

977-905-
C396-2
C1

A NEW JERSEY NEWSLETTER

POPULATION AND CENSUS



Thomas H. Kean, Governor

Roger A. Bodman, Commissioner

Issue 32

January 1984

TABLE OF CONTENTS

Commuting to Work: 1980	2
Household Formation in New Jersey 1970 to 1980	12
Neighborhood Statistics Available	20
Creating Census Data for a Micro Computer	26
1990 Census Planning Issues	28
New Census Data Products	33
Conferences/Workshops	34
Occupation Information Hotline	35
Subject Index - NJSDC Newsletters	35
Publication Order Form	37

NEW JERSEY STATE LIBRARY
PROPERTY OF
FEB 14 1984
185 W. State St.
Trenton, N.J.

COMMUTING TO WORK: 1980

INTRODUCTION

According to the 1980 census, there were over 3.2 million workers 16 years of age and over living in New Jersey. But, where did they work? The answer to this question is important to transportation planners in assessing highway and mass transportation needs; to economists and labor market analysts in determining labor market areas; to housing specialists in examining housing needs, particularly with respect to the Mount Laurel Court decision requiring that adequate housing be built within a region for those employed within that region.

The question of place of work was asked on the 1980 census questionnaire and the resulting data were used in delineating new Metropolitan Statistical Areas (MSAs) effective June 1983.* County of residence by place of work data from the 1980 census have just become available and the purpose of this article is to discuss some of the findings. There are certain limits to the data that should be kept in mind: (1) data are only available for the 20 major work locations of a county's residents; (2) approximately 9% of the state's workers did not report their place of work; (3) the data are based on a sample of about 1 out of 6 and, therefore, are subject to sampling variability; (4) data were not available at the time of this writing on workers commuting from out of state to New Jersey; and, (5) the Standard Metropolitan Statistical Areas (SMSAs) discussed are those defined at the time of the 1980 census, not the new MSAs.

STATEWIDE PATTERNS

About 89% of New Jersey's workers worked in New Jersey in 1980; in 1970, 88% worked within the state. As can be seen from Table 1, the percentage of all workers who worked in NJ but outside their county of residence in 1980 increased only slightly from the 24% in 1970.

*See Newsletter, Issue #31, page 2 for a discussion of the new MSAs.

Table 1
WORKERS BY PLACE OF WORK
NEW JERSEY

	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

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, 22,212 workers and in 1980, 280,010
 workers did not report their place of work.

NA = Not Available.

Source: 1970 and 1980 Census of Population.

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% of these workers worked outside the state, while in 1970, 34% of the state's workers who worked outside their resident county worked outside the state. Most out-of-state commuters worked in New York, followed by Pennsylvania, Delaware, and to some small extent, Connecticut.

Table 2 shows place of work data for the state's workers in 1980, according to the 1980 census. It provides data on the total number of New Jersey workers working in selected areas, the number of New Jersey workers both living in and working in those areas, and the number of New Jersey workers only working in those areas.

It is not surprising that most people worked in the northeastern part of the state; that is where the majority of the jobs are, and traditionally, have been. Of the 2,875,448 workers who worked in one of the areas detailed on Table 2, 28% had a job in either Essex, Morris, Somerset, or Union County--the Newark SMSA. This percentage is down slightly from the 29% in 1970. And, in 1980, a somewhat smaller percentage than in 1970 both worked in and lived in the Newark SMSA--78% versus 81%.

The New York, NY-NJ SMSA, which included Bergen County, was the second major destination of the workforce. However, there was almost as much commuting from outside the area as from Bergen

County. As Table 3 shows, 237,948 workers both worked in and lived in Bergen County; 71,011 lived in the county and worked elsewhere within the SMSA; but there was substantial incommuting from many other of New Jersey's counties. This overall pattern has not changed significantly from that in 1970.

Approximately two-thirds of the workers working in Hudson County (Jersey City SMSA) and Passaic County (Paterson-Clifton-Passaic SMSA) were residents of their respective counties in 1980. According to the decennial censuses, the total number of workers working in each county declined from the 1970 numbers; however, the percentage of resident workers (people living in the same county in which they work) hardly changed at all.

Table 2
PLACE OF WORK: NJ
1980

	Total NJ Workers Working In		Living In and Working In		Working In Only	
	Number	Percent	Number	Percent	Number	Percent
Workers (16 Yrs. & Over)						
Atlantic City SMSA	70,743	100.0	62,982	89.0	7,761	11.0
New York, NY-NJ SMSA	520,529	100.0	308,959	59.4	211,570	40.6
Phila., PA-NJ SMSA	389,355	100.0	370,129	95.1	19,226	4.9
Newark SMSA	793,069	100.0	619,153	78.1	173,916	21.9
Paterson-Clifton-Passaic SMSA	155,803	100.0	103,024	66.1	52,779	33.9
Jersey City SMSA	183,449	100.0	128,875	70.3	54,574	29.7
Trenton SMSA	131,736	100.0	106,477	80.8	25,259	19.2
Wilmington, DE-NJ-MD SMSA	24,934	100.0	18,144	72.8	6,790	27.2
Allentown-Bethlehem-Easton, PA-NJ SMSA	24,938	100.0	22,615	90.7	2,323	9.3
Cape May County	21,478	100.0	19,638	91.6	1,795	8.4
Vineland-Millville-Bridgeton SMSA	46,807	100.0	38,379	82.0	8,428	18.0
Hunterdon County	23,023	100.0	19,750	85.8	3,273	14.2
New Brunswick-Perth Amboy-Sayreville SMSA	238,631	100.0	165,927	69.5	72,704	30.5
Long Branch-Asbury Park SMSA	154,703	100.0	133,287	86.2	21,416	13.8
Ocean County	73,465	100.0	67,814	92.3	5,651	7.7
Sussex County	21,239	100.0	20,936	98.6	303	1.4
Other New York	667	100.0	NA	NA	667	100.0
Other Pennsylvania	230	100.0	NA	NA	230	100.0
Connecticut	649	100.0	NA	NA	649	100.0
Worked Elsewhere	68,705	100.0	NA	NA	NA	NA
Place of Work Not Reported	280,010	100.0	NA	NA	NA	NA

Source: 1970 and 1980 Censuses of Population and Housing.

Another area of high employment concentration is the Philadelphia, PA-NJ SMSA, which includes the New Jersey counties of Burlington, Camden, and Gloucester. An estimated 14% of the state's workforce held jobs within this SMSA in 1980. And, a very high proportion (95%) were resident workers (in this case, people living in the same SMSA in which they work). The total number of New Jerseyans employed in the Philadelphia, PA-NJ SMSA increased from 327,000 in 1970 to 389,000 in 1980, but, the pattern of commutation did not.

The number of the state's workers employed in Cumberland County (the Vineland-Millville-Bridgeton SMSA) increased by about 2,500 during the decade and the general commutation pattern changed minimally. In 1980, 82% of the people working in the county were resident workers; in 1970, about 84% both worked in and lived in the county.

Salem County, which was part of the Wilmington, DE-NJ-MD SMSA, showed an increase in workers of approximately 2,200. Unlike Cumberland County, the percentage that were resident workers declined substantially from 82% to 75%.

Although the northeastern and southwestern areas of New Jersey and respective adjacent out-of-state counties have historically been the dominate employment loci for the state's workers, the central portion of the state is growing in importance. According to the 1970 and 1980 censuses, the counties of Mercer, Middlesex, and Monmouth all had substantial gains in the number of people working in these counties. In total, there was an increase of 26% in the number of workers. Middlesex County (New Brunswick-Perth Amboy-Sayreville SMSA) had the second lowest percentage of resident workers in 1980 of all the areas shown in Table 2. In 1970, 74% of the people working in Middlesex County were also residents; by 1980, this percentage had dropped to 70%. The percentage of residents workers for Mercer County (Trenton SMSA) only declined from 82% to 81%. However, the percentage for Monmouth County changed from 90% in 1970 to 86% in 1980.

It has been well documented that the population of the shore counties, Cape May and Ocean, grew by leaps and bounds. At the same time, the number of people working in the counties increased during the decade. The number of New Jerseyans employed in Cape May County increased by 37% and in Ocean County by 73%. Resident workers in Cape May represented about the same proportion in 1980 as in 1970 (92%), but Ocean County was one of the few counties which experienced an increase, albeit small, in the percentage of resident workers--from 90% in 1970 to 92% in 1980.

Since the advent of casino gambling in Atlantic City, several studies have been undertaken to examine the pattern of commutation in Atlantic County. (See for example: Charles Crowley, "Hotel-Casino Employee Migration to the Atlantic City Region," Division of Planning and Research, Department of Labor, Trenton, NJ, March 1982.) The decennial censuses showed that the total number of the state's workers working in Atlantic County increas-

ed by 27%. In both 1970 and 1980, 90% were resident workers. At the time of the 1980 census, there were 5 casinos; presently there are 9 open and 2 under construction. This development may have altered the commutation patterns reported in the census, but the data are unavailable to document any changes.

