 census fell into two categories--complete count (100%) or sample. Complete count questions were asked on every questionnaire. Sample questions were asked only on the "long form"--those sent to approximately 1 out of every 6 households. (See Table 1.)

Tabulations from the complete count questions are available from the Summary Tape Files (STFs)--STF1 and STF2. The NJSDC has processed these files and has distributed the data as shown on the accompanying "Who Has What." Sample data tabulations are available from STF3 and will also be available from STF4 and STF5.

#### Differences Between STFs

There are three main differences between the five STFs: data content, data detail, and geography. The data content and geography differences are summarized

**TABLE 1**  
**SUBJECT ITEMS INCLUDED IN THE 1980 CENSUS**

SHORT FORM	
100-Percent Items	
(STF1 & 2)	
<b>Population</b>	<b>Housing</b>
Household relationship	Number of units at address
Sex	Complete plumbing facilities
Race	Number of rooms
Age	Tenure (whether unit is owned or rented)
Marital status	Condominium identification
Spanish/Hispanic origin or descent	Value of home (owner-occupied units and condominiums)
	Contract rent (renter-occupied units)
	Vacant for rent, for sale, etc.; and period of vacancy
LONG FORM	
Sample Items*	
(STF3, 4, & 5)	
<b>Population</b>	<b>Housing</b>
School enrollment	Type of unit
Educational attainment	Stories in building and presence of elevator
State or foreign country of birth	Year built
Citizenship and year of immigration	Year moved into this house
Current language and English proficiency	Acreage and crop sales
Ancestry	Source of water
Place of residence five years ago	Sewage disposal
Activity five years ago	Heating equipment
Veteran status and period of service	Fuels used for house heating, water heating, Costs of utilities and fuels
Presence of disability or handicap	Complete kitchen facilities
Children ever born	Number of bedrooms
Marital history	Number of bathrooms
Employment status last week	Telephone
Hours worked last week	Air conditioning
Place of work	Number of automobiles
Travel time to work	Number of light trucks and vans
Means of transportation to work	Homewoner shelter costs for mortgage, real estate taxes, and hazard insurance
Persons in carpool	
Year last worked	
Industry	
Occupation	
Class of worker	
Weeks looking for work in 1979	
Amount of income in 1979 by source	

\*To meet the aim of greater statistical reliability for small areas, there will be a 50% sample for governmental jurisdictions with a population of less than 2,500. The sample will be one-in-six (16.7%) in areas with a population of 2,500 or more, yielding a National sample rate of 19.7%.

# WHO HAS WHAT

AVAILABILITY OF 1980 CENSUS DATA  
NJSDC NETWORK



	TYPE OF NJSDC AFFILIATED AGENCY	STATE & NEWARK PUBLIC LIBRARY	PRINCETON & RUTGERS UNIVERSITY COMPUTER CENTER	DELAWARE VALLEY REGIONAL PLANNING COMMISSION	COUNTY AFFILIATES: COUNTY PLANNING AGENCIES	NJ STATE AGENCIES	NJ DEPOSITORY LIBRARIES
<b>STF 1</b>							
PAPER COPIES							
State	YES	YES	YES	YES	YES	YES	YES
County							
MCD							
Census Tract	CENSUS TRACT ONLY	NO	VARIES	FOR OWN COUNTY ONLY	NO	NO	
Block Group							
ED							
Block							
TAPES	NO	YES	YES	VARIES	VARIES	VARIES	NO
<b>STF 2</b>							
PAPER COPIES	NO	NO	VARIES	FOR OWN COUNTY ONLY	VARIES	VARIES	NO
TAPES	NO	YES	YES	VARIES	VARIES	VARIES	NO
<b>STF 3</b>							
PAPER COPIES <sup>1</sup>							
State	YES	NO	YES	YES	YES	YES	NO
County							
MCD	YES	NO	NO	FOR OWN COUNTY ONLY	VARIES	VARIES	NO
Census Tract	YES	NO	NO	FOR OWN COUNTY ONLY	NO	NO	
TAPES	NO	YES	YES	VARIES	VARIES	VARIES	NO
<b>CENSPAC</b>	NO	YES	YES	VARIES	VARIES	VARIES	NO
<b>MAPS<sup>2</sup></b>	YES	YES	YES	YES	VARIES	VARIES	YES

<sup>1</sup> Selected data will be published in near future and all network members will receive publications.

<sup>2</sup> Types of maps vary by agency.

for reference purposes in the chart below. A complete description of these differences is provided in Census Bureau's 1980 Census Users Guide.

<u>File</u>	<u>Data Content</u>	<u>Geography (Smallest Area for which data are tabulated)</u>
STF1	100% Items	Block/Enumeration District
STF2	100% Items	Tract
STF3	Sample Items	Blockgroup/Enumeration District
STF4	Sample Items	Tract
STF5	Sample Items	Central City of SMSA County of 50,000+ Place of 50,000+

STF2 has greater data detail than STF1: there are more crosstabulations in STF2; STF2 contains many more tabulations by race and Spanish origin categories. STF5 has greater data detail than STF4, which has greater data detail than STF3-- more crosstabulations; STF4 contains tabulations for more race and Spanish origin groups than either STF3 or STF5, but STF5 has more racial detail than STF3.

#### The Newest File - STF3

Using formatting developed by the Census Bureau, the NJSDC has processed STF3. The end result is a set of 12 profiles, which in combination display all of the data from STF3 for a geographic area. Each profile is one page. The NJSDC has produced all of these profiles for the State of New Jersey, the 21 counties, the 567 municipalities, and the 1889 census tracts. These have been distributed as shown on "Who Has What." The topics covered in each profile are listed below.

<u>Profile Number</u>	<u>Data Topics</u>
I	Total Population, Race, Sex by Age, Race by Sex by Age, Marital Status, Children Ever Born
II	Persons in Household, Household Relationship, Group Quarters, Family Type by Presence of Children
III	Language Spoken, Ancestry, Nativity Place of Residence in 1975, Veterans Status, Disability
IV	Labor Force Status by Race and Sex and by Presence of Children, Occupation, Industry, Class of Worker
V	Place of Work, Journey to Work, Automobile Availability, Employment in 1979
VI	School Enrollment, Years of School Completed
VII	Household, Family, and Per Capita Income in 1979
VIII	Poverty Status of Families and Persons in 1979
IX	Housing Units, Occupancy Status, Units in Structure, Year Structure Built
X	Bedrooms, Bathrooms, Kitchen Facilities, Heating Equipment and Fuel, Telephone Availability
XI	Gross Rent, Monthly Owner Housing Costs
XII	Mean Value of Housing, Heating Equipment by Year Structure Built, Plumbing Characteristics

## STF3 - NJSDC Publications

The NJSDC plans on producing several publication based on the STF3 data. The content, cost, and planned released dates are given below. These publication may be ordered by completing the order form on the last page of this newsletter. All NJ depository libaries, as well as members of the NJSDC network will receive these publications.

Income and Poverty in New Jersey: 5 data items--median household income, median family income, per capita income, poverty rate (persons), poverty rate (families); geographic content--state, counties, municipalities.

Availability: December 1982                    Cost: \$2.50

Vol. IV Characteristics of the Labor Force in NJ: STF3 profile IV (see above description) plus employment in 1979; geographic content--state, counties, municipalities.

Availability: February-March 1983                    Cost: \$20.00

Vol. V Income Statistics for NJ: STF3 profile VII (see above description); geographic content--state, counties, municipalities.

Availability: March 1983                    Cost: \$20.00

Sample Data from the 1980 Census: 12 STF3 profiles (see above description); geographic content--state, counties

Availability: March-April 1983                    Cost: \$15.00

### NOTE TO USERS OF 1980 CENSUS INCOME DATA

In reviewing the STF3 data, the Census Bureau has noted some potential problems in some of the income tables. According to the Bureau, a small number of questionnaires were incorrectly coded resulting in an overstatement of income, particularly mean income, per capita income, and aggregate income. The magnitude and geographic distribution of the problem are being reviewed by the Bureau.

### 1980 CENSUS DEVELOPMENTS

STF1A Microfiche: All NJ depository libraries which ordered this microfiche have received it.

STF2: The national level file (C) should be available in December 1982-January 1983.

STF3A Microfiche: Until the review of the potential problems with the income data, the processing of the STF3A microfiche will be delayed.

Public-Use Microdata Samples: Production of these files is expected to begin this month, with completion in early 1983. Preliminary documentation will be available shortly.

1980 Users Guide: Supplement No. 1 will consist of (1) Updates and an appendix to Text and (2) Part B: Glossary. It should be available in early 1983. The appendix will provide an updated list of sources of assistance such as SDC's Clearinghouse registrants, etc.

Geographic Identification Code Scheme: The report will be available in a single, 800-page volume early 1983.

## NEIGHBORHOOD STATISTICS PROGRAM UNDERWAY

The Neighborhood Statistics Program (NSP) is getting underway with a series of workshops and the start of neighborhood area coding by the local participants. A series of workshops will be conducted in New Jersey by the Philadelphia and New York Census Bureau Regional Offices starting in January for participants in the program. Coding materials and instructions for completing the coding will be provided to all NSP participants in advance so that those attending the workshops will have them to bring to the workshop.

Participation in the NSP was entirely voluntary. The Census Bureau contacted the highest elected official of all municipalities of 10,000 or more inhabitants. Requests for participation in the program must have been postmarked by July 2, 1982. Neighborhood boundaries were provided by the participating municipalities.

