Palmer Ass. v. Twp Holmdel $^{1/7}$ (1985)

Memo to provide a planning review of the Report Fair Share Housing Analysis, Holmdel Twp, Dec, 1984

+ additional:

mount Laurel present need for Holmdel Twp + reports

61 pgs

＃blue sticky note

ML000130D

malcolm kasler & associates, p.a.

Community Planning & Development Consultants • 29 Pangborn Place • Hackensack, N.J. 07601 • 201-487-1424

MEMORANDUM

TO   : RONALD REISNER, ESQ.
FROM   : MALCOLM KASLER, AICP,P.P.
SUBJECT   : REVIEW OF RICHARD COPPOLA'S FAIR
              SHARE HOUSING ANALYSIS
REVIEW DATE : JANUARY 7, 1985

INTRODUCTION

The purpose of this memorandum is to provide a planning review of the report _Fair Share Housing Analysis, Holmdel Township, December, 1984_, prepared by Richard Thomas Coppola, the Court appointed master in the matter of _Palmer Associates et al v. Township of Holmdel_.

It should be noted that Coppola has accepted the procedure established by the Consensus planners and with one exception, proceeds to verify the findings of Moskowitz and Hintz without making independent findings concerning some of the issues raised by Kasler and Burchell. For example, as will be specified in greater detail, Coppola

 ... Does not question the method of projecting future
  housing needs as to its accuracy or veracity;

 ... Does not question the 20 percent projection add-on;

 ... Relies upon the Consensus methodology in general without
  consideration of the issues raised by the Township;

 ... Does not drive but relies upon mapping techniques in the
  determination of the region and utilizes the wrong exit/
  entrance to the Parkway.

It should be noted that Richard Coppola was a participant in the Consensus methodology as was Harvey Moskowitz and Carl Hintz.

Reliance Upon Consensus Methodology

Coppola states that his fair share analysis utilizes "the agreed upon methodology". We are not aware that the Consensus methodology was a pre-condition to the fair share analysis. The reference to "so-called" refinements relates solely to the 82 percent factor.

Report Does Not Make Reference to January 1, 1985

The Supreme Court recognized that the SDGP (State Development Guide Plan) would be of limited benefit if not brought up to date and kept current. The Court stated :

  "(24-27) The third exception recognizes that if the planning
  process does not remain a continuing one, the categories set
  forth in the SDGP might become unrealistic and certainly would

ML000130D

"lose a considerable degree of their legitimacy. It is one thing for a court
to defer the judgement of the planners, even where it disagrees; it is
another · to defer to a document that is clearly out of
date where deferral might frustrate a constitutional
obligation. In order for it to remain a viable remedial
standard, we believe that the SDGP should be revised no
later than January 1, 1985 (and , in the absence of proof
of a more appropriate period, every three years thereafter)[16].
If it is not, then courts shall have considerable discretion
to vary the locus of the Mount Laurel obligation from that
shown on the present SDGP concept map."[1] ([16]We will continue
to rely on revision of the SDGP as long as the procedures by
which it is amended and the substantive recommendations it
contains demonstrate that it is a sound planning document.
Given the significance this opinion attributes to the SDGP,
it becomes even more important that the state authorities
responsible for it continue to act on the basis of sound
planning principles. Failure to do so would not only have
adverse consequences for the state, but would cause us to
reconsider use of the SDGP as a remedial guide to the Mount
Laurel obligation.)

We believe the method of determining fair share housing need shifts as of January
1, 1985 since the State has not undated the SDGP. We believe all of the com-
munities that have been exempted from prospective housing need in the Holmdel
region will have to be recomputed due to the failure to upgrade the SDGP.

Coppola does not mention this factor despite the December, 1984 date of his
report.

---

[1]92NJ 158, pg. 242.