In the northwestern part of New Jersey lie Hunterdon, Sussex, and Warren counties--another area experiencing population growth. At the time of the 1980 census, neither Hunterdon nor Sussex were part of SMSAs. However, the tabulation of the commutation and other data from the 1980 census, resulted in their being included in the new designations which became effective in June 1983. The number of New Jerseyans working in Hunterdon County grew by 5,500 during the 1970s, but the overall percentage of resident workers remained the same (86%). In Sussex County, the number of the state's workers employed in the county increased by 4,600; unlike Hunterdon, however, the percentage of resident workers increased substantially from 92% in 1970 to almost 99% in 1980. The latter represents the highest proportion of resident workers for any area detailed in Table 2.

Warren County, which is part of the Allentown-Bethlehem-Easton, PA-NJ SMSA, was the workplace location for 20,000 of its residents in 1980. The proportion of all New Jerseyans working in the SMSA that lived in Warren County was 91%. Similar to Sussex County, this increased substantially from the 83% in 1970.

For most of the areas listed in Table 2, there was little change in the percentage of resident workers. It was only in the state's traditionally less densely populated areas that there was a substantial change, and these were increases. The next question to be addressed in some detail is, where did New Jerseyans commute to and from in 1980.

ORIGINS AND DESTINATIONS

Table 3 displays 1980 census data on county of residence by place of work. The following discussion will focus primarily on non-resident workers.

As can be seen from the table, people commute to the Newark SMSA from all but seven of the state's counties. As would be expected, the majority of the incommuters lived in surrounding counties. In 1980, 52,000, or 18% of Middlesex County's workers commuted to the Newark SMSA. This is only about 1,000 greater than in 1970, but represents a smaller proportion of the county's workforce. Bergen, Hudson, and Passaic all had close ties to this area with approximately 20,000 to 24,000 workers of each county travelling to the Newark SMSA for employment. And, 32% of Sussex County's workers commuted to the area, with 25% to Morris County.

The relationship between New Jersey's workers and the New York, NY-NJ SMSA is also strong. As would be expected, the tie is closest with counties in the northeastern part of the state. Some interesting changes in the pattern of commutation, however, have occurred since 1970. For example, the ratio of people commuting to Bergen County to those commuting to the remainder of the SMSA, increased for several counties--Hudson, Hunterdon, Morris, Passaic, and Sussex. At the same time, the total number commuting from Monmouth and Ocean counties increased, while commuting from Somerset and Union counties decreased.

Hudson County is the destination of workers from many parts of the state. Since 1970, 3,300 less workers from Essex County and 2,100 from Union County traveled to the Jersey City SMSA. On the other hand, the number from Ocean almost doubled.

Commutation to the Philadelphia, PA-NJ SMSA is somewhat less diverse than that of the preceding areas discussed. For the most part, workers who live outside this area tend to reside in Mercer, Atlantic, Salem, and Ocean counties. The total number from Atlantic and Mercer counties has decreased since 1970, but increased for Ocean and Salem counties.

About 2,100 to 2,600 residents of Salem, Atlantic, and Gloucester counties commute to Cumberland County for employment. The number is not substantially greater than that evidenced in 1970.

New Jerseyans who are employed in the Wilmington, DE-NJ-MD SMSA live primarily in Camden, Cumberland, and Gloucester counties. Most of these work in the Salem County portion of the SMSA. In general, there was an increase during the 1970s in the number of outcommuters from these counties to this area.

The pattern of commutation vis a vis Mercer County changed considerably from that of the 1970s. First of all in 1980, it was not one of the "major"* destinations of residents of Atlantic, Cumberland, Salem, Somerset, Union, Warren counties. In 1970, only small numbers (10 to 300 persons) commuted from these counties to the Trenton SMSA with the exception of Somerset County. In 1970, 1,900 of Somerset County's residents were employed in Mercer County. This anomaly may be due more to the increase in Somerset County residents' employment in other counties than to no or fewer residents working in Mercer County. For example, substantially more inhabitants of Burlington County (9,805 vs. 6,945), Middlesex County (6,140 vs. 2,900), and Monmouth County (3,221 vs. 1,909) worked in the Trenton SMSA in 1980 than 1970.

*Data on commutation are tabulated for the 20 most prevalent destinations.

Table 3
 COUNTY OF RESIDENCE BY PLACE OF WORK
 1980

County of Residence	Total Workers (16 years & over)	Place of Work																
		Atlantic Co. (Atlantic City SMSA)	Bergen Co.	Remainder (NY, NY-NJ SMSA)	Burlington Co.	Camden Co.	Gloucester Co. (Phila., PA-NJ SMSA)	Remainder	Cape May Co.	Cumberland Co. (Vineland-Millville-Bridgeton, NJ SMSA)	Essex Co.	Morris Co.	Somerset Co. (Newark SMSA)	Union Co.	Hudson Co. (Jersey City SMSA)	Hunterdon Co.	Mercer Co. (Trenton SMSA)	Middlesex Co. (New Brunswick-Perth Amboy-Sayerville, NJ SMSA)
Atlantic	80,684	62,982	.....	.....	456	1,483	521	1,382	1,469	2,240	.....	.....	.....	.....	.....	.....	.....	.....
Bergen	412,329	.....	237,948	71,011	.....	.....	.....	.....	.....	.....	.....	22,915	.....	21,051	.....	.....	.....	.....
Burlington	166,594	.....	.....	.....	89,218	21,004	1,364	22,282	.....	195	.....	.....	.....	.....	.....	.....	9,805	.....
Camden	191,200	.....	.....	.....	12,840	106,103	8,230	41,025	.....	717	.....	.....	.....	.....	.....	.....	982	.....
Cape May	29,148	3,762	.....	.....	70	234	88	825	19,683	571	.....	.....	.....	.....	.....	.....	.....	.....
Cumberland	51,244	1,932	.....	.....	52	489	918	319	326	38,379	.....	.....	.....	.....	.....	.....	.....	.....
Essex	344,382	.....	9,997	19,128	.....	.....	.....	.....	.....	198,510	13,576	1,474	26,470	12,117	.....	.....	.....	5,890
Gloucester	82,764	.....	.....	.....	1,744	14,390	38,487	13,442	.....	2,584	.....	.....	.....	.....	.....	.....	190	.....
Hudson	232,473	.....	17,553	35,900	.....	.....	.....	.....	.....	14,622	1,588	.....	4,911	128,875	.....	.....	.....	.....
Hunterdon	39,975	.....	217	647	.....	.....	.....	.....	.....	631	1,215	6,311	1,579	110	19,750	2,482	2,201	.....
Mercer	139,378	.....	4,022	.....	2,123	305	4,097	.....	.....	953	.....	1,557	597	.....	474	106,477	6,630	.....
Middlesex	282,601	.....	19,292	.....	.....	.....	.....	.....	.....	11,636	1,822	12,165	26,251	5,304	.....	6,140	165,927	.....
Monmouth	214,805	.....	17,408	.....	284	.....	.....	.....	.....	6,196	1,478	.....	6,412	3,200	.....	3,221	16,182	.....
Morris	197,061	.....	6,163	9,031	.....	.....	.....	.....	.....	21,609	112,057	4,823	8,261	2,295	.....	.....	1,865	.....
Ocean	117,737	2,067	3,839	.....	1,544	1,119	.....	.....	.....	2,729	710	.....	2,930	1,568	.....	2,405	5,058	.....
Passaic	194,468	.....	37,697	8,018	.....	.....	.....	.....	.....	15,278	7,781	354	1,611	3,394	.....	.....	.....	.....
Salem	25,020	.....	.....	.....	1,149*	1,643	.....*	.....	.....	2,121	.....	.....	.....	.....	.....	.....	.....	.....
Somerset	99,976	.....	459	3,376	.....	.....	.....	.....	.....	3,762	3,717	46,331	9,709	412	.....	.....	17,486	.....
Sussex	50,671	.....	2,165	1,825	.....	.....	.....	.....	.....	2,600	12,568	396	519	721	.....	34	318	.....
Union	235,343	.....	2,378	12,455	.....	.....	.....	.....	.....	28,209	5,296	6,337	129,012	4,402	.....	.....	17,074	.....
Warren	36,310	.....	.....	.....	.....	125	.....	.....	.....	.....	3,601	.....	.....	.....	2,799	.....	.....	.....
TOTAL	3,224,163	70,743	520,529	.....	389,355	.....	.....	21,478	46,807	793,069	.....	.....	183,449	23,023	131,736	238,631	.....	.....

Notes: SMSAs are those defined at the time of the 1980 Census and do not reflect the new MSA designations effective June 30, 1983.

* 1,149 of Salem County's residents worked in either Burlington County, Camden County, or the remainder of the Phila., PA-NJ SMSA.

Source: Bureau of the Census, U.S. Department of Commerce, 1980 Census STF4 Technical Documentation.