The resulting NSP file will provide socio-economic characteristics of neighborhoods which are often necessary when formulating programs for residents of the areas and when looking at possibilities of qualification in federal and other programs. The NSP file will contain a variety of data items including education, income, employment, and poverty data plus narrative profiles describing characteristics of the neighborhoods.

Questions regarding general NSP procedures should be directed to the appropriate Census Bureau Regional Office: Philadelphia (215-597-8313); New York (212-264-4730). All questions concerning NSP policy or problems with maps or related materials should be directed to the Bureau's NSP staff (301-763-1818).

## CENSUS BUREAU RELEASES NEW PUBLICATIONS

During 1982, the U.S. Bureau of the Census published several reports detailing data from the 1980 Census. The following list gives the title of each report and a brief description of content:

Number of Inhabitants. New Jersey, PC80-1-32: issued in February of 1982, this report presents statistics from the 1980 Census of Population on the number of inhabitants of the state, classified by urban and rural residence and by size of place; its counties, county subdivisions, incorporated places, CDPs, SMSAs, SCSAs, and urbanized areas, and certain other geographic areas of the State.

Persons of Spanish Origin by State: 1980. PC80-S1-7: a supplementary report, released in August of 1982, showing 1980 Census population counts of the Spanish Origin population by type of Spanish origin (Mexican, Puerto Rican, Cuban, and Other Spanish) for the United States, regions, divisions, and states. Counts of Spanish and non-Spanish populations by race are also provided. In addition, the results of an evaluation study of the reporting in the 1980 Census items on Spanish/Hispanic origin or descent are presented in section "Preliminary Evaluation of Responses in the Mexican Origin Category of the Spanish Origin Item."

General Population Characteristics. New Jersey, PC80-1-B32: issued in August 1982, this report presents 100-percent data from the 1980 Census of Population on basic demographic characteristics of the inhabitants of the state, its counties, county subdivisions, places of 1000 or more inhabitants, SMSAs, SCSAs, urbanized areas,

American Indian reservations, Alaska Native villages, and certain other geographic areas of the state. (A large portion of the information compiled from the 1980 Census will appear in Volume 1, Characteristics of the Population, of which this report is part.)

General Housing Characteristics. New Jersey: HC80-1-A32: released in August 1982, this publication shows 100-percent data from the 1980 Census of Housing on general characteristics of housing units for the State classified by urban and rural residence and by size of place, its counties, county subdivisions, places of 1000 or more inhabitants, CDPs, SMSAs, SCSAs, urbanized areas, American Indian reservations, Alaska Native villages, and certain other geographic areas of the state. (This report is part of Volume 1, Characteristics of Housing Units, of which a large portion of the Housing information compiled from the 1980 Census will appear.)

Summary Characteristics for Governmental Units and Standard Metropolitan Statistical Areas, New Jersey, PHC80-3-32: presents statistics from the 1980 Census of Population and Housing based on tabulations of 100-percent data (i.e. information asked of all housing units) and sample data (i.e., additional information asked of approximately one out of every six households in most areas). The report includes data for the state, SMSAs, certain county subdivisions, and incorporated places.

Copies of these reports may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 or any U.S. Department of Commerce district office. All federal depository libraries have copies for review.

#### "OTHER" BUREAU REPORTS AVAILABLE

Because many individuals and organizations need information more frequently than decennial censuses allow and more promptly than data from a full-scale survey can be tabulated, the Census Bureau gathers and reports statistics on many census subjects in the form of "current reports."

The following is a list of current reports recently released by the Bureau.

County Government Employment in 1981. GE-81, #4: Data tabulated for this report include a summary of county government employment and payrolls, by function for October 1981 and prior years; county government employment and payrolls by function and population size-group for October 1981; county government full-time equivalent employment per 10,000 population and average October earnings of full-time employees, by function and population size-group for October 1981; and employment and payrolls of individual counties having 100,000 population or more for October 1981.

Public Employment in 1981. GE-81, #1: A companion report to "County Government Employment in 1981," with tabulations on public employment and payrolls by level of government, by function, and by state for October 1981 and 1980; employment and payrolls of state and local governments by type of government from 1957 to

1981, and by function for October 1981; payrolls of state and local governments by function and by state for October 1981; and other cross tabulations of government employment and payrolls.

Projections of the Population of the U.S., 1982 to 2050 (Advance Report). P25, #922: This report presents U.S. population projections by age, race, and sex for 1982 to 2050. These are based on the July 1, 1981 population estimates and race definitions, and are projected forward using a cohort-component method with alternative assumptions on fertility, mortality, and net immigration levels.

Population Profile of the United States: 1981. P20, #374: The eighth annual U.S. population profile contains a wide range of data from 1981 surveys as well as the 1980 Census. A new feature is a set of summary tables showing selected demographic, social, and economic characteristics annually from 1970 through 1981. The profile includes sections on: population growth and distribution; age, sex, race, and Spanish origin; households, families, and marital status; fertility and birth expectations; school enrollment and educational attainment; labor force; occupation and industry; income; and poverty. The geographic focus is national; however, some demographic data are shown for states.

County Business Patterns 1980 - New Jersey, CBP-80-32: Published annually since 1964, the County Business Patterns summary data are provided on number of employees for mid-March pay period, first-quarter total payroll, total annual payroll, number of establishments, and number of establishments by employment-size class. Data are tabulated by detailed kinds of businesses based on the 1972 Revised Standard Industrial Classification designations. Geographic areas tabulated are the United States, all 50 states, the District of Columbia, and Puerto Rico.

For additional information or to purchase any of the above reports, contact the Customer Services Branch, Data User Services Division, Bureau of the Census, Washington, D.C. 20233 or any U.S. Department of Commerce Regional Office. All federal depository libraries have copies for review.

#### WOMEN IN THE LABOR FORCE

The increase in female labor force participation was one of the major factors, along with the aging of the baby boom generation, contributing to the 17 percent 1970 to 1980 increase in the number of persons in New Jersey's labor force. (Simultaneously, the state's population grew by slightly less than 3 percent.) In fact, of the total 526,000 decade change in the size of the labor force, 387,000 or 73 percent were females.

According to the 1980 census, 51 percent of the women 16 years old and over were in the labor force in New Jersey. This compares to 43 percent in 1970. The percentage increase in the number of women in the labor force was almost three times the increase in the number of women 16 years old and over. And, the number of women not in the labor force in 1980 (1,527,000) declined from the 1970 level (1,480,000).

Table 1  
WOMEN IN THE LABOR FORCE  
NEW JERSEY

	<u>1970</u>	<u>1980</u>	<u>Number</u>	<u>1970-1980 Change</u> <u>Percent</u>
TOTAL, 16 years old and over*	2,656,488	2,996,280	339,792	12.8
Labor Force	1,129,631	1,516,472	386,841	34.2
Percent of Total	42.5	50.6	--	--
Armed Forces	1,027	2,830	1,803	175.6
Civilian Labor Force	1,128,604	1,513,642	385,038	34.1
Employed	1,071,919	1,402,194	330,275	30.8
Unemployed	56,685	111,448	54,763	96.6
Percent of Civilian Labor Force**	5.0	7.4	--	--
Not in Labor Force	1,526,857	1,479,808	-47,049	-3.1

Notes: \*Based on sample data, may not match tabulation from 100% data.

\*\*Not the official unemployment rate as reported by the U.S. Bureau of Labor.

Source: 1970 and 1980 Censuses of Population

Of course, the data in Table 1 do not show the full picture. Missing are the types of jobs at which women are working and in which industries. Are more women working full-time? Has the majority of growth occurred for single or married women? What are their familial characteristics? Unfortunately, these questions cannot be answered yet from the 1980 census. Most of this type of information will not be available until some time later in 1983.

One phenomenon that can be verified, however, is the increase of mothers in the labor force during the 1970s. It is this topic which will be discussed next.

#### Women in Labor Force by Presence of Children

The number of women in the labor force with at least one own child under the age of 18 years was 382,000 in 1970. By 1980, there were 516,000 mothers in the labor force. The percentage increase was about the same as that of all women in the labor force.

During the 1970s, the number of women with at least one child under the age of 6 years<sup>1</sup> actually declined. However, in 1980, there were almost 41,000

<sup>1</sup>The category "with own children under 6 years" includes women with at least one child under 6 years of age, who may or may not also have one or more children 6 to 17 years of age.

more such women in the labor force than in 1970. This is a particularly important statistic for those in the social services field for it is an indicator of the increased need for child care, i.e., day care centers, babysitters, etc. It may also be important for employers. Some companies provide on-site day care facilities, while others arrange for flexible hours.

Table 2  
WOMEN IN LABOR FORCE  
BY PRESENCE OF CHILDREN  
NEW JERSEY

	<u>1970</u>	<u>1980</u>	<u>1970-1980 Number</u>	<u>Change Percent</u>
TOTAL, 16 years old and over*	2,656,488	2,996,280	339,792	12.8
With own children under 6 yrs.**	477,238	397,330	-79,908	-16.7
In labor force	114,798	155,381	40,583	35.4
Percent in labor force	24.1	39.1	--	--
With children 6 to 17 years only	537,337	579,555	42,218	7.9
In labor force	267,442	360,544	93,102	34.8
Percent in labor force	49.8	62.2	--	--
No own children under 18 years	1,641,913	2,019,395	377,482	23.0
In labor force	747,391	1,000,547	253,156	33.9
Percent in labor force	45.5	49.5	--	--

Notes: \*Based on sample data, may not match tabulation from 100% data.