Indigenous Housing Need

Coppola modifies Holmdel's indigenous housing need from 25 to 17 units based upon the 58.3 percent of the "three surrogates". This technically is <u>not</u> the methodology utilized in <u>Countryside Estates v. Ringwood.</u> Numerically, the number of units is close to that which has been determined by the Rutgers methodology.

Allocation of Surplus Present Housing Need

Coppola's calculation for re-allocation housing is identified on pages 12 through 18. The reallocation process takes the cap of 3.6 percent rather than consider a more uniform cap applicable statewide.

The redistribution to other communities is made to all "growth area" communities except "urban aid municipalities". We, again, object to the exclusion of urban aid towns since they are not clearly identified as exempt under the Supreme Court decision and creates an inequitable and unfair system.

Coppola concludes that there are a total of 2,562 reallocated housing units which are increased to 2,639 units with a 3 percent vacancy factor. Coppola admits that these statistics were based upon the 82 percent factor and that if the Rutgers cross-referenced data were utilized ,"... the Township's Fair share would be lower". He does not, in fact, utilize the lower statistic.

Kasler and Burchell indicated that the Rutgers study identified the fact that 46.29 percent of all substandard housing in the Monmouth -Ocean region were occupied by Mount Laurel households.

If one were to utilize the three-surrogate number of reallocated housing in the two county region, there are 3,123 units. A total of 1,446 units would have to be reallocated. This number increased by 3 percent would total 1,489 units rather than 2,639 units identified by Coppola.

There is an <u>82.5 percent</u> difference in the two techniques as applied to reallocated housing , comparing Rutgers to Coppola.

Coppola chooses to follow the Consensus methodology concerning reallocation. In using employment statistics, Coppola excludes urban aid communities resulting in an employment base of 148,506 jobs. Kasler rejects elimination of urban aid communities with a resultant of 195,862 jobs. The difference in the two is a 7.391 factor versus 5.604. The difference in the two techniques, divided by the factor of 3 is an increase of 0.6 percent just for the exclusion of urban aid communities. In the case of Holmdel, a total of 16 additional units are allocated to the Township due to the urban aid exclusion. That factor can be increased to 80 additional units if a builder's remedy is granted. These units, when increased by 20 percent and 3 percent, result in 20 low cost housing units and 100 total housing units.

The master's statistics for Township growth area is higher than that of Kasler and the growth area region is less than Kasler. Kasler's percent share for growth area reallocation is 1.994 and Coppola's is 2.078.

Coppola's employment statistics as previously noted is 7.391 percent vs. 5.604 for Kasler . His income factor of 2.02 percent vs. 2.15 for Kasler is due, we believe, to the "urban aid" exclusions.

Overall his reallocation percent is 9.563 versus 8.164 percent forKasler. The difference is numerically significant - 17.1 percent greater . Detailed methodology of the master should be provided.

Kasler projects a reallocation of 78 housing units utilizing the 3.6 percent factor or 26 units for 1990. Coppola estimates 67 units of reallocated housing - an increase of 158 percent of the Coppola calculations over that of Kasler. Remember, Kasler has relied on the Rutgers determination of re-allocated housing which Coppola admits has not been utilized.

Regional Prospective Housing Need

Coppola evaluates the prospective region which will be separately discussed.

He utilizes the Consensus methodology for projecting future need which Kasler and Burchell points out is excessive. For example, Coppola notes on page 9 of his report that a total housing need of 157,461 units is in-dicated for the four county region of Union, Middlesex, Monmouth and Ocean Counties.

During the first four years and4 months of 1984, the entire state of New Jersey produced a total 108,950 housing units . This methodology predicts that approximately 64 percent of the total housing built in the entire State will occur within the four county region. We think not. We therefore find that the 62,040 units of low and moderate income housing to be excessive.

We also take exception to the 20 percent factor as earlier noted.