Continued

Table 3 (Continued)
 COUNTY OF RESIDENCE BY PLACE OF WORK
 1980

Place of Work

County of Residence	(Long Branch- (Asbury Park, NJ (SMSA Monmouth Co.	Ocean Co.	(Paterson- (Clifton- (Passaic, NJ (SMSA Passaic Co.	(((Wilm. DE-NJ-MD (SMSA Salem Co.	((((Remainder	Sussex Co.	(((Allentown- (Bethlehem- (Easton, PA-NJ (SMSA Warren Co.	(((Remainder	Other NY	Other PA	Connecticut	Worked Elsewhere	Place of Work Not Reported
Atlantic	....	276	....	211	25	....	....	....	....	....	....	775	8,864
Bergen	....	....	24,029	....	....	....	....	....	667	....	649	6,199	27,860
Burlington	....	....	....	253	99	....	93	....	....	20	....	8,081	14,180
Camden	....	....	....	880	401	....	82	....	....	63	....	5,506	14,371
Cape May	....	11	....	65	15	....	....	....	....	....	....	415	3,409
Cumberland	....	....	....	1,495	118	....	....	....	....	....	....	318	6,898
Essex	....	....	10,780	....	....	....	....	....	....	....	....	4,154	42,286
Gloucester	....	....	....	2,486	742	....	53	....	....	14	....	2,559	6,073
Hudson	....	....	2,367	....	....	....	....	....	....	....	....	4,664	21,993
Hunterdon	....	....	53	....	....	....	1,089	....	....	....	....	1,491	2,199
Mercer	902	....	....	....	....	....	....	....	....	....	....	1,489	9,752
Middlesex	4,507	....	....	....	....	....	....	....	....	....	....	4,137	25,420
Monmouth	133,287	5,364	....	....	....	....	....	....	....	....	....	3,285	18,488
Morris	....	....	11,331	....	....	....	....	....	....	....	....	6,218	13,408
Ocean	16,007	67,814	....	....	....	....	....	....	....	....	....	1,621	8,326
Passaic	....	....	103,024	....	....	303	....	....	....	....	....	2,229	14,779
Salem	....	....	....	16,311	1,833	....	....	....	....	....	....	397	1,566
Somerset	....	....	407	....	....	....	....	....	....	....	....	6,042	8,275
Sussex	....	....	2,629	....	....	20,936	1,006	....	....	....	....	1,630	3,324
Union	....	....	1,183	....	....	....	....	....	....	....	....	3,444	25,553
Warren	....	....	....	....	....	....	20,017	2,598	....	133	....	4,051	2,986
TOTAL	154,703	73,465	155,803	21,701	3,233	21,239	24,938	....	667	230	649	68,705	280,010

Notes: SMSAs are those defined at the time of the 1980 Census and do not reflect the new MSA designations effective June 30, 1983.

* 1,149 of Salem County's residents worked in either Burlington County, Camden County, or the remainder of the Phila., PA-NJ SMSA.

Source: Bureau of the Census, U.S. Department of Commerce, 1980 Census STF4 Technical Documentation.

A similar pattern emerged for Middlesex County. While Bergen County (1,439), Camden County (510), Hudson County (1,393), and Passaic County (718) were listed as "major" origins of the county's employees in 1970, this was not so in 1980. However, there was a considerable increase in incommuting during the decade from the counties of Hunterdon (2,201 vs. 785), Mercer (6,630 vs. 3,880), Monmouth (16,182 vs. 9,875), Ocean (5,058 vs. 1,045), Somerset (17,481 vs. 12,319), and Union (17,074 vs. 11,288).

Unlike Mercer and Middlesex counties, which are the recipients of incommutation from many areas in New Jersey, Monmouth County is the "major" destination of residents of only three counties--Ocean, Middlesex, and Mercer. Since 1970, there was only a minimal increase in the number of workers from Mercer and Middlesex counties; however, the number from Ocean County doubled from 8,043 to 16,007.

Not surprisingly, fewer people commute to New Jersey's traditionally less densely populated counties of Cape May, Ocean, Hunterdon, Sussex, and Warren than any other county of the state. However, in every instance, except Sussex County, the number of incommuters increased during the decade by 300 to 1,400. The largest increase was for Ocean County.

Finally, in 1980 Atlantic County was a "major" destination for residents of Cape May, Cumberland, and Ocean Counties. In 1970, however, Burlington, Camden, Gloucester, and Salem were also listed, but only for small numbers of people. As in 1970, Cape May contributed the most incommuters to the Atlantic City SMSA, but there was an increase during the decade of almost 200% in the number of people commuting from Cape May to Atlantic. This pattern was replicated for Cumberland County residents. The most substantial increase, however, was for Ocean County--over 450%. Most probably, casino development in Atlantic City contributed to these changes. Additionally, 5 new casinos have opened since the 1980 census which may have altered commutation patterns for the county.

SUMMARY

The questions of whether jobs follow people, people follow jobs, or both cannot be answered from decennial census data. Nor can the question of whether people choose to move to be closer to their jobs or choose their jobs to be closer to home be answered. However, changes in commutation patterns do reflect changes in the demographic and economic changes within an area. Such changes 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.

In the traditional employment and population centers of northeastern and southwestern New Jersey, there appear to have been minimal differences in commutation patterns from 1970 to 1980. Rather, it was in the growing areas where differences were occurring both in terms of percentage of resident workers and numbers of incommuting. New Jersey continues to be a commuter state and much of the commutation occurs within the state.

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 employment 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.

DATA AVAILABILITY

The data in this article were obtained from the 1970 and 1980 censuses. The 1970 data were based on a 15% sample and are available on the 1970 census Fourth Count Summary Tape. The 1980 data were based on an approximately 1-in-6 sample and were obtained from an early tabulation of the 1980 census Summary Tape File 4. In both cases, data were only available for the first 20 places of work defined for each county of residence.

For further information on commutation data, contact the county planning boards. A list of these agencies is available from the New Jersey State Data Center, Office of Demographic and Economic Analysis, Division of Planning and Research, Department of Labor, CN388, Trenton, New Jersey 08625-0388.

HOUSEHOLD FORMATION IN NEW JERSEY 1970 TO 1980

INTRODUCTION

The number of households in New Jersey increased by 15% during the 1970s, while the number of persons increased by less than 3%, according to the 1980 census. This difference in growth rates is a function of the decrease in average population per household--from 3.17 in 1970 to 2.84 in 1980. The implications and impacts of this phenomenon, which occurred nationwide, are widespread and affect both the public and private sector. For example, a smaller average household size may signal a rethinking of the size of the housing stock to be built; the strong emergence of nontraditional household configurations, e.g., single parent families, may warrant consideration of converting existing single family dwellings to multi-unit housing. In another vein, marked growth in the number of households is significant to those involved in the production of household goods, such as kitchen and bathroom appliances.

The purpose of this article is to discuss household formation in New Jersey and the changes that were evident during the 1970's. To be analyzed are such trends as the disproportionate increase in single- and two-person households, and single parent and nonfamily households. Data were obtained from the 1970 and 1980 censuses. Explanations of the concepts used and availability of the data will be provided at the end of the article.

SMALLER HOUSEHOLDS

An estimated 21% of all of New Jersey's households in 1980 consisted of one-person. This represented an increase of over 50% in the number of single-person households in 1970. Persons 65 years of age and over tend to predominate single-person households and in 1980 accounted for 40% of all such households; in turn, 25% of all persons 65 years old and over lived alone. Combining these factors with the 23% decade growth in the number of the state's elderly, partially explains the dramatic upswing in the number of single person households.

However, as can be seen from Table 2, which provides data on marital status by sex, the number of widowed persons increased less than that for the total population 15 years old and over. Thus, the growth in one-person households cannot be accounted for solely based on the elderly. The number of single, separated, and divorced persons showed substantial increases during the decade. In New Jersey, there were 32% more single persons, 34% more separated persons, and a tremendous 137% more divorced persons in 1980 than in 1970. Obviously, not all of these persons live alone; rather, these trends have played a significant role in the overall reduction of household size.

Two-person households were the second fastest growing of those listed in Table 1 from 1970 to 1980. In New Jersey, there were 761,000 two-person households in 1980, compared to 626,000 in 1970, representing a 22% increase. The growth in two-person households, of course, is a function of the trends mentioned above and exhibited in Table 2. What cannot be ascertained from the 1980 census data at this time, however, was the growth in two-person households which consisted of two persons of opposite sex living together (cohabitating). Additionally, the substantial increase in single-parent households -- 64% for female headed and 57% for male-headed -- contributed to the expansion of two-person households.