\*\*Includes women with own children under 6 years and 6 to 17 years.

Source: 1970 and 1980 Census of Population.

Women with only school age children, i.e., ages 6 to 17, participated in the labor force in New Jersey to a much greater extent in 1980 (62 percent) than in 1970 (50 percent). The growth of the number of these women in the labor force was more than twice the growth of the number of all women with only school age children.

Interestingly, it was the women with no children under 18 years of age whose labor force participation grew the least. Their participation rate was 46 percent in 1970 and 50 percent in 1980. However, in terms of numbers, they still represent the largest group of women in the labor force.

The reasons for the increase in female labor force participation are complex and probably interrelated. Whether it is due to the woman's liberation movement, delayed childbearing, and/or the state of the economy is beyond the scope of this article. The "why" cannot be determined from the 1980 census data, just the "what."

### Definitions, Concepts, Limitations

Labor Force Status. Persons 16 years old and over were classified as to their status in the labor force based on replies to several questions relating to work activity and status during the reference week. These items were asked on a sample basis. Data on labor force status refer to the calendar week prior to the date on which respondents completed their questionnaires or were interviewed by enumerators. Since the week of enumeration was not the same for all persons, the reference week for labor force data is not entirely uniform. For many persons, however, the reference week for answering the 1980 census employment question was the last week in March 1980.

Labor Force. Members of the Armed Forces and the civilian labor force.

Civilian Labor Force. Employed and unemployed civilians. Employed are those "at work" or "with a job but not at work," due to illness, vacation, industrial dispute, etc.

Comparability with data from other sources: Because employment data from the decennial census are obtained from respondents in households, they differ from statistics based on reports from individual business establishments, etc. There are several conceptual and definitional differences. Those interested in these differences should consult the 1980 Census User's Guide and the U.S. Bureau of Labor Statistics' Handbook of Labor Market Information.

Own Child. A never-married child under 18 years who is a son, daughter, stepchild, or adopted child of the householder or parent.

### Data Availability

The data presented in this article were secured from the 1980 census STF3. All of these data have been tabulated for the state, counties, municipalities, and census tracts. The 21 county planning boards have hard copies of these data for their own counties and jurisdictions. All New Jersey state agencies have the state and county data; some have the municipal data. The State and Newark Public Libraries have all of the data in hard copy. (Note: When requesting the data from these agencies, refer to STF3 profile 4.) Also, Princeton and Rutgers University Computer Centers have copies of the computer file.

### GOING TO WORK: 1980

In both 1970 and 1980, over one-third of New Jersey's workers who reported their place of work, worked outside their county of residence. However, in 1980, 30 percent of these workers worked outside the state, while in 1970, 34 percent of the state's workers who worked outside their resident county worked outside the state. In 1970, most out-of-state commuters worked in New York, followed by Pennsylvania and Delaware. Although these data for 1980 are still unavailable, it can be assumed that a similar pattern may have existed in 1980.

Table 1  
WORKERS BY PLACE OF WORK  
NEW JERSEY: 1970 AND 1980

	1970*		1980**	
	Number	Percent	Number	Percent
Total Workers***	2,617,433	100.0	2,944,153	100.0
Worked in New Jersey	2,303,229	88.0	2,624,014	89.1
Worked in County of Residence	1,688,932	64.5	1,861,128	63.2
Worked Outside of County of Residence	614,297	23.5	762,886	25.9
Worked Outside New Jersey	314,204	12.0	320,139	10.9
Worked in New York	207,599	7.9	NA	-
Worked in Pennsylvania	92,123	3.5	NA	-
Worked in Delaware	2,941	1.1	NA	-
Other	11,541	0.4	NA	-

Notes: \*Data are for workers 14 years of age and over.

\*\*Data are for workers 16 years of age and over.

\*\*\*Total workers who reported their place of work; in 1970, 222,112 workers and in 1980, 280,010 workers did not report their place of work.

NA = Not Available.

Source: 1970 and 1980 Censuses of Population.

Thus, it appears that there was only a modest, if any, change in the overall commutation patterns of New Jersey's workers. Because these data were based on a sample<sup>1</sup> and therefore subject to sampling variability, such small changes may not be significant.

#### County Commutation Highlights

Changes in commutation patterns within New Jersey may be attributed to several factors, e.g., a worker may change jobs from one location to another, but maintain his/her original place of residence; a worker may move from one area to another, but retain his/her job; or, a worker may change both his/her place of residence and job. In turn, some of these differences may be caused by increases or decreases in job availability.

Table 2 shows workers by place of work, 1970 and 1980 for the state and 21 counties. Keeping in mind that small changes may not be significant due to sampling errors, it can be seen that the percent of outcommuting of Sussex County's workers increased the most, from 43.4% in 1970 to 55.8% in 1980, and had the highest percentage of outcommuting in the state. Sussex County was the second fastest growing, in terms of population, in the state during the 1970s (49.8%), more likely due to residential preferences for a rural type environment than being

<sup>1</sup>In 1970 the 15 percent sample; in 1980, the sample size was about 1 out of 6 households.

Table 2  
WORKERS BY PLACE OF WORK  
AND MEAN TRAVEL TIME TO WORK  
1970 AND 1980

Area	1970*				1980**				Mean Travel Time To Work (Minutes)****	
	Total Workers***	Worked in County of Residence		Percent Outcommuting	Total Workers***	Worked in County of Residence		Percent Outcommuting		
		Worked Outside County of Residence	Percent			Worked in County of Residence	Worked Outside County of Residence			
New Jersey	2,617,433	1,688,932	928,501	35.5	2,944,153	1,861,128	1,083,025	36.8	24.9	
Atlantic	59,327	50,023	9,304	15.7	71,820	62,982	8,838	12.3	20.0	
Bergen	359,150	204,054	155,096	43.2	384,469	237,948	146,521	38.1	25.9	
Burlington	120,320	74,316	46,004	38.2	152,414	89,218	63,196	41.5	24.0	
Camden	158,006	93,602	64,404	40.8	176,829	106,103	70,726	40.0	24.4	
Cape May	17,510	14,411	3,099	17.7	25,739	19,683	6,056	23.5	20.5	
Cumberland	42,563	37,038	5,525	13.0	44,346	38,379	5,967	13.5	17.1	
Essex	332,740	233,779	98,961	29.7	302,096	198,510	103,586	34.3	25.7	
Gloucester	58,654	30,490	28,164	48.0	76,691	38,487	38,204	49.8	23.9	
Hudson	222,367	140,444	81,923	36.8	210,480	128,875	81,605	38.8	26.2	
Hunterdon	25,871	15,068	10,803	41.8	37,776	19,750	18,026	47.7	26.9	
Mercer	110,109	92,766	17,343	15.8	129,626	106,477	23,149	17.9	21.7	
Middlesex	221,198	139,523	81,675	36.9	257,181	165,927	91,254	35.5	24.5	
Monmouth	149,859	104,777	45,082	30.1	196,317	133,287	63,030	32.1	28.5	
Morris	143,679	88,132	55,547	38.7	183,653	112,057	71,596	39.0	25.5	
Ocean	59,538	38,108	21,430	36.0	109,411	67,814	41,597	38.0	30.2	
Passaic	170,080	108,907	61,173	36.0	179,689	103,024	76,665	42.7	22.2	
Salem	21,958	16,026	5,932	27.0	23,454	16,311	7,143	30.5	20.1	
Somerset	76,470	39,654	36,816	48.1	91,701	46,331	45,370	49.5	23.6	
Sussex	26,979	15,260	11,719	43.4	47,347	20,936	26,411	55.8	32.8	
Union	213,799	134,821	78,978	36.9	209,790	129,012	80,778	38.5	23.2	
Warren	27,256	17,733	9,523	34.9	33,324	20,017	13,307	39.9	23.2	

Notes: \* Data are for workers 14 years of age and over.

\*\* Data for workers 16 years of age and over.

\*\*\* Total workers who reported their place of work; in 1970, 222,112 workers and in 1980, 280,010 workers did not report their place of work.

\*\*\*\* Available for the first time in 1980.

Source: 1970 and 1980 Censuses of Population.

close to one's job location. Not surprisingly, the mean travel time to work of Sussex County's workers was also the highest in the state (32.8 minutes). This same type of reasoning may also apply for Cape May, Hunterdon, and Warren--these counties all experienced fairly substantial population growth during the 1970's.

The changes in the 1970 and 1980 outcommutation for Bergen and Passaic counties may be somewhat interrelated. Both counties exhibited population declines--Bergen (-5.8 percent); Passaic (-2.9 percent)--but the number of covered jobs in Bergen County increased by 27 percent and in Passaic County increased by only 2 percent. Perhaps, persons who had been living in Bergen County and working in Passaic County in 1970, found employment in Bergen County during the 1970s; and/or persons living in Passaic County and working outside the county in 1970 obtained employment in Bergen County between 1970 and 1980. This assertion cannot be verified, however, until more detailed 1980 census data are available.

Atlantic County residents appeared somewhat less likely to commute out of the county for jobs in 1980 than 1970. This may, to some extent, have been a function of the beginning of casino development in the late 1970s, i.e., people moved into Atlantic County upon securing a job at casinos or Atlantic County residents resigned positions outside the county to work at the casinos. It should be noted that in both 1970 and 1980 Atlantic County had among the lowest proportion of resident outcommuters in the state.