TABLE 1
BUILDING PERMITS ISSUED
1980 - APRIL, 1984

| | NEW JERSEY | FOUR COUNTY REGION | | | | TOTAL |
		UNION	MONMOUTH	MIDDLESEX	OCEAN	
1980	22,257	319	2,358	1,918	2,950	7,545
1981	21,293	510	2,152	2,830	2,589	8,081
1982	21,404	780	2,096	3,737	2,646	9,259
1983	36,791	562	4,217	6,701	4,897	16,377
1984*	7,205	133	715	727	960	2,535
	108,950	2,304	11,538	15,913	14,022	43,797

*First four months of year.

Determining Prospective Housing Region

Coppola notes there are four different prospective regions depending
upon the selection of the "functional center". Coppola indicates a range
between 1,720 to 2,542 units depending solely on the selection of the
functional center.

Although he computes the numerical values for the four combinations, he
does not provide a basis for selecting a preferred region, which we
believe he should, as the Court appointed master.

The selection of the functional center, as defined in the Warren decision,
is not a three tiered decision wherein you can pick and choose the one
most preferable to a particular conclusion. It states if the community
maintains a "downtown area" that would define a functional center. In
the absence of this type of condition, the municipal building would be
chosen. Absent both conditions, the functional center represents the
intersection of major roadways.

Coppola fails to select the municipal building as the functional center of
Holmdel. All parties agree that Holmdel does not maintain a "downtown
area" as is traditionally understood.

Appendix A states that the functional center chosen was the intersection
of Holmdel Road and Crawford's Corner Road.

Coppola does not justify the selection of these two intersecting roads
as opposed to other intersecting roads or to the selection of the muni-
cipal complex as the designated site.

It is also unclear how and under what conditions Coppola is measuring
the journey-to-work. On appendix page 2, Coppola claims a total dis-
tance of 22.5 miles to the Ocean County border from the intersection
of Crawford's Corner and Holmdel Road through Exit 116.

You will recall in our memorandum of October 5, 1985 that we indicated
in great detail how we measured the travel time southward to the Ocean
County which was 22.3 miles as measured from the municipal building
complex through Exit 114 on the Parkway. Our travel time was 29.25
minutes and it was not possible to exit the Parkway into Ocean County
proper.

Coppola claims that the distance to the Parkway and the Ocean County
line vis-a-vis Exit 116 is 22.5 miles and the total drive time is
27.8 minutes resulting in 2.2 minutes of travel time in Ocean County.

Coppola could not have driven through Exit 116 since it is not an exit
or entrance to the Township of Holmdel. Our phone conversation with the
Garden State Parkway Authority confirmed that Exit 116 is the access
to the Garden State Arts Center which only is available from the Parkway
itself. Therefore, we believe all of Coppola's calculations are in-
correct as they relate to Ocean County.

We also do not understand his calculations relative to Union County but they certainly are more likely to be plausible relative to the northbound movement. If you recall, we could not located the County line marker on the Parkway but did believe some extension into Union County was likely.

It is clear that Tables 1 and 2 are inconsistent with one another since travelling 21½ miles in each table results in a different travel period.