TABLE 1
HOUSEHOLDS BY PERSONS IN HOUSEHOLDS
New Jersey
1970 and 1980

	1970		1980		Change: 1970 to 1980	
	Number	Percent	Number	Percent	Number	Percent
Total Households	2,218,182	100.0	2,548,594	100.0	330,412	14.9
1 Person	351,545	15.8	537,510	21.1	185,965	52.9
2 Persons	626,113	28.2	761,215	29.9	135,102	21.6
3 Persons	401,572	18.1	455,218	17.9	53,646	13.4
4 Persons	378,728	17.1	421,151	16.5	42,423	11.2
5 Persons	238,007	10.7	219,544	8.6	-18,463	-7.8
6 or More Persons	222,217	10.0	153,956	6.0	-68,261	-30.7

Note: These data were obtained from the 100% (complete count) tabulations and may not correspond exactly with the sample tabulations presented in Table 4 due to sample variability of the latter.

Source: U.S. Bureau of the Census, 1970 and 1980 census.

Table 2
MARITAL STATUS BY SEX
New Jersey
1970 and 1980

TOTAL POPULATION (15 Years Old and Over)						
	1970		1980		Change: 1970 to 1980	
	Number	Percent	Number	Percent	Number	Percent
TOTAL	5,171,066	100.0	5,787,246	100.0	616,180	11.9
Single	1,212,685	23.5	1,623,813	28.1	411,128	33.9
Married, Except Separated	3,271,427	63.3	3,231,798	55.8	-39,629	-1.2
Separated	134,693	2.6	186,483	3.2	51,790	38.5
Widowed	440,398	8.5	480,428	8.3	40,030	9.1
Divorced	111,863	2.2	264,724	4.6	152,861	136.7

MALE POPULATION (15 Years Old and Over)						
	1970		1980		Change: 1970 to 1980	
	Number	Percent	Number	Percent	Number	Percent
TOTAL	2,449,648	100.0	2,727,335	100.0	277,687	11.3
Single	636,915	26.0	854,155	31.3	217,240	34.1
Married, Except Separated	1,640,540	67.0	1,619,139	59.4	-21,401	-1.3
Separated	47,363	1.9	72,448	2.7	25,085	53.0
Widowed	82,816	3.4	80,679	3.0	-2,137	-2.6
Divorced	42,014	1.7	100,914	3.7	58,900	140.2

FEMALE POPULATION (15 Years Old and Over)						
	1970		1980		Change: 1970 to 1980	
	Number	Percent	Number	Percent	Number	Percent
TOTAL	2,721,418	100.0	3,059,911	100.0	338,493	12.4
Single	575,770	21.2	769,658	25.2	193,888	33.7
Married, Except Separated	1,630,887	59.9	1,612,659	52.7	-18,228	-1.1
Separated	87,330	3.2	114,035	3.7	26,705	30.6
Widowed	357,582	13.1	399,749	13.1	42,167	11.8
Divorced	69,849	2.6	163,810	5.4	93,961	134.5

Note: These data were obtained from the 100% (complete count) tabulations and may not correspond exactly with the sample tabulations presented in Table 4 due to sampling variability of the latter.

Source: U.S. Bureau of the Census, 1970 and 1980 Census.

Three and four-person households showed an increase in the 1970s, but at a level slightly lower than that for all households. However, the traditional family size households--mom, pop, and three children--are decreasing in number. And, the larger, six-person or more households appear to be slowly disappearing. Five-person households declined by 8% from 1970 to 1980, and the number of larger households represented 6% of all households in 1980 versus 10% in 1970.

FAMILIES VERSUS NONFAMILIES

A family is defined as two or more persons living together who are related by blood, marriage, adoption, or some other form. A household, on the other hand, consists of one or more persons, related or not, in a housing unit. Thus, all families are households, but not all households are families.

As can be seen from Table 3, nonfamily households grew far in excess of family households--60% versus 5%. Although family households still comprised the majority of households in New Jersey in 1980--76%, in 1970, they represented 83%. Married-couple families actually exhibited a decline in number from 1.573 million in 1970 to 1.553 in 1980. This phenomenon corresponds with the data in Table 2, which shows that there was a slight decrease in the number of married persons.

In 1980, the number of family households with a female householder, no husband present, however, were half again as great in number as in 1970. This corresponds with the 130% increase in the number of divorced persons; 32% increase in separated persons; and, the fact that traditionally when such dissolution of marriages occur, women keep the children. Another contributing factor is the higher mortality of males.

On the other hand, family households with a male householder, no wife present increased by 28%. This is also a substantial increase and a function of most of the same trends affecting the growth in female headed families. Obviously, higher male death rates and children tending to remain with their mothers after marriage dissolution result in dampened growth rates for family households with a male householder and no wife present.

As mentioned previously, nonfamily households, i.e., those with no related individuals, secured the highest growth rates during the 1970 to 1980 period. In 1970, 64% of these households had a female householder. The somewhat surprising finding from the 1980 census was that by 1980, this percentage dropped slightly to 59%. The number of new nonfamily households with a male householder (112,000) was almost equivalent to the number of new nonfamily households with a female householder. A partial explanation for this particularly dramatic increase in nonfamily households with male householders is the tendency for single males to form households more readily than females. Another is

that in marriages in which children are present and the parents separate, it is more likely for the father to create a new household as a single person.

Table 3
HOUSEHOLDS BY HOUSEHOLD TYPE
New Jersey
1970 and 1980

	1970		1980		Change: 1970 to 1980	
	Number	Percent	Number	Percent	Number	Percent
TOTAL	2,218,182	100.0	2,348,594	100.0	330,412	14.9
Family Households	1,833,423	82.7	1,931,578	75.8	98,155	5.4
Married-Couple Families	1,573,056	70.9	1,553,090	60.9	-19,966	-1.3
Male Householder, no wife present	57,157	2.6	73,251	2.9	16,094	28.2
Female Householder, no husband present	203,210	9.2	305,237	12.0	102,027	50.2
Nonfamily Households	384,759	17.3	617,016	24.2	232,257	60.4
Male Householder	138,424	6.2	250,962	9.8	112,538	81.3
Female Householder	246,335	11.1	366,054	14.4	119,719	48.6

Note: These data were obtained from the 100% (complete count) tabulations and may not correspond exactly with the sample tabulations presented in Table 4 due to sampling variability of the latter.

Source: U.S. Bureau of the Census, 1970 and 1980 Census of Population and Housing

CHILDREN VERSUS NO CHILDREN

Table 4 displays 1970 and 1980 census data on the number of families in New Jersey by type and presence of children. Overall, there was a 3% decline in the state in the number of families with children during the decade. Conversely, there was a 17% increase in the number of families without children. When the data are examined by type of family, it becomes readily apparent that the decline in families with children is accounted for by substantial decrease in married-couple families with children (-12%).

Table 4
FAMILIES BY TYPE AND PRESENCE OF CHILDREN
New Jersey
1970 and 1980

	1970		1980		Change: 1970 to 1980	
	Number	Percent	Number	Percent	Number	Percent
Total Families	1,833,423	100.0	1,942,108	100.0	108,685	5.9
With own children	1,000,003	54.5	965,846	49.7	-34,157	-3.4
Without own children	833,420	45.5	976,262	50.3	142,842	17.1
Married-Couple Families	1,573,056	85.8	1,574,350	81.1	1,294	0.1
With own children	882,741	48.1	774,778	39.9	-107,963	-12.2
Without own children	690,315	37.7	799,572	41.2	109,257	15.8
Female Householder, No Husband Present	203,210	11.1	297,276	15.3	94,066	46.3
With own children	102,942	5.6	168,576	8.7	65,634	63.8
Without own children	100,268	5.5	128,700	6.6	28,432	28.4
Male Householder, No wife Present	57,157	3.1	70,482	3.6	13,325	23.3
With own children	14,320	0.8	22,492	1.2	8,172	57.1
Without own children	42,837	2.3	47,990	2.5	5,153	12.0

Note: These data were obtained from the sample tabulations and may not correspond exactly with the 100% (complete count) tabulations in Tables 1, 2, and 3 due to sampling variability.

Source: U.S. Bureau of the Census, 1970 and 1980 Census of Population and Housing

However, single-parent families were significantly on the rise. In 1970, there were 103,000 single-parent families with a female householder; by 1980, there were 119,000 such families, an increase of 64%. Male headed single-parent families also exhibited a substantial growth rate--57%, but there are far less single-male parents than single-female parents. There are about one-seventh as many single-male parents as female.

A combination of factors contributed to these trends: delayed childbearing or the choice not to have children on the part of married-couple families; the tendency of New Jersey to have net outmigration of people in their childbearing ages; and, the large increase in the number of divorced and separated persons.

SUMMARY

The decade of the 1970s was one in which traditional household formation did not contribute to the substantial increase in total households. This was a national trend which was observed via U.S. Bureau of the Census survey data throughout the 10-year period. As with many national demographic and economic patterns, this one was mirrored in New Jersey and is confirmable by examining the decennial census data.

Households outpaced population in growth in New Jersey, almost five to one. The difference was accounted for by the decrease in the average population per household. Nonfamily households, one and two person households, and single-parent families were the fastest growing household/family configurations during the 1970s. A myriad of interacting demographic and social forces caused these patterns to emerge.