Generalizations about commutation and mean travel time to work are difficult. Common sense might prompt the assumption that the greater the proportion of a county's workers which commute out of the county for employment, the greater the mean travel time and vice versa. However, Gloucester and Somerset counties had the second and third highest percent of their workers outcommuting, but the mean travel time to work for both counties was below the state average of 24.9 minutes.

Until origin and destination data from the 1980 census are available, a full analysis of commutation cannot be undertaken. These data will be important not only to transportation planners. For example, the U.S. Office of Management and Budget will use these data to determine the construct of Metropolitan Statistical Areas, while others will utilize the data to delineate labor market areas.

#### Definitions, Concepts, Limitations

Place of Work. The geographic location of the plant, office, store, or other establishment where the person worked most last week, ascertained for persons at work last week, including both civilian employed and Armed Forces at work. If a person worked at more than one location or more than one job, the exact address of the location (branch) or job where the respondent worked most last week was requested.

Limitations: It should be noted that place of work tabulations do not necessarily give the total number of persons who work in the specified area, only those who also reside within the area summarized. Additionally, data on place of work are tabulated for persons who worked during the reference week; data on employed persons are tabulated for persons who worked during the reference week and were with a job but not at work (illness, industrial dispute, vacation, etc.). Hence, the number of workers in place of work tables will be less than the number of employed persons in the labor force tables.

Historical comparability: Place of work was asked first in 1960, when the inquiry was limited to the state, county, and city of work. In 1970, the question took on its current form, requesting the specific street address and ZIP code. A higher percentage of cases was successfully coded to tract and block of work in 1980 than in 1970 due to improvements in coding materials.

Travel Time to Work. The usual number of minutes spent in travling from home to work (one way) during the reference week, ascertained for persons at work last week and tabulated for persons 16 years old and over. Travel time includes time spent waiting for public transportation, picking up passengers in carpools, etc.

Limitations: Since travel time to work was coded only for a sample of one-half of all long-form questionnaires, along with place of work and residence in 1975, the estimated number of workers 16 years and over who did not work at home as derived from travel time figures will differ somewhat from the corresponding figures derived from a tabulation of means of transportation to work, a full-sample item. Further, any cross-tabulation of travel time to work with other items is necessarily based only on the half sample.

Historical comparability: Travel time to work is a new item for 1980.

#### Transportation-Related Data Availability

These transportation-related data (place of work, travel time to work) represent only some of this type of information available from the 1980 census STF3. Place of work data are also delineated by the following categories: worked in residence SMSA vs. outside, worked in municipality of residence vs. outside, worked in a place vs. outside. Travel time to work data are detailed by broad time spans, i.e., less than 5 minutes, 5 to 9 minutes, etc.

Other transportation data include mode of transportation to work, carpool status, vehicle availability by race and Spanish origin. In addition, information is available on public transportation disability status.

All of the data listed above have been tabulated for the state, counties, municipalities, and census tracts. The 21 county planning boards have hard copies of these data for their own counties and jurisdictions. All New Jersey state agencies have the state and county data; some have the municipal data. The State and Newark Public Library have all of the data in hard copy.  
(Note: When requesting the data from these agencies, refer to STF3 profiles 5 and 3.) Also, Princeton and Rutgers University Computer Centers have copies of the computer file.

#### CENSUS FIGURES SHOW EXPANDING HISPANIC POPULATION

Highlights of the data on New Jersey from the 1980 census report, Persons of Spanish Origin by State include:

\*New Jersey's Hispanic population increased by 70.5%

\*The Spanish origin proportion of the New Jersey total increased from 4.0% to 6.7% during the decade, reaching a 1980 total of 491,883.

\*While the Mexican-origin population of the nation represented the largest Hispanic group, it accounted for only 2.7% of New Jersey's Spanish origin population.

\*New Jersey had the second largest concentration of Puerto Ricans in the United States (243,540). Almost 1,000,000 lived in New York State. And, 49.5% of New Jersey's Hispanic population were Puerto Ricans.

\*New Jersey also had the second largest concentration of Cubans (80,860), following Florida's 470,250.

#### COMPUTING STANDARD ERRORS FOR 1980 CENSUS DATA

Data from the 1980 census sample are now available for New Jersey. These data include items on income, employment, schooling, ancestry, and many other characteristics of the state's population and housing stock. Since these are estimates based on a sample, they may be expected to differ from complete count figures. Indeed, the estimates are subject to both sampling error and nonsampling error. Sampling error, which is what this article is all about, arises from the selection of persons and housing units included in the sample. Nonsampling errors are all the other errors that may occur during the collection and processing of census data. For example, coding hotel clerks as physicians.

#### Sample Design

The statistic used to measure sampling error is called the standard error. The specific formula for calculating a standard error depends on the sample design, that is, how the housing units were selected for inclusion in the census sample. The basic sampling unit for the 1980 census was the housing unit, including all occupants. For persons living in group quarters (prison, dormitories, and so on), the sampling unit was the person. The Census Bureau had lists of addresses, maps, and estimates of the population for nearly everywhere in the United States. Using this information, the census-takers selected half of all housing units and persons in group quarters for incorporated places with a precensus population estimate of 2,500 persons. In all other places, one-sixth of the housing units or persons in group quarters were sampled.

Nationally, about 19% of all housing units were included in the census sample, while in New Jersey 454,082 of 2,772,149 (16.4%) housing units were in the 1980 sample. The sampling rate for persons was 16.1%, an estimated 1,188,357 from a total population of 7,364,823.

#### Computing Standard Errors

To calculate the approximate standard error of an estimate, follow the steps given below.

- a. Compute the unadjusted standard error using these formulas:

$$(1) \hat{Se}(\hat{y}) = \sqrt{5 \hat{y} \left(1 - \frac{\hat{y}}{N}\right)}, \text{ for totals}$$

where N is the total count of persons in the area if the estimated total is a person characteristic or the total count of housing units in area if the estimated total is a housing unit characteristic and  $\hat{y}$  is the estimate of characteristic total.

$$(2) \hat{Se}(\hat{p}) = \sqrt{\frac{5}{B} \hat{p} (100 - \hat{p})}, \text{ for percentages}$$

where B is the base of the estimated percentage and  $\hat{p}$  is the estimated percentage.

- b. For the geographic tabulation area with which you are working, compute the "percent in sample" by dividing the appropriate unweighted sample count by the corresponding 100-percent count. For person and family characteristics these figures are found in STF3 tables 2 and 3; for household and housing unit characteristics these figures are found in STF3 tables 5 and 6.

- c. Use Table C (page 24) to obtain the factor for the characteristic and range that contains the percent in sample with which you are working. Multiply the unadjusted standard error by this factor. If the estimate is a crosstabulation of more than one characteristic, use the largest factor.

As is evident from the formulas (1) and (2), the unadjusted standard errors of zero estimates or of very small estimated totals or percentages approach zero. This is also the case for very large percentages or estimated totals that are close to the size of the tabulation areas to which they correspond. These estimated totals and percentages are, nevertheless, still subject to sampling and nonsampling variability, and an estimated standard error of zero (or very small standard) error is not appropriate. Use a standard error of 16 for totals and the SE for 2% in formula (2).

Differences. The standard errors estimated with these methods are not directly applicable to differences between two sample estimates. In order to estimate the standard error of a difference, the methods are to be used somewhat differently in the following three situations.

- a. For the difference between a sample estimate and a complete-count value, use the standard error of the sample estimate.
- b. For the difference between (or sum of) two sample estimates, the appropriate standard error is approximately the square root of the sum of the two individual standard errors squared; that is, for standard errors  $Se_x$  and  $Se_y$  of estimates x and y:

$$Se_{(x+y)} + Se_{(x-y)} = \sqrt{(Se_x)^2 + (Se_y)^2}$$

This method, however, will underestimate (overestimate) the standard error if the two items in a sum are highly positively (negatively) correlated. This method may also be used for the difference between (or sum of) sample estimates from two censuses or between a census sample and another survey. The standard error for estimates not based on the 1980 census sample must be obtained from an appropriate source outside of this documentation.

- c. For the difference between two estimates, one of which is a subclass of the other, use the methods directly where the calculated difference is the estimate of interest.

Means. The standard error of a mean depends upon the variability of the distribution on which the mean is based, the size of the sample, the sample design (for example, the use of households as a sampling unit), and the estimation procedure used.

An approximation to the standard error of the mean may be obtained as follows: Compute the variance of the distribution on which the mean is based; multiply this value by five and divide the product by the total count of units in the distribution; obtain the square root of this quotient and multiply the result by the adjustment factor from table C that is appropriate for the characteristic on which the mean is based.

Medians. For the standard error of a median of a characteristic, it is necessary to examine the distribution from which the median is derived, as the size of the base and the distribution itself affect the standard error. An approximate method is given here. As the first step, compute one-half of the number on which the median is based (refer to this result as  $N/2$ ). Treat  $N/2$  as if it were an ordinary estimate and obtain its standard error as instructed above using formulas (1), (2) and table C. Compute the desired confidence interval about  $N/2$ . Starting with the lowest value of the characteristic, cumulate the frequencies in each category of the characteristic until the sum equals or first exceeds the lower limit of the confidence interval about  $N/2$ . By linear interpolation, obtain a value of the characteristic corresponding to this sum. This is the lower limit of the confidence interval of the median. In a similar manner, cumulate frequencies starting from the highest value of the characteristic until the sum equals or exceeds the count in excess of the upper limit of the interval about  $N/2$ . Interpolate as before to obtain the upper limit of the confidence interval for the estimated median.