CONCEPTS AND DEFINITIONS

Household. The person or persons occupying a housing unit. Counts of households, householders, and occupied-housing units are always identical in complete-count tabulations. In sample tables, the numbers may not always be the same because of differences in weighting sample data.

Persons in Household. The number of persons living in the housing unit. All occupants are counted--not just those related to the householder, but also any lodgers, roomers, boarders, partners, wards, foster children, and resident employees who share the living quarters.

Figures for "persons in household" match those for "persons in unit" in tabulations based on complete-count data. In sample tabulations, they may differ because of the weighting process. The phrase "persons in household" is used for population tabulations, "persons in unit" for housing items. "One-person household" and "persons living alone" are synonymous.

Family. Two or more persons, including the householder, who are related by birth, marriage, or adoption, and who live together as one household; all such persons are considered as members of one family. (Persons not in families and not inmates of institutions are classified as unrelated individuals.) Families are defined using responses to the complete-count relationship question.

If the son/daughter of the person or couple who maintains the household and the son's or daughter's spouse and/or children are members of the household, they are treated as part of the household's family. A roomer/boarder and his/her spouse who are not related to the person or persons who maintain the household, or a resident employee and his/her spouse living in are not counted as a family, but as individuals unrelated to the house-

holder. Thus, a household can contain only one family for purposes of census tabulations.

A person maintaining a household alone, or two or more unrelated persons are regarded as a household but not as a family. Thus, some households do not contain a family.

In certain Census Bureau surveys (e.g., Current Population Survey) before 1980, families as defined here are referred to as "primary families." The term "secondary family" refers to a resident family unrelated to the householder, such as a roomer and his or her spouse. Tabulations of families from such surveys include secondary families.

Historical comparability: A similar definition for family was used in 1970. In 1960, secondary families were also identified.

Family Type. Families are classified by type according to sex of the householder and the presence of relatives, based on questions on sex and relationship asked on a complete-count basis.

Married-couple family. A family in which the householder and his/her spouse are enumerated as members of the same household.

Other family:

Male householder, no wife present. A family with a male householder and no spouse of householder present.

Female householder, no husband present. Family with a female householder and no spouse of householder present.

Historical comparability: The terminology for the family-type categories is new for 1980. The categories are reasonably compatible with the 1970 categories, "husband-wife families," "families with other male head," and families with female head."

DATA AVAILABILITY

The data presented in this article are available not only for the State of New Jersey, but also for the 21 counties, 567 municipalities, and almost 1,900 census tracts from a variety of sources. The data for a specific county and all of its jurisdictions may be obtained from the appropriate county planning agency. The Newark Public and State Libraries maintain the data for the entire state and all areas. The computer files containing this information are accessible at the Princeton and Rutgers University Computer Centers. Additionally, the New Jersey State Data Center has published the 1980 data detailed in Tables 1, 2, and 3 for the state, counties, and municipalities in a report entitled, Municipal Profiles, Volume II: Characteristics of Households and Families (\$20.00).

To obtain a list of the agencies and 1980 census data availability, contact: New Jersey State Data Center, Division of Planning and Research, Department of Labor, CN 388, Trenton, New Jersey 08625-0388. The publication may be obtained by sending a check for \$20.00 payable to the New Jersey Department of Labor to the same address.

NEIGHBORHOOD STATISTICS AVAILABLE

INTRODUCTION

Civic leaders and planners in 26 southern and 64 northern New Jersey communities have received 1980 census data from the U.S. Census Bureau's Neighborhood Statistics Program. What makes these numbers different from those already available from the 1980 Census of Population and Housing is that they are tailored to each neighborhood. In the past, these figures were presented using "census tract" boundaries which residents then had to divide or combine to form their local neighborhoods.

The bureau has produced not only detailed statistical tables but also a narrative profile of each of the neighborhoods. Using the tables and profiles, residents in New Jersey communities taking part in the program can find out such facts about their neighborhoods as:

- Racial and ethnic makeup
- Median household and per capita income for 1979
- Average age of housing units
- General occupational characteristics of residents
- Types of fuel used for heating and cooking
- The number of high school and college graduates
- Age breakdown of the population
- How residents commute to work

DATA AVAILABILITY

Several data products are or will be available from the Neighborhood Statistics Program. Some of these were provided directly to local jurisdictions participating in the program, some to state data centers (SDCs), and others will be available for purchase from the Census Bureau.

STFs 1G and 3G - These files will contain, respectively, the same 59 and 150 data tables as other STF 1 and 3 files, but for neighborhoods identified by the local participants. Each 1G and 3G file will be released on a state-by-state basis. The respective files will be provided to the SDCs and will be offered for sale through Customer Services.

Neighborhood Equivalency File - There will be one file per state. For each neighborhood, only the lowest level of census geography necessary to identify the neighborhood will be provided. For example, if a neighborhood is coterminous with a place, only that place will be identified; if a neighborhood is composed of several blocks, each individual block will be identified. A copy of the neighborhood equivalency file will be made available to the NJSDC. Copies will be sold through Customer Services.

*Reports - There will be no published reports from the Neighborhood Statistics Program. However, photocopies of the six population and five housing tables have been sent to each participating jurisdiction. Additionally, each jurisdiction received a narrative profile of about 10 pages for each neighborhood, a description of the neighborhood in terms of census geography (from the Neighborhood Equivalency File), as well as several introductory and appendix-style pages. No paper copies were provided to the NJSDC, nor will copies be sold by Customer Services.

Microfiche - Tables, narrative profiles, geographic definitions, etc. were microfiched. The NJSDC and the Census Bureau's Regional Offices were provided with a copy of the appropriate fiche. The microfiche and blowbacks will be sold by Customer Services.

*Maps - There will not be any neighborhood maps produced by the Census Bureau as part of this program. The maps showing neighborhood boundaries submitted by the localities will be returned once the tabulations are prepared. Some localities may have prepared for distribution maps that show boundaries of the individual neighborhoods.

*Available from participating jurisdictions.

In summary, in general, the best sources for neighborhood statistics are the participating jurisdictions. They each have familiarity with the geographic boundaries of the neighborhoods, if not maps, as well as the statistical tables, and narrative profiles. By February, the Princeton and Rutgers University Computer Centers will have copies of the computer files, STF1G and STF3G, and the Neighborhood Equivalency Files.

NEIGHBORHOOD STATISTICS PROGRAM CONTACTS

JURISDICTION	CONTACT	JURISDICTION	CONTACT
ATLANTIC COUNTY	Joseph F. Luste Dept. Head Atlantic County Dept. of Regional Planning & Development 1125 Atlantic Ave. Room 630 Atlantic City, NJ 08401 609/345-6700 X-2231	BURLINGTON COUNTY (Cont'd) Burlington City	Nicholas Kamaras City Historian of Burlington City Hall 432 High Street Burlington, NJ 08016 609/386-3993
Atlantic City	Stanley Johnson Principal Planner Atlantic City City Hall - Rm. 303 1301 Bacharach Blvd. Atlantic City, NJ 08401 609/347-5522	Moorestown Twp.	Dennis J. Funaro Director, Moorestown Twp. Dept. of Com- munity Development 111 West Second St. Moorestown, NJ 08057 609/235-0912
BERGEN COUNTY		CAMDEN COUNTY	
Englewood City	Joseph K. Murphy City Planner Englewood City P.O. Box 228 Englewood, NJ 07631 201/567-1800	Haddonfield Boro	Barry R. Ersek Sup't. of Schools One Lincoln Ave. Haddonfield, NJ 08033 609/429-4131
		CAPE MAY COUNTY	
Lodi Boro	Edwin E. Andrews Executive Assistant Borough of Lodi One Memorial Drive Lodi, NJ 07644 201/365-4040	Ocean City	Stephen R. Gabriel Sr. Environmental Planner Dept. Public Works City of Ocean City 1040 Haven Ave. Ocean City, NJ 08226 609/399-6111
Washington Twp.	Marc H. Pfeiffer Business Admin. Twp. of Washington 350 Hudson St. Westwood, NJ 07675 201/664-4404	CUMBERLAND COUNTY	
		Bridgeton City	Susan Trusty-Holman Assistant Director Office of Community & Economic Development City Hall Annex Bridgeton, NJ 08302 609/455-3230 X-263
BURLINGTON CO.	Robert Knoff, Land Use Coordinator Burl. Co. Dept. of Economic Devel. 49 Rancocas Rd. Mt. Holly, NJ 08060 609/261-5055	Vineland City	Mary Festa, Pr. Plan. Vineland City Hall Seventh & Wood Sts. Vineland, NJ 08360 609/691-3000 X-262

JURISDICTION	CONTACT	JURISDICTION	CONTACT
ESSEX COUNTY		GLOUCESTER COUNTY	
Belleville Town	Luna I. Mishoe II	Clayton Boro	Charles Romick
Caldwell Boro	Director, Essex Co.	Logan Twp.	Supervising Planner
Cedar Grove Twp.	Div. of Planning	National Park Boro	Gloucester Co. Planning Department
Fairfield Twp.	235 Franklin Ave.	Paulsboro Boro	N. Delsea Drive
Glen Ridge Boro	Belleville, NJ 07109	Pitman Boro	Clayton, NJ 08312
Livingston Twp.	201/961-8238		609/881-1200 X-16
Maplewood Twp.			
Millburn Twp.		Glassboro Boro	Carl Halpin, Clerk
North Caldwell Boro			Borough of Glassboro
Nutley Town			Main & High Sts.
Orange City			Glassboro, NJ 08028
Roseland Boro			609/881-9230
South Orange Village Twp.		West Deptford Twp.	Raymond H. Kromer
Verona Boro			Administrator,
West Orange Town			West Deptford Twp.
			Municipal Building
			Grove Ave. & Crown Point Rd.
East Orange City	James Hsu, Act. Dir.		Thorofare, NJ 08096
	Planning & Grants Administration		609/845-4004
	City of East Orange	Westville Boro	Richard M. Burr, Clk.
	44 City Hall Plaza		Westville Borough
	East Orange, NJ 07017		Borough Hall
	201/266-5140		114 Crown Point Rd.
Montclair Town	Peter Steck, Director		Westville, NJ 08093
	Dept. of Planning & Community Development		609/456-0030
	Town of Montclair	Woodbury City	Judith Zaehring, Dir.
	205 Claremont Ave.		Woodbury Community Development
	Montclair, NJ 07042		25 Newton Ave.
	201/744-1400 X-295		Woodbury, NJ 08096
Newark City	Barbara Sacks		609/845-4799
	Assistant to the Mayor		
	City of Newark	HUDSON COUNTY	
	City Hall	Harrison Town	Martin A. Polcari
	920 Broad Street		Harrison Town Treas.
	Newark, NJ 07102		318 Harrison Ave.
	201/733-3843		Harrison, NJ 07029
West Caldwell Boro	Benedict F. Martorana		201/483-7300
	Municipal Engineer		
	Township of West Caldwell	Hoboken City	Fred Bado, Director
	30 Clinton Road		Hoboken Community Development Agency
	Room 203		124 Grand St.
	West Caldwell, NJ 07006		Hoboken, NJ 07030
	201/226-2300		201/420-2201

JURISDICTION	CONTACT	JURISDICTION	CONTACT
HUDSON COUNTY (Cont'd)		MIDDLESEX COUNTY (Cont'd)	
Jersey City	Fran Wright Assistant Planner Urban Research & Design Development Jersey City Dept. of Housing & Community Development 88 Clifton Place Jersey City, NJ 07304 201/547-5010	Sayreville Boro	Joanne Amante (Address: See begin- ning Middlesex Co.)
		South Amboy City	
		South Brunswick Twp.	
		South Plainfield Boro	
		South River Boro	
		Spotswood Boro	
		Woodbridge Twp.	
MERCER COUNTY		Old Bridge Twp.	Courtney Powell Tax Assessor Twp. of Old Bridge Room 211 One Old Bridge Plaza Old Bridge, NJ 08857 201/721-5500 X-270
East Windsor Twp.	Michael K. Mueller Township Planner East Windsor Township Municipal Building 16 Lanning Blvd. East Windsor, NJ 08520 609/443-4000 X-246		
Trenton City	Rebecca Mitchell Chief, Bur. of Neigh- borhood Planning Trenton Dept. of Hous- ing & Development City Hall Annex Trenton, NJ 08608 609/989-3502	Plainfield City	Jerome C. Harris, Jr. Director, Plainfield Dept. of Public Wks. & Urban Development City Hall 515 Watching Ave. Plainfield, NJ 07061 201/753-3375
MIDDLESEX COUNTY		MONMOUTH COUNTY	
Carteret Boro	Joanne Amante	Howell Twp.	Barry J. Roller Admin., Howell Twp. P.O. Box 580 Howell, NJ 07731 201/938-4500
Cranbury Twp.	Sr. Data Management Specialist		
Dunellen Boro	Middlesex County Planning Board		
East Brunswick Twp.	40 Livingston Ave.		
Edison Twp.	New Brunswick, NJ 08901	Ocean Twp.	Stacy A. Smith Planning Admin. Township of Ocean Town Hall Monmouth & Deal Roads Oakhurst, NJ 07755 201/531-5000 X-18
Helmetta Boro	201/745-3865		
Highland Park Boro			
Jamesburg Boro			
Metuchen Boro			
Middlesex Boro			
Milltown Boro			
Monroe Twp.			
New Brunswick City		Red Bank Boro	Frederick A. Richart Health Officer Boro of Red Bank 32 Monmouth St. Red Bank, NJ 07701 201/842-3546
North Brunswick Twp.			
Perth Amboy City			
Piscataway Twp.			
Plainsboro Twp.			

JURISDICTION	CONTACT	JURISDICTION	CONTACT
MORRIS COUNTY Madison Boro	James R. Allison Madison Boro Admin. Hartley Dodge Memorial Kings Road Madison, NJ 07940 201/377-8000 X-62	PASSAIC COUNTY Clifton City	Grace C. Harris Executive Director The Planning Assoc. of North Jersey 1051 Bloomfield Ave. Clifton, NJ 07012 201/778-0733
Mt. Olive Twp.	Donald A. Ferguson Planning Director Twp. of Mt. Olive Municipal Building P.O. Box A, Rt. 46 Budd Lake, NJ 07828 201/691-0900	Passaic City	Carmen Mendez Senior Planner Passaic Dept. of Com- munity Development 330 Passaic St. Passaic, NJ 07055 201/365-5640
Parsippany- Troy Hills Twp.	Frank B. Priore Mayor, Parsippany- Troy Hills Twp. 1001 Parsippany Blvd. Parsippany, NJ 07054 201/263-4297	Paterson City	George Ferensick Planning Director Municipal Complex 4th Fl. Broadway/Church St. Paterson, NJ 07505 201/881-3305
Pequannock Twp.	Robert A. Michaels Planning Director Twp. of Pequannock 530 Newark-Pompton Turnpike Pompton Plains, NJ 07444 201/835-5700	SUSSEX COUNTY Hopatcong Boro	Frank Vanore Boro Administrator Boro of Hopatcong Municipal Building River Styx Road Hopatcong, NJ 07843 201/770-1200
Randolph Twp.	Adrian Humbert, Pl. Dir. Twp. of Randolph Municipal Bldg. 502 Millbrook Ave. Randolph, NJ 07869 201/361-8200	UNION COUNTY Cranford Twp.	Edward J. Murphy Administrator Twp. of Cranford Municipal Bldg. 8 Springfield Ave. Cranford, NJ 07016 201/276-8900
Roxbury Twp.	Cecil E. Cole, Tres. Township of Roxbury Municipal Bldg. 72 Eyland Ave. Succasunna, NJ 07876 201/584-7400	Elizabeth City	Neil DeHaan, Director Elizabeth Community Development Dept. Room 214, 2nd Floor 50 Winfield Scott Plaza Elizabeth, NJ 07201 201/353-6000 X-380, X-389
OCEAN COUNTY Brick Twp.	Stephen Leone Business Admin. Twp. of Brick 401 Chambers Bridge Rd. Brick, NJ 08723 201/477-3000		

JURISDICTION	CONTACT	JURISDICTION	CONTACT
UNION COUNTY (Cont'd)		WARREN COUNTY	
Linden City	John A. Ziemian Engineer City of Linden City Hall 301 North Wood Ave. Linden, NJ 07036 201/486-3800	Phillipsburg Town	James P. Grassi Director Phillipsburg Com- munity Development Department 122 South Main St. Phillipsburg, NJ 08865 201/454-3232
Rahway City	Robert E. Rosa Community Planning Consultant Robert E. Rosa Assoc. 510 Amboy Ave. Woodbridge, NJ 07095 201/636-7575		

CREATING CENSUS DATA FOR A MICRO COMPUTER
by Gertrude Lewis, CCIS, Rutgers University

Since there are many inquiries on creating census data for micro computers, I decided to carry out a project of extracting census data from a mainframe, an IBM 3033U, and of producing the same data on floppy disk for a micro computer, an APPLE II. I presented the results in a session on mainframes vs. micros at the NJSDC Network Meeting in May, 1983.

There are many conditions to consider in this procedure. The process of downloading or moving the data files from a mainframe to a micro requires communications link between the machines, a program to communicate through that link, compatibility with the micro disk operating system and a statistical software package on the micro which can accept the data file.

For this experiment, I chose the APPLE II micro computer because of the proliferation of the computer and the existing communications link between the mainframe and the APPLE II in the Microlab on the Rutgers University New Brunswick campus.