#### Confidence Intervals

A sample estimate and its estimated standard error may be used to construct confidence intervals about the estimate. These intervals are ranges that will contain the average value of the estimated characteristic that results over all possible samples, with a known probability. For example, if all possible samples that could result under the 1980 census sample design were independently selected and surveyed under the same conditions, and if the estimate and its estimated standard error were calculated for each of these samples then:

1. Approximately 68 percent of the intervals from one estimated standard error below the estimate to one estimated standard error above the estimate would contain the average result from all possible samples; and
2. Approximately 95 percent of the intervals from two estimated standard errors below the estimate to two estimated standard errors above the estimate would contain the average result from all possible samples.

The intervals are referred to as 68 percent and 95 percent confidence intervals, respectively.

The average value of the estimated characteristic that could be derived from all possible samples is or is not contained in any particular computed interval. Thus, we cannot make the statement that the average value has a certain probability of falling between the limits of the calculated confidence interval. Rather, one can say with a specified probability or confidence that the calculated confidence interval includes the average estimate from all possible samples (approximately the complete-count value).

Confidence intervals may also be constructed for the difference between two sample figures. This is done by computing the difference between these figures, obtaining the standard error of the differences (using the formula given earlier) and then forming a confidence interval for this estimated difference as above. One can then say with specified confidence that this interval includes the difference that would have been obtained by averaging the results from all possible samples.

The estimated standard errors for 1980 census data do not include all portions of the variability due to nonsampling error that may be present in the data. The standard errors reflect the effect of simple response variance, but not the effect of correlated errors introduced by enumerators, coders, or other field or processing personnel. Thus, the standard errors calculated represent a lower bound of the total error. As a result, confidence intervals formed using these estimated standard errors may not meet the stated levels of confidence (i.e., 68 or 95 percent). Thus, some care must be excised in the interpretation of the census data based on the estimated standard errors.

#### Example

The following example illustrates the use of Table C with data from New Jersey:

1. The data show that for Pleasantville city, 6,015 out of all 9,996 persons aged 16 years and over were in the civilian labor force. The procedure for obtaining the standard error of 6,015 will be demonstrated.

The unadjusted standard error for the estimated total 6,015 is obtained from the formula (1). In order to avoid interpolation, the use of the formula will be demonstrated here. By the formula, the unadjusted standard error,  $se$ , is given by

$$se = \sqrt{5 (6,015) (1 - \frac{6,015}{13,435})} = 129 \text{ persons}$$

Note: The total count of persons for Pleasantville city is 13,435.

The standard error of the estimated 6,015 persons aged 16 years and over who were in the civilian labor force is found by multiplying the unadjusted standard error 129, by the appropriate adjustment factor. Table 2 of the STF3 record for Pleasantville city shows 2,030 as the unweighted sample count of persons. This figure is found to be 15.1 percent of the 100-percent count of 13,435 persons shown in STF3 table 3. Table C lists the adjustment factor for the characteristic "Labor force status." The column that gives the range which includes 15.1 percent in sample shows the adjustment factor to be 1.0 for "Labor force status." Thus, the estimated standard error is  $129 \times 1.0$  or 129.

The estimated percent of persons 16 years and over who were in the civilian labor force is 60.2. From formula (2), the unadjusted standard error is found to be 1.1. Thus, the standard error for the estimated percent of persons 16 years and over who were in the civilian labor force is seen to be  $1.1 \times 1.0 = 1.1$ .

A note of caution concerning numerical values is necessary. Standard errors of percentages derived in this manner are approximate. Calculations

can be expressed to several decimal places, but to do so would indicate more precision in the data than is justifiable. Final results should contain no more than one decimal place when the estimated standard error is one percentage point (i.e., 1.0) or more.

2. In the previous example, the standard error of the 6,015 persons, 16 years and over in Pleasantville city who were in the civilian labor force was found to be 129. Thus, a 95-percent confidence interval for this estimated total is found to be

$$\begin{aligned}[6,015 - 2(129)] &\text{ to } [6,015 + 2(129)] \\ \text{or} \\ 5,757 &\text{ to } 6,273.\end{aligned}$$

One can say with about 95-percent confidence that this interval includes the value that would have been obtained by averaging the results from all possible samples.

3. The calculation of standard errors and confidence intervals will be illustrated when a difference of two sample estimates is obtained. For example, the number of persons in Ocean City city aged 16 years and over who were in the civilian labor force is 6,187 and the total number of persons aged 16 years and over is 11,820. Thus, the percentage of persons 16 years and over who were in the civilian labor force is 52.3 percent. The unadjusted standard error from formula (2) is 1.1 percent. The STF-3 record for Ocean City city contains as the unweighted sample count 2,047 persons in table 2 and 13,949 as the 100-percent count of persons yielding a percent-in-sample of 14.7 percent. From table C, the column that gives the range which includes 14.7 percent in sample shows the adjustment factor to be 1.0 for "Labor force status." Thus, the approximate standard error of the percentage (52.3 percent) is  $1.1 \times 1.0 = 1.1$ .

Suppose that one wishes to obtain the standard error of the difference between the cities of Pleasantville and Ocean City of the percentages persons who were 16 years and over who were in the civilian labor force.

The difference in the percentages of interest for the two cities is

$$60.2 - 52.3 = 7.9 \text{ percent.}$$

Using the results of the previous example

$$\begin{aligned}\text{Se (7.9)} &= \sqrt{[\text{Se}(60.2)]^2 + [\text{Se}(52.3)]^2} \\ &= \sqrt{(1.1)^2 + (1.1)^2} \\ &= 1.6 \text{ percent.}\end{aligned}$$

The 95-percent confidence interval for the difference is formed as before.

$$\begin{aligned}[7.9 - 2(1.6)] &\text{ to } [7.9 + 2(1.6)] \\ \text{or} \\ 4.7 &\text{ to } 11.1.\end{aligned}$$

One can say with 95-percent confidence that the interval includes the difference that would have been obtained by averaging the results from all possible samples.

Table C: Standard Error Adjustment Factors

Characteristics	Percent of Persons or Housing Units in Sample <sup>1/</sup>			Characteristics	Percent of Persons or Housing Units in Sample		
	Less than 19 Percent	19 to 33 Percent	More Than 33 Percent		Less than 19 Percent	19 to 33 Percent	More Than 33 Percent
<b>POPULATION</b>							
Urban and Rural	1.0	0.9	0.5	Occupancy and Vacancy Status	1.1	0.9	0.5
Age, Sex, Race, and Spanish Origin <sup>2/</sup>	1.2	1.1	0.6	Tenure	1.1	1.0	0.6
Household Type	1.1	1.0	0.5	Units in Structure	1.1	0.8	0.5
Household Relationship	1.2	1.1	0.6	Stories in Structure	1.0	0.4	0.4
Household Size	1.1	0.9	0.5	Passenger Elevator	0.9	0.5	0.5
Marital Status	1.0	0.8	0.5	Source of Water	1.0	0.9	0.5
Language Usage and Ability to Speak English	1.5	1.5	0.8	Sewage Disposal	1.1	0.9	0.6
Ancestry	1.7	1.5	0.8	Year Structure Built	1.0	0.9	0.5
Type of Group Quarters	0.8	0.8	0.4	Year Householder Moved into Housing Unit	1.1	0.9	0.5
Nativity and Place of Birth	1.8	1.8	0.9	Heating Equipment and Fuel	1.1	0.9	0.5
Residence in 1975	3.9	3.5	2.2	Kitchen Facilities	1.1	0.9	0.5
Place of Work	2.0	1.8	1.1	Number of Bedrooms or Bathrooms	1.1	0.9	0.5
Travel Time to Work	1.7	1.6	0.9	Telephone in Housing Unit	1.1	0.9	0.5
Means of Transportation to Work and Private Vehicle Occupancy	1.2	1.0	0.6	Air Conditioning	1.1	1.0	0.5
School Enrollment	1.3	1.2	0.6	Vehicles Available	1.1	0.9	0.5
Years of School Completed	1.2	1.0	0.6	Gross Rent	1.1	1.0	0.5
Veteran Status and Period of Service	1.0	0.9	0.5	Inclusion of Utilities in Rent	1.0	0.9	0.5
Work and Public Transportation Disability	1.1	0.9	0.5	Gross Rent as Percentage of Income	1.1	0.8	0.5
School Enrollment and Years of School Completed by Labor Force Status	1.2	1.0	0.5	Mortgage Status and Selected Monthly Owner Cost	1.0	0.9	0.5
Labor Force Status	1.0	0.9	0.5	Selected Monthly Owner Cost as Percentage of Income	1.1	0.9	0.5
Hours Worked Per Week and Weeks Worked in 1979	1.0	0.9	0.5	Units with Complete Plumbing Facilities for Exclusive Use			
Unemployment in 1979	1.1	1.0	0.5	Built 1939 or Earlier	1.1	0.8	0.5
Industry and Occupation	1.1	1.0	0.5	With 1.01 Persons Per Room or More	1.1	0.8	0.5
Class of Worker	1.3	1.1	0.6	Lacking Central Heating Equipment	1.1	0.9	0.5
Household Income	1.1	0.9	0.5				
Income Type	1.2	1.0	0.5				
Family Income	1.1	0.9	0.5				
Unrelated Individual Income	1.1	0.9	0.5				
Workers in Family	1.2	1.0	0.6				
Poverty Status - Family	1.1	0.8	0.5				
Poverty Status - Persons	1.9	1.5	0.9				
Poverty Status - Unrelated Individuals	1.1	0.9	0.5				

<sup>1/</sup> For person and family characteristics, derive this figure from the appropriate SF7-3 data by dividing the unweighted sample count of persons (table 2) by the 100-percent count of persons (table 3). For household and housing unit characteristics, derive this figure by dividing the unweighted sample count of housing units (table 5) by the 100-percent count of housing units (table 6).