The data file was created by accessing the 1980 Census Summary Tape File 3A for New Jersey using the CENSPAC program, moving the results to the interactive software system, SUPERWYLBUR, and transmitting it through the SOFTERM, a terminal emulator and file transfer system, onto a micro disk. The statistical package, ASTAT, which was stored on the APPLE II micro disk was set up to receive the data.

Most micro programs are on disk. Unfortunately, they are not usually compatible among machines, although this may change in the future, nor are the disk operating systems compatible. When investigating, the buyer should consider hardware and software together. Be sure to test it out and see the system work before buying it. Also, if the buyer plans to upgrade the hardware later on, the buyer should check to see that the software can adapt to the change. Hopefully, competition for good software on micros will help foster development of good compatible software among various micro system. This is happening now, but very slowly.

The downloading and uploading of data between a specific mainframe and a specific micro is not a clearly defined operation. Each step had to be considered within the environment in which the user is working. It is important to know which hardware and software to purchase, including communications hardware and software such as memory configuration, keyboard configuration, program and data storage, display configuration and proper documentation. Since my experiment used NJECN's IBM 3033U, the following information is based on downloading from that IBM system and applies to the SUPERWYLBUR software of that IBM 3033U specifically.

Hardware: APPLE II+ computer with the Hayes
Micromodem II

Software: SOFTERM communications and file
transfer software

Operating System: APPLE DOS 3.3

Statistical Package: ASTAT

Quality of Documentation: SOFTERM=Very Good
ASTAT=Poor

If the researcher is used to working on the mainframe, he/she should be aware of the limitation of the storage capacity of the micro computer disk. The data must be compressed to the amount of space available on a 5 1/4" floppy disk. Depending on how much data is desired and how the micro statistical software handles the data, a number of disks may be required. This limitation could be a blessing in disguise because it forces the researcher to concentrate in depth on one topic and not spend time and money on a broad generalized hypothesis. On the other hand,

the researcher may discover during the analysis process, the need for more data and may have to return to the original tape on the mainframe. Thus the process of downloading to create data on additional disks may be necessary.

Although I didn't carry the project any further, the data on the disk could have been tested, manipulated and uploaded back to the mainframe, if desired.

For general information on micros, the contact person for Rutgers Micro Lab is Seymour Joseph at (201) 932-2685. The Rutgers Micro Lab supports two publicly accessible computer bulletin board systems. These are usable by anyone with a terminal/Personal Computer and a modem. The Computer Bulletin communicates at 300 baud (30 characters per second).

They are:

RIBBS - The Rutgers Interactive Bulletin Board System which allow electronic mail and file upload and download. Its phone number is (201) 932-3879.

PMS - The Personal Message System is used as a base system for Amateur Computer Group of New Jersey Apple Users Group. Meetings are announced on it and it allows electronic mail and file transfer. The phone number is (201) 932-3887.

The main purpose of a computer bulletin board is to establish a public exchange of messages. If you need to transfer a data file from a mainframe to a microcomputer, you may be able to communicate through these bulletin boards with someone knowledgeable about your specific operation.

1990 CENSUS PLANNING ISSUES

INTRODUCTION

"Census Day, 1990--it seems so far away. Even so, the U.S. Bureau of the Census already has begun planning for the 1990 cen-

sus even as information from the 1980 census is still being analyzed and disseminated." Thus begins a paper entitled "1990 Census Planning Issues" presented by Peter A. Bounpane of the U.S. Census Bureau at the Joint Meetings of the American Statistical Association in Toronto on August 15, 1983.

The paper presents some of the Bureau's current thinking on plans for the 1990 census. The paper concentrates on activities related to improving the census taking process, and briefly covers the issues of choosing a basic census methodology and whether or not the bureau should adjust the census results to correct for the undercount. It also discusses the meaning of enumeration.

Mr. Bounpane points out that, "the 1980 census was one of the best censuses ever--all one has to do is to read the history of census taking in this county and others to know how true that is." He does recognize that there were some major problems of the 1980 census and suggests that examination of these is a good starting point for 1990 planning. "The problem the bureau faced in 1980 included:

- A shortage of funds, necessitating layoffs and disruption of data entry and processing efforts at a particularly critical time.
- Delays and inaccuracies in the preparation of geographic materials.
- A great deal of public concern about the accuracy of the 1980 census.
- Recruitment, training, retention, and productivity problems in the temporary work force.
- A host of legal challenges concerning the use of imputation, the question of adjusting for the undercount, and the presence of a significant but unknown number of illegal aliens.
- Emergencies in several district offices, including a fire in a New York City office that necessitated a total recount of the Bedford-Stuyvesant district."

According to Bounpane, "The 1990 census program should solve, or take into account these problems faced by the last census." Another objective of the 1990 census planning is "to build a census process that can form the foundation for future efforts." Costs, of course, are another consideration. "The cost for each American counted in the 1980 census was only about \$4.73 or 47¢ per year per individual for the 10-year period. Nevertheless, the bureau is working to keep the 1990 costs as low as possible while still delivering accurate and timely results."

"An overriding objective," states Bounpane, "for the 1990 census is to produce a solid and reliable program that will not break down. The objective is to create a census process that can

anticipate the foreseeable and survive the unexpected." Thus, "in order to plan a 1990 census that will meet these objectives, the bureau is conducting planning efforts on four different levels simultaneously:

- (1) An examination of changes from the basic census methodology used in 1980--the mail-out/mail-back method.
- (2) The improvement of the census process to make it more effective and efficient.
- (3) Continuing research on the problems and feasibility of adjusting census figures for the undercount
- (4) A general review of the mean of enumeration."

FIRST PLANNING LEVEL: CHOOSING A BASIC METHODOLOGY

For the initial contact with the actual population in the population in the actual enumeration, the bureau is considering three basic approaches--the 1980 approach and two others. Bounpane discusses the advantages and disadvantages of each, but this presentation will be limited to a brief description of each.

The 1980 census was the second conducted using a mail-out/mail-back, self-enumeration process as the basic methodology. For 95 percent of the population, each housing unit received a form in the mail, and one person filled it out and mailed it back. Approximately one out of five units received a longer questionnaire with additional sample questions. For each household where no form was returned by mail, an effort was made to contact someone personally who could report the necessary information.

One potential approach is the two-stage census. In the first stage, the initial questionnaire is delivered to every housing unit. It would cover only basic "short form" question (also known as the 100-percent questions) needed to gather basic population and housing data necessary to meet the statutory deadlines for redistricting and reapportionment. A second questionnaire would be distributed in the second stage to a selected sample of the population to gather additional, discretionary population and housing information. The two-stage process could be used with any delivery and collection system--the U.S. mail or list/leave.

Another potential approach being considered is the list/leave census. Canada uses variation of list/leave. In the U.S. version, census employees, instead of mail carriers, would distribute the questionnaires. The control address list would be updated during the distribution of questionnaires. Most respondents would be asked to mail the form back.

In pretest activities, the bureau will study and test these different approaches for taking a census, delaying the selection of the basic census methodology until about mid-1986. This kind of timing essentially is different from that used in advance of the 1980 census. Because the mail-out/mail-back format was so successful in 1970, it already had been chosen as the basic collection methodology by this time 10 years ago.

SECOND PLANNING LEVEL: IMPROVING EFFECTIVENESS AND EFFICIENCY

While the issue of choosing a basic census methodology is being studied and tested, immediate efforts are needed to address more technical problems that will face the Bureau in 1990 whatever methodology is chosen. Some of the more important plans for improving the efficiency and effectiveness of the census can be grouped into five categories:

- (1) Increasing community outreach and publicity efforts.
- (2) Automating more of the data handling process.
- (3) Improving the management of the temporary work force.
- (4) Developing and maintaining a more accurate and less costly address list of housing units.
- (5) Continuing coverage improvement.

These categories are discussed in some detail by Bounpane. Readers are referred his complete paper for more information.

THIRD PLANNING LEVEL: ADJUSTMENT

The extent to which the Bureau pursues coverage improvement programs will depend on decisions about adjustment. If the decision is made before 1990 to adjust the data, some of the resources used for coverage improvement may be shifted to the adjustment program. According to Bounpane, "it would make little sense to expend significant resources in an attempt to reduce the undercount to negligible levels through coverage improvement if more precision would be achieved by adjustment. If, on the other hand, there is to be no adjustment of the census count, the burden on the bureau to reduce the undercount to negligible levels will be correspondingly higher."

"Adjustment of the 1990 census to reflect the undercount can actually be viewed as two distinct problems. First, the bureau must be able to measure the undercount more accurately than it is able to now. Preliminary estimates show that overall coverage in the 1980 census was quite good. In that situation, considerable

accuracy is demanded of the undercount estimate if it is to be used for adjustment purposes. Related to this question is the issue of what criteria should be satisfied to determine that the estimate of the undercount is sufficiently accurate for use in adjusting the census."

"The second undercount problem is how can estimates of the undercount be broken down to small geographic areas? Even if the undercount could be measured adequately at the national or regional level, there are doubts about the accuracy of techniques available for adjusting population counts for smaller areas. The practicality, as well as the accuracy, of adjusting for undercount diminishes with the size of the area in question."