<sup>2/</sup> For use only in tables 11 through 17.

Additional information in sampling errors can be found in 1980 census publications and technical documentation. Examples used in this article were taken from the U.S. Bureau of Census Technical Documentation for Summary Tape File 3.

## SDC NETWORK NOTES

### NJSDC NETWORK RECEIVES 1980 CENSUS SAMPLE DATA

As described in the previous section of this newsletter, "CENSUS '80 AND DATA NEWS," the third Summary Tape File from the 1980 census containing sample data has been received. In a continuing effort to provide localized access to the data, the NJSDC processed the file and distributed output to members of the NJSDC network. For a listing of the NJSDC network members, see issue #27 or contact NJSDC, Division of Planning and Research, Department of Labor, CN 388, Trenton, NJ 08625-0388.

Princeton & Rutgers University Computer Centers have a copy of the tape. Through an agreement with Rutgers University, the Educational Computer Network (ECN) also has a tape copy.

State Library and Newark Public Library received output displaying all data for New Jersey, 21 counties, 567 municipalities, and all census tracts.

County Planning Boards have the output for New Jersey, 21 counties, and their own municipalities and census tracts.

NJ State Agencies received all New Jersey and county data, and, based upon indicated need, selected municipal data. NJ state employees should contact their agency representative to ascertain the holdings.

Depository Libraries will receive copies of NJSDC publications. The output referenced above may be available at libraries through the cooperating efforts of county planning boards and the State and Newark Public Libraries.

## BRIDGEWATER TWP. & WAYNE PUBLIC LIBRARY HOST MINI-WORKSHOPS

Two mini-workshops on census data were sponsored on October 7 and October 22 by Bridgewater Township and the Wayne Public Library, respectively. Margaret Tabin-Oialo of the Census Bureau's New York Regional Office and Connie Hughes of the NJSDC made presentations on 1980 census data availability. The small group at the Bridgewater Township Building consisted of local area planners and engineers; while the audience of about 30 at the Wayne Public Library was primarily librarians. At both workshops the corresponding NJSDC-affiliated county contact was present to answer questions.

## ECONOMIC NOTES

### EEO FILE NOW AVAILABLE

The Equal Employment Opportunity (EEO) file, a special product of the 1980 census, is now available. Tape copies of the entire national file have been distributed to the Princeton (Judith Rowe, 609-452-6052) and Rutgers (Gert Lewis, 201-932-2483) University Computer Centers. Output is being distributed to members of the NJSDC network, and the New Jersey Department of Labor's Division of Planning and Research is planning on producing a publication containing New Jersey data from this file.

Persons working on affirmative action programs should find this file to be of extreme value. The EEO file will contain two tabulations: detailed occupation data (514 categories) and years of school completed. It will use 12 race and Spanish origin categories for each tabulation. The geographic areas covered by the file are counties, SMSA's, incorporated places of 50,000 or more inhabitants, states, and Census Designated Places of 50,000 or more.

## THE CODING OF OCCUPATIONAL LABOR MARKET INFORMATION

Prior to the passage by Congress of the Education Amendments of 1976, the collection and distribution of occupational labor market information was based upon the specific needs of the individual agencies involved. Each agency collected that data necessary for its operations and developed a coding structure to meet its own needs and the needs of its constituency. What evolved was a myriad of data sources dealing with occupations and no methodology valid to compare the data.

The Department of Labor utilized the Dictionary of Occupational Titles (DOT), with its 13,000 specific codes, to collect demand and supply data through the Employment Service Automated Reporting System (ESARS), and the ES-203 reporting system for unemployment insurance claimants. Current and projected occupational employment levels were developed utilizing a set of survey codes utilized only within the Occupational Employment Survey (OES) Program.

Two other major systems were developed to collect occupational supply data:

- 1) The NJ Department of Education collected vocational education program enrollment and completion data via the Vocational Education Data System (VEDS) and collected data on enrollments and completers from college and university programs via the Higher Education General Information System (HEGIS), and
- 2) The Census Bureau in the US Department of Commerce utilized their own occupational coding system to collect supply data through the Commerce 1970 census.

It has been long realized that the users of occupational information were having difficulty in obtaining and using the available data due to the incompatibility of the various coding systems. In the late 1970s federal enabling legislation was passed that was aimed at improving the situation. The Education Amendments of 1976 called for the development and implementation of... "an occupational information system to meet the common occupational information needs of vocational education programs and employment and training programs at the national, State, and local levels, which system shall include data on occupational demand and supply based on uniform definitions, standardized estimating procedures, and standardized occupational classification," (P.L. 94-482, Title II, Vocational Education, Sec. 161(b) (1)).

Further Federal legislation supporting the development of such a system included the:

- Youth Employment and Demonstration Act of 1977 (P.L. 95-93)
- Career Education Incentive Act (P.L. 95-207)
- Comprehensive Employment and Training Act (P.L. 95-524)

and more recently,

- The Jobs Training Partnership Act (P.L. 97-300)

The Federal-State administrative structure established to implement the development was the National Occupational Information Coordinating Committee (NOICC)/State Occupational Information Coordinating Committee (SOICC) Network. These agencies are inter-agency consortiums composed of representatives from the major occupational data collectors and user groups. In New Jersey, the agency designated as the network representative responsible for the coordination of the collection and dissemination of all occupational labor market information is the New Jersey Occupational Information Coordinating Committee which is housed in the New Jersey Department of Labor's Division of Planning and Research.

One of the first major projects undertaken at the national level by NOICC was an extensive review of the occupational coding systems in use in 1979. This study revealed the extent of the coding problem and resulted in NOICC adopting the Standard Occupational Classification (SOC) as the standard structure for the presentation of occupational information. While NOICC believed that it was important to maintain the integrity of the existing classification systems, it also recognized the important advantages of the incorporation of a standard occupation classification system such as the SOC, which would enhance the possibility of information access about one area or State from another area or State, improve the match of data between the 1980 Census of Population and other data collection programs, provide a basis for the aggregation of occupational employment information for presentation of national occupation information and provide a framework for the inclusion of job openings information in a delivery system.

The Standard Occupational Classification provides a mechanism for cross-referencing and aggregating occupation-related data collected by social and economic statistical reporting programs. The system is designed to maximize the analytical utility of statistics on labor force, employment, income, and other occupational data collected for a variety of purposes by various agencies of the United States Government, state agencies, professional associations, labor unions and private research organizations.

The Classification covers all occupations in which work is performed for pay or profit, including work performed in family-operated enterprises where direct remuneration may not be made to family members. This classification may be used to classify volunteers, but occupations unique to volunteer settings were not included.

The SOC provides a coding system and nomenclature for identifying and classifying occupations within a framework suitable for use in and out of government. However, because of the vast amount of occupational detail that was considered in developing such a system, and the wide variety of uses of occupational data, it was not possible to construct a system that will meet the specific needs of all organizations. The level of detail, for example, may not be sufficient for specialized analytical purposes for internal organizational management requirements. In such cases, however, approaches can generally be taken that will not conflict with the general scheme of the system.

Once the SOC was adopted as the primary coding system, the next task was to either modify the existing systems to conform to the SOC or to develop cross-walks to relate the equivalent codes from each system. As constructed, the DOT crosswalks fairly well with SOC as each SOC is composed of one to many hundred individual DOT's. For 1980, the Bureau of the Census adopted the SOC as its coding structure and the detailed occupational data developed from the Census will be published at one of the SOC levels.

The Occupational Employment Survey (OES) conducted by the States in cooperation with the Bureau of Labor Statistics has developed and is now utilizing a new coding system which is, to a large degree, compatible with SOC. Demand data and projections utilizing this new structure will be available beginning in 1984 and by 1986 the coding system will be in full use.

As previously noted, educational occupational supply data was collected primarily by the National Center for Educational Statistics (NCES) via VEDS or Handbook VI coding structure and the HEGIS Taxonomy. In many instances, these

structures were not compatible making the aggregation of data difficult if not impossible. To alleviate this problem, the Classification of Instructional Programs (CIP) was developed and adopted for use in both VEDS and HEGIS reporting programs.

This instructional program classification will serve a wide range of persons in the educational community, from those involved in elementary programs to those involved in post-doctoral studies, including persons in the various forms of adult/continuing education and those in both the private and public sectors. It is intended that CIP will make their tasks for collecting, recording, reporting, analyzing, interpreting, and disseminating data about instructional programs easier. It will also ease the burden of crosswalking educational supply data to occupational demand data, as the CIP can be relatively easily matched to the SOC occupational structure.

As a result of the efforts of the NOICC/SOICC network, in part, the occupational information picture is beginning to come together as a coherent system which combines the data collected by many agencies to develop an Occupational Information System (OIS). The OIS will provide the people of New Jersey with a clear, concise and up-to-date package of information to be utilized in the planning and administration of programs, and in the career development of its citizens. For additional information, contact Laurence H. Seidel, Staff Director, NOICC, Labor and Industry Building, CN 056, Trenton, New Jersey 08625-0056, or call (609) 292-2682.