FOURTH PLANNING LEVEL: THE MEANING OF ENUMERATION

"An underlying issue facing the bureau as it plans for the census is to reach a working definition of the meaning of enumeration. Traditionally, census enumerations have been thought of as accounting procedures rather than statistical procedures. The bureau has always attempted to count every person living in the United States on census day. Even so, there has always been more than pure head counting in the census. In the first census an enumerator visited each residence, listed the name of the head of the family, and tallied the households members by age and sex. In recent censuses, for most residents, the self-enumeration principle was used."

"Sometimes, in spite of the enumerator's best efforts, no information could be gathered about a housing unit. Sometimes, incomplete or inconsistent questionnaires were returned. Computer editing procedures were designed to 'clean up' missing or incomplete data in a statistically reliable way. Imputation procedures were used to supply missing information by having the computer select a matching housing unit or person and allocate or substitute its characteristics for the missing or inconsistent information. The census process has thus evolved to an accounting procedure with 'estimation' as necessary to achieve a more accurate result."

"The Bureau is examining the extension of statistical estimation in the census. More estimation would involve sampling and the use of administrative records to obtain basic census counts."

ADDITIONAL INFORMATION

Only excerpts from Bounpane's paper are presented here. A complete copy of the paper is available from Peter A. Bounpane, Census Bureau, U.S. Department of Commerce, Washington, D.C. 20233 or the NJSDC, Division of Planning and Research, Department of Labor, CN388, Trenton, NJ 08625-0388.

NEW CENSUS DATA PRODUCTS

All of the products listed are available for purchase from Customer Services, U.S. Bureau of the Census, Department of Commerce, Washington, D.C. 20233 (301-763-4100). Additional access is available as described below.

COMPUTER TAPES (Accessible at Princeton and Rutgers University Computer Centers; NJ and NJSDC county affiliate agencies should contact the NJSDC 609-984-2593 for further information.)

STF1F & STF3F: 100% (complete count) and sample data from the 1980 census for school districts.

STF1G & STF3G: 100% (complete count) and sample data from the 1980 census for neighborhoods.

STF4: Detailed crosstabulations of sample data from the 1980 census for the state, SMSAs (pre-1983 definitions), counties, municipalities, and census tracts.

REPORTS (Available for review purposes at all federal depository libraries and NJSDC county affiliate agencies. For a list of these, contact the New Jersey State Data Center, Division of Planning and Research, Department of Labor, CN388, Trenton, NJ 08625-0388.)

"Detailed Social and Economic Characteristics"

"General Housing Characteristics"

"Census Tract Reports"

"Detailed Housing Characteristics"

"General Social and Economic Characteristics"

MICROFICHE

"EEO Data": Equal Employment Opportunity data on occupation of experience civilian labor force by sex and race/Spanish origin.

"Neighborhood Statistics"

CONFERENCES/WORKSHOPS

NEW JERSEY STATE DATA CENTER

- May 1984 - "NJSDC Network Meeting and Workshop." Proposed topics include: 1990 Census Planning, 1980 Census Transportation Package, New Jersey Statistical Abstract. NJSDC network members will receive further information in April.
- June 1984 - "Census Table." Topic to be determined. To be an informal luncheon meeting of 30 - 35 representatives of government, academia, and the private sector to discuss important demographic/economic issues to the State of New Jersey.
- September 1984 - (Tentative) "Data Users Workshop." Topics to be determined. To be a full-day program consisting of several "hands-on" workshops focusing on using census and related issues. Suggestion for topics are invited.
- November 20, 1984 - "Fifth Annual New Jersey State Data Center Conference." Topic to be determined. Further information to be available in the Fall.

U.S. BUREAU OF THE CENSUS (For information on the following contact Dorothy Chin, Bureau of the Census, Washington, D.C. 20233, 301-763-1510.)

- February 13-16, 1983 - "Census Bureau Statistical Resources for Librarians." Washington, D.C. (Registration Fee: \$13.00).
- March 7 & 8, 1984 - "1980 Census Data: Intermediate Workshop." New York (Registration Fee \$80.00).
- March 14, 1984 - "Microdata from the 1980 Census." New York (Registration Fee: \$40.00).
- June 20 & 21, 1984 - "Aging Population - 1980 Census Workshop." New York (Registration Fee: \$800.00).

OCCUPATION INFORMATION HOTLINE

The New Jersey Occupational Information Coordinating Committee (NJOICC) has established an Occupational Information Hotline to assist individuals seeking to obtain occupational or career development information. The toll-free telephone will be staffed from 8:30 a.m. to 4:30 p.m. each working day. This line will also be available to aid New Jersey Career Information Delivery System (CIDS) users who have questions concerning CIDS operations.

The telephone number is 800-222-1309 and can be accessed from all New Jersey telephone exchanges. This service, coupled with the education and financial aid hotlines maintained by the Department of Higher Education, will provide residents of the state with access to the full range of occupational and training data presently available.

For further information, contact Lawrence H. Seidel, Staff Director, NJOICC, Department of Labor, CN056, Trenton, NJ 08625-0056 (Phone: 609-292-2682).

SUBJECT INDEX NJSDC NEWSLETTERS (1/83-7/83)

	ISSUE #	ISSUE DATE	PAGE
Ancestries	29	4/83	14
Commutation Data	28	1/83	14
Computer Tape Holdings, NJSDC	30	7/83	4
Congressional Districts Data	30	7/83	19
County Contacts, NJSDC	29	4/83	23
Census Bureau Products	29	4/83	22
Census Bureau Publications	28	1/83	9

SUBJECT INDEX
 NJSDC NEWSLETTERS
 (1/83-7/83)
 (Continued)

	ISSUE #	ISSUE DATE	PAGE
Census, Data from	28	1/83	4
Census Developments	28	1/83	8
Census Developments	29	4/83	19
Census Developments	30	7/83	26
Classification of Counties	28	1/83	32
Earnings and College Education	30	7/83	33
Economic Censuses	28	1/83	29
EEO Data	29	4/83	25
EEO Data	28	1/83	26
Expenditures, Federal	29	4/83	26
Farm Population	29	4/83	19
Geographic Base Development Program	30	7/83	35
Hispanic Population	28	1/83	18
Income, Personal (County, 1981)	30	7/83	30
Income, Personal (NJ, 1982)	30	7/83	29
Income, Per Capita (NJ, 1982)	31	10/83	8
Income, Census	29	4/83	5
Labor Force, Women in	28	1/83	11
Languages	29	4/83	14
Manufacturing Goods, Export of	30	7/83	34
Maps	28	1/83	30
Metropolitan Statistical Areas	28	1/83	31
Metropolitan Statistical Areas	31	10/83	2
Microdata Files	30	7/83	22
Mobility, New Jersey's Population	30	7/83	15
MSA Designations	29	4/83	28
Neighborhood Statistics Program	28	1/83	9
Occupations: By Race, Spanish Origin, & Sex	30	7/83	9
Occupation Codes	28	1/83	27
Place of Work	28	1/83	14
Population Estimates by Age, 1981 & 1982	30	7/83	21
Population, Voting Age	28	1/83	34
Population Estimates 1981	28	1/83	35
Poverty Census	29	4/83	5
Poverty, Cities and	30	7/83	18
Product Primers on Census Reports	29	4/83	21
Publications, NJSDC	30	7/83	2
PUMS	30	7/83	22
Rankings, NJ	31	10/83	9
Standard Errors	28	1/83	19
STF3	28	1/83	7
Spanish Origin	28	7/83	18
TIGER	30	7/83	35
Transportation Planners Guide	30	7/83	26
Using Census Data, Example	31	10/83	12
Women in the Labor force	28	1/83	11

N J S D C P U B L I C A T I O N S O R D E R F O R M

(Note: There is a Limit of 1 Copy of Each Free Publication Per Agency)
(Please allow 3-4 weeks for delivery)

Table with columns: PRODUCT, PRICE, QUANTITY, TOTAL AMOUNT (if applicable). Rows include 1980 CENSUS PRODUCTS (e.g., NJ 1980 Census Counts of Population by Race & Spanish Origin) and OTHER DATA PRODUCTS (e.g., County Summary, 1981).

MAKE CHECK PAYABLE TO: New Jersey Department of Labor

MAIL TO: Connie O. Hughes, Staff Director
New Jersey State Data Center
Division of Planning & Research
Department of Labor, CN 388
Trenton, NJ 08625-0388

TOTAL AMOUNT ENCLOSED \$

NAME: _____

AGENCY: _____ PHONE: _____

MAILING ADDRESS: _____

ZIP: _____

STATE OF NEW JERSEY
DEPARTMENT OF LABOR
DIVISION OF PLANNING AND RESEARCH
CN 388
TRENTON, NEW JERSEY 08625 - 0388

BULK RATE
U.S. Postage Paid
TRENTON, N.J.
Permit No. 21

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.