## 1982 ECONOMIC CENSUS

Conducted by the US Commerce Department's Census Bureau, the economic censuses were started in 1810 with a census of manufactures. Firms are canvassed every five years and asked to report on the number of their employees, payrolls and value of sales or shipments for each place of business. Additional questions relate to the particular business or industry in which each establishment is engaged. The Bureau asks that the forms be returned by February 15, 1983.

The economic censuses cover manufacturing, mining, retail trade, wholesale trade, service industries and construction industries. Included also are special surveys of transportation and minority-owned and women-owned-businesses.

Areas covered by the censuses include the 50 states, the District of Columbia, Puerto Rico, and the "outlying areas" of the Virgin Islands, Guam and the Marianas.

Information obtained from the 3 million firms participating directly in the censuses will be augmented by data concerning some 5 million smaller businesses obtained from administrative records of other government agencies.

Results of the censuses will be published by industry classification for the nation as a whole, for each state and for counties, cities and Standard Metropolitan Statistical Areas or SMSAs.

Additionally, retail trade figures will be produced for major retail centers--essentially, central business districts and shopping centers--located within most

of the SMSAs. Reports from the censuses also will show figures on sales- and employment-size, legal form of organization and by single- and multi-establishment firms.

Information reported to the Census Bureau is confidential by law and can be used for statistical purposes only. The Bureau publishes no data which can be associated with any firm or establishment.

Preview of the 1982 Economic Census, a 10-page booklet provides a brief overview of the censuses and their data products. The Preview describes the history and background of these census and their uses, scope, and content.

It shows-

- \*The economic areas and the standard industrial classification range covered in these censuses.
- \*The major data items dealing with employment, payroll, capital expenditures, and other general topics.
- \*The differences between these censuses and those conducted in 1977.
- \*The preliminary publication schedule.

A copy of Preview may be obtained by contacting Customer Services, Bureau of the Census, U.S. Department of Commerce, Washington, D.C. 20233.

## GEOGRAPHY

MAPS! MAPS! MAPS!

Two central sources of 1980 census maps now exist in New Jersey. As mentioned in earlier issues of this newsletter, maps may be obtained from the state's 21 county planning boards (own county only) or may be reviewed at the State and Newark Public Library.

The NJSDC has made arrangements with the NJ Department of Transportation's Bureau of Graphics and Cartography to make copies of census maps upon request. The service is available to everyone. This Bureau will be maintaining a complete set of 1980 census maps for New Jersey. Not all maps are available as of this writing. For further information on this service and pricing, contact Joe Perry, Bureau of Graphics and Cartography, NJ Dept. of Transportation, 1035 Parkway Avenue, CN 600, Trenton, NJ 08625-0600.

In addition, Princeton University will be purchasing a complete set, in hard copy, of the block maps for the United States. These will be maintained at the Firestone Library, Princeton, and will be available only for review purposes. This may be the only location in New Jersey which is presently planning on obtaining all of these maps. For further information, contact Judith Rowe, Princeton University Computer Center, 87 Prospect Avenue, Princeton, New Jersey 08540.

## TOPICAL JARRING

### UPDATE ON REDEFINITION OF METROPOLITAN STATISTICAL AREAS

The U.S. Office of Management and Budget (OMB) defines standard metropolitan statistical areas (SMSA's) for use in federal statistics. This enables diverse statistical programs to incorporate consistent geographic definitions of the nation's large population centers. First developed over 30 years ago, the metropolitan definitions are updated after each decennial census.

The current standards for defining metropolitan statistical areas were adopted in 1980 (Federal Register, January 3, 1980) and are being implemented in two stages. The first stage, completed last year, identified 36 areas that newly qualified as SMSA's on the basis of 1980 population counts for counties and cities.

The second stage is now underway. All of the second stage changes (identified below) will take effect on the same date--June 30, 1983. OMB plans to announce the specific changes as decisions are determined: one group in December 1982, the next in March 1983, and final set of changes in May 1983.

The SMSA redefinitions will reflect new data on commuting patterns. OMB, with assistance from the interagency Federal Committee on SMSA's, is reviewing the boundaries of each existing SMSA as 1980 census commuting results become available. Counties will be added to (or deleted from) an SMSA where warranted by their metropolitan character and the level of commuting to that SMSA's central county(ies). Areas not undergoing any change will also be specified in the three announcements.

Additional changes will include:

1. central cities and titles of each SMSA will be reviewed and where necessary revised;
2. a few additional metropolitan areas will be recognized;
3. additional consolidated areas will be recognized;
4. a size classification scheme for metropolitan areas will be introduced; and
5. the terminology applied to metropolitan areas will be changed. All "free-standing" Standard Metropolitan Statistical Areas (SMSA's)--those, not qualifying as part of a larger consolidated area--will be redesignated as metropolitan statistical areas (MSA's). All qualifying SMSA's located within consolidated areas will be redesignated as primary metropolitan statistical areas (PMSA's). The consolidated areas themselves--metropolitan complexes with over one million population within which primary areas have qualified for recognition--will be redesignated consolidated metropolitan statistical areas (CMSA's) instead of the present term, standard consolidated statistical areas (SCSA's).

## **GENERAL INTEREST**

### **1980 COUNTY SUMMARY**

The new 1980 County Summary sheet is now available. This one page double-sided product presents various demographic, social and economic data for New Jersey and the 21 counties. This convenient publication provides information on population (total, sex, age); total covered employment by major industry; covered manufacturing employment by sector; income and poverty; dwelling units authorized; housing characteristics; vital statistics (births, deaths, marriages); motor vehicle registrations; fiscal conditions; bank deposits; and education.

A copy of the 1980 County Summary may be obtained by completing the order form on the last page of this newsletter.

### **CLASSIFICATION OF NEW JERSEY COUNTIES**

For legislative purposes, New Jersey's twenty-one counties are classified into 6 categories. Classes 1 through 4 include all counties not bordering on the Atlantic Ocean with populations ranging from under 50,000 to over 550,000 persons. The two remaining classes include the four counties which border the Atlantic Ocean.

Total population and population density are two of the major factors used in the classification process. For example, first class counties must have a population over 550,000 and a density of over 3,000. In the case of Middlesex County which has a population of approximately 596,000 but a density of only 1,916 persons per square mile it is a county of the second class.

The standard for determining first and second class counties has been lowered since the classification established after the 1970 census. At that time, a first class county had to have a population over 600,000 and a second class county had to be between 200,000 and 600,000. None of the remaining classes were changed. Only Somerset County which went over 200,000 in population according to the 1980 Census changed classification from third to second class. Any reclassification due to an increase in population shall take effect on July 1 following the promulgation of the federal decennial census.

**CLASSIFICATION AND POPULATION  
ACCORDING TO THE 1980 CENSUS**

<b>First Class Counties</b> (Over 550,000 and Population Density of over 3,000)	<b>Population</b>	<b>Population Density</b>
Essex .....	851,116	6,673
Bergen .....	845,385	3,604
Hudson .....	556,972	11,999

**Second Class Counties**  
(Other counties of over 200,000)

Middlesex .....	595,893	1,916
Union .....	504,094	4,897
Camden .....	471,650	2,124
Passaic .....	447,585	2,331
Morris .....	407,630	867
Burlington .....	362,542	443
Mercer .....	307,863	1,362
Somerset .....	203,129	665

**Third Class Counties**  
(50,000-200,000)

Gloucester .....	199,917	609
Cumberland .....	132,866	265
Sussex .....	116,119	221
Hunterdon .....	87,361	203
Warren .....	84,429	234
Salem .....	64,676	187

**Fourth Class Counties**  
(Under 50,000)

None

**Fifth Class Counties**

(Over 100,000 on Atlantic Ocean)

Monmouth .....	503,173	1,067
Ocean .....	346,038	543
Atlantic .....	194,119	342

**Sixth Class Counties**

(Under 100,000 on Atlantic Ocean)

Cape May .....	82,226	312
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## N.J. VOTING AGE POPULATION CONTINUES TO GROW

New Jersey's voting age population in November 1982 is projected to be 5,544,000 almost 130,000 more than in the previous congressional election in 1980, according to the Census Bureau's publication, Projections of the Population of Voting Age for States.

Table 1  
NEW JERSEY  
POPULATION OF VOTING AGE  
November 1972 to 1982  
(all estimates consistent with 1970 and 1980 censuses)  
(numbers in thousands)

<u>Year</u>	<u>Population 18 and over</u>	<u>Percent Casting Votes for U.S. Representatives</u>
1972	5,010	56.5%
1974	5,108	38.4%
1976	5,220	46.5%
1978	5,326	33.9%
1980	5,417	43.4%
1982	5,544	NA

Notes: \*Projection

NA = not applicable

Source: U.S. Bureau of the Census, Current Population Reports, "Projections of the Population Voting Age for State: November 1982," Series P-25, No. 916, U.S. Government Printing Office, Washington, D.C., July 1982.

The total may be over a half million more than in November 1972, the Census Bureau report projects, reflecting movement of much of the baby boom generation into adulthood. Although the voting age population will continue to grow, the decline in the number of births during the 1960s will slow the amount of growth during the 1980s.

In November 1982, almost 39% of New Jersey's population of voting age will be between the ages of 25 and 44 and 16% will be under 25.

Women represented the majority of the 1980 voting age population in New Jersey, as in most states. (1982 projections for state by age were not developed.) Men 18 to 24 years old have a slight majority over women (432,107 versus 401,102), but by age 45, women clearly predominate in the voting age population and represent about 60% of persons 65 and over.

In 1980, New Jersey's population of voting age included 593,000 blacks, 307,000 persons of Spanish origin, 69,000 Asian and Pacific Islanders, and almost 6,000 American Indians, Eskimos, and Aleuts.

Voter participation in Congressional elections in the non-Presidential election years has traditionally lagged well behind that in Presidential years. Unless economic or political issues bolster the turnout, the voting trend for 1974 and 1978 suggests that voter participation in New Jersey could drop to

less than one-third of the voting age population. The percent voting for U.S. Representatives declined from 38.4% to 33.9% between 1974 and 1978; and, in the Presidential election years of 1976 and 1980, the percent voting for Representatives fell from 46.5% to 43.4%.

The Census Bureau's report, Projections of the Population Voting Age for States: November 1982, P-25, No. 916 is available for \$2.50 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies are available for review at federal depository libraries.

#### POPULATION ESTIMATES FOR NEW JERSEY: JULY 1, 1981

New Jersey's population increased by 39,000 or 0.5% from Census day, April 1, 1980 to an estimated July 1, 1981 level of 7,404,000. Although New Jersey's rate of growth was substantially less than the 1.2% recorded nationally, the state's rate of growth was higher than the 0.3% recorded in New York and 0.05% in Pennsylvania.

Provisional estimates for July 1, 1981 for the State of New Jersey, its 21 counties and its 567 municipalities were recently released by the New Jersey Department of Labor. These estimates, which are the first produced based on the 1980 census, are published in the report Official State Estimates-Population Estimates for New Jersey: July 1, 1981. Most of the techniques used to generate the 1981 estimates were used throughout the 1970s. Although testing of these procedures is still in progress, a report entitled "A Preliminary Evaluation of Population Estimating Techniques in New Jersey 1980 Test of Methods, Report 2" was issued by this Department in 1981. A comprehensive evaluation of the estimating methods is planned for publication in 1983.

#### Counties

The provisional estimates suggest some slowing of many of the county trends that occurred throughout the decade of the 1970s. However, it must be stressed that these estimates are provisional. There has been only one estimate since the Census; and also some of the data necessary as input to the estimating techniques are unavailable. Therefore, any conclusion of a trend from these data must be tentative.

The county data suggest some possibilities of population shifts that should be closely monitored in the future. Many of the declines that occurred between 1970 and 1980 in northeastern New Jersey counties - Bergen, Essex, Hudson, Passaic and Union may have abated since 1980, as suggested in Table 1. Previous increases in rural counties such as Cape May, Cumberland, Hunterdon, Ocean, Salem, Sussex and Warren may also have moderated. On the other hand, Camden and Middlesex counties may be experiencing an increase in growth.

Some of the 1970-80 patterns may have continued through 1981 even if the magnitude of the pattern changed. Ocean county was still the leader in annual average rates of growth. Burlington, Cape May, Gloucester and Sussex counties all showed growth rates above one percent, while Essex County continued to decline.

RESIDENT POPULATION ESTIMATES  
FOR NEW JERSEY COUNTIES\*

STATE OF NEW JERSEY	CENSUS COUNTS		ESTIMATES JULY 1, 1981 (P)	ANNUAL AVERAGE RATES OF CHANGE		COMPONENTS OF CHANGE		
	APRIL 1, 1970	APRIL 1, 1980		1970-1980	1980-1981	TOTAL	NATURAL INCREMENT	NET MIGRATION
Atlantic County	175,043	194,119	192,200	+ 1.03	- 0.80	- 1,900	- 200	- 2,100
Bergen County	897,148	845,385	846,900	- 0.59	+ 0.14	+ 1,500	+ 800	+ 700
Burlington County	323,132	362,542	367,400	+ 1.15	+ 1.07	+ 4,900	+ 3,400	+ 1,500
Camden County	456,291	471,650	475,900	+ 0.33	+ 0.72	+ 4,200	+ 4,000	+ 200
Cape May County	59,554	82,266	84,300	+ 3.23	+ 1.95	+ 2,000	- 200	+ 2,200
Cumberland County	121,374	132,866	133,100	+ 0.91	+ 0.14	+ 300	+ 1,000	- 700
Essex County	932,526	851,116	844,200	- 0.91	- 0.65	- 6,900	+ 4,300	- 11,200
Gloucester County	172,681	199,917	204,000	+ 1.46	+ 1.62	+ 4,100	+ 1,800	+ 2,300
Hudson County	607,839	556,972	558,500	- 0.87	+ 0.22	+ 1,600	+ 2,700	- 1,100
Hunterdon County	69,718	87,361	88,000	+ 2.26	+ 0.58	+ 600	+ 600	0
Mercer County	304,116	307,863	306,500	+ 0.12	- 0.36	- 1,300	+ 1,500	- 2,800
Middlesex County	583,813	595,893	600,500	+ 0.20	+ 0.62	+ 4,600	+ 3,500	+ 1,100
Monmouth County	461,849	503,173	507,900	+ 0.86	+ 0.75	+ 4,800	+ 1,900	+ 2,900
Morris County	383,454	407,630	411,600	+ 0.61	+ 0.78	+ 4,000	+ 2,500	+ 1,500
Ocean County	208,470	346,038	355,500	+ 5.07	+ 2.16	+ 9,500	+ 300	+ 9,200
Passaic County	460,782	447,585	448,700	- 0.29	+ 0.20	+ 1,100	+ 2,900	- 1,800
Salem County	60,346	64,676	65,100	+ 0.69	+ 0.52	+ 400	+ 400	0
Somerset County	198,372	203,129	204,600	+ 0.24	+ 0.58	+ 1,500	+ 1,100	+ 400
Sussex County	77,528	116,119	118,400	+ 4.04	+ 1.56	+ 2,300	+ 1,200	+ 1,100
Union County	543,116	504,094	505,000	- 0.75	+ 0.14	+ 900	+ 1,200	- 300
Warren County	73,960	84,429	85,400	+ 1.32	+ 0.92	+ 1,000	+ 400	+ 600
State Total	7,171,112	7,364,823	7,404,000	+ 0.27	+ 0.42	+ 39,000	+ 35,000	+ 4,000

(P) Provisional

\*State estimates are shown to the nearest thousand and county estimates to the nearest hundred.

In large part, 1980-81 population growth or decline can be explained by differences in county net migration patterns. Ocean County appears to have had the highest number of net migrants of all counties in the 1980-81 period. Burlington, Cape May, Gloucester, Middlesex, Monmouth, Morris and Sussex counties all had net in-migration of over 1,000. Essex and Mercer counties had the most substantial net out-migration.

#### Data Availability

A copy of the report, Population Estimates for New Jersey July 1, 1981 containing 1981 population estimates for the state, counties, and municipalities, may be obtained by contacting Scott Campbell Brown, Office of Demographic and Economic Analysis, Division of Planning and Research, Department of Labor, CN 388, Trenton, NJ 08625-0388.

**NJSDC PUBLICATIONS  
ORDER FORM**

(NOTE: THERE IS A LIMIT OF 1 COPY OF EACH FREE PUBLICATION PER AGENCY.)

	<u>PRICE</u>	<u>QUANTITY</u>	<u>TOTAL AMOUNT (if applicable)</u>
<b>1980 CENSUS PRODUCTS</b>			
NJ 1980 Census Counts of Population by Race and Spanish Origin	Free	_____	NA
NJ Population Per Household, 1970 & 1980	Free	_____	NA
County Profiles (all 21 counties & State) Sample Data from the 1980 Census (Mar.-Apr. '83)	\$15.00	_____	_____
Municipal Profiles (all 567 + 21 counties + State)			
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Vol. II: Characteristics of Households & Families	\$20.00	_____	_____
Vol. III: Characteristics of Housing Units	\$20.00	_____	_____
Vol. IV: Characteristics of the Labor Force (Feb.-Mar. '83)	\$20.00	_____	_____
Vol. V: Income Statistics for NJ (March '83)	\$20.00	_____	_____
NJ Population by Age and Household Type and Relationship	\$ 2.50	_____	_____
NJ Population by Race, Spanish Origin and Age Groups	\$ 2.50	_____	_____
NJ Population by Age and Sex	\$ 2.50	_____	_____
Income & Poverty in New Jersey	\$ 2.50	_____	_____
<b>OTHER DATA PRODUCTS</b>			
County Summary, 1980	Free	_____	NA
NJ Personal Income 1969-1980	\$ 2.50	_____	_____
Provisional Estimates of Social, Economic, and Housing Characteristics: U.S., New Jersey, Newark SMSA	\$ 2.50	_____	_____
Summary Data for Selected Economic Censuses of New Jersey, 1977	Free	_____	NA
<b>MISCELLANEOUS</b>			
Statistical Source Directory for NJ State Government	\$ 2.50	_____	_____
NJSDC Reference Manual 1980	Free	_____	NA
What 1980 Census Data Means for NJ: Conference Proceedings	Free	_____	NA

MAKE CHECK PAYABLE TO: New Jersey Dept. of Labor

MAIL TO: Connie Hughes  
N.J. State Data Center  
Division of Planning & Research  
Department of Labor, CN 388  
Trenton, NJ 08625-0388

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NOTICE

This newsletter will publicize any Census, population, planning and economic conference or seminar to be held in New Jersey. Please send all pertinent information, including the name and phone number of a contact person, to Connie O. Hughes, Office of Demographic and Economic Analysis, New Jersey Department of Labor CN 388, Trenton, New Jersey 08625.