TOWNSHIP OF HOLMDEL
MONMOUTH COUNTY, NEW JERSEY
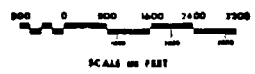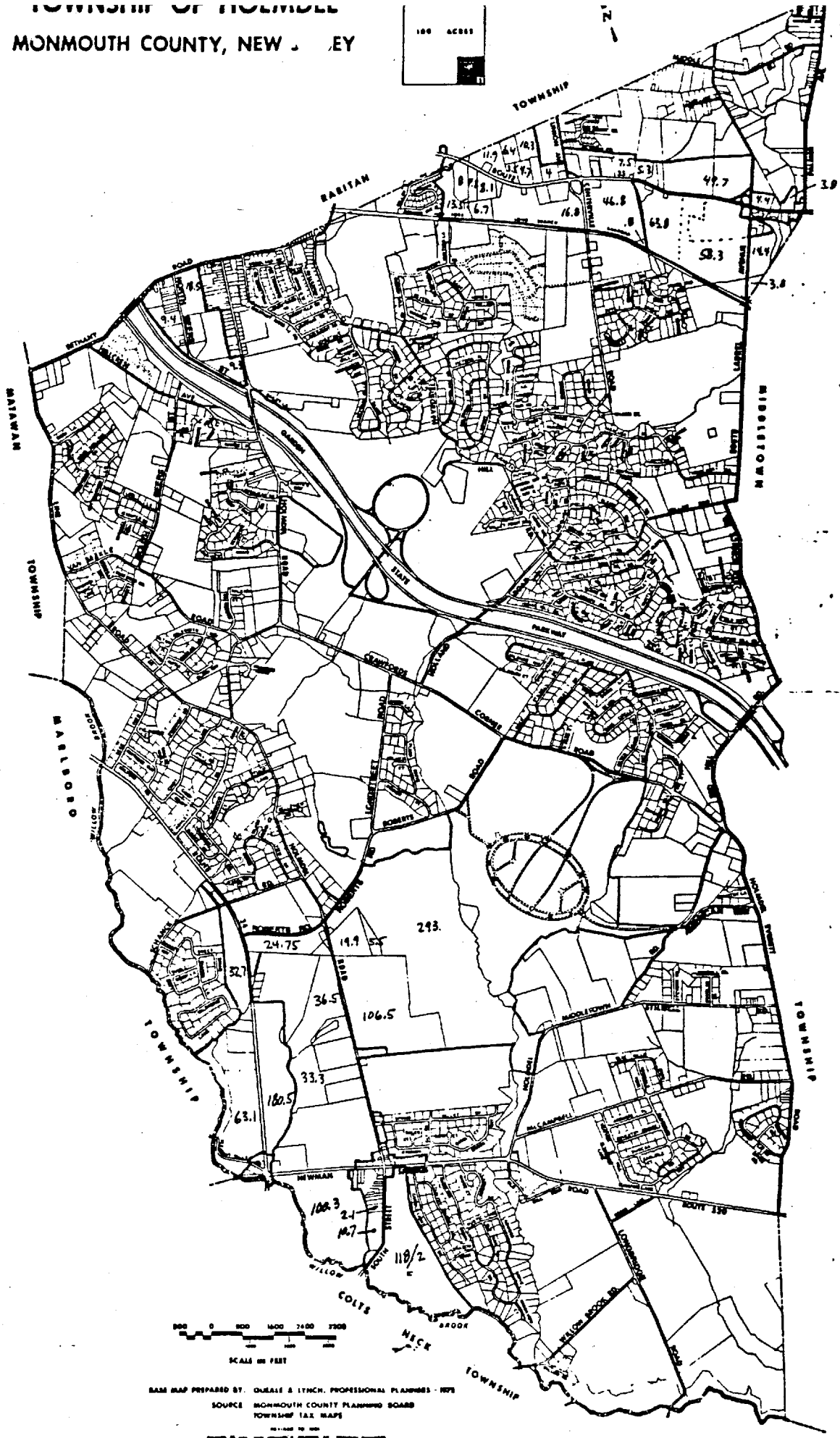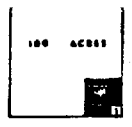
malcolm Kasler & associates, p.a.

M E M O R A N D U M

TO   : HOLMDEL FILES
FROM   : MALCOLM KASLER
SUBJECT   : COMMUTERSHED REGION
DATE   : OCTOBER 5, 1984

This memorandum will confirm my field observations with reference to Holmdel Township's journey-to-work region, specifically to determine if the region extends into Ocean County and, if so, to what extent.

On this date, I drove to Holmdel Township and started from the Municipal Building. My odometer reading was 49.7 miles. I drove 3.1 miles along Crawford Corner-Everett Road and Middletown Road (County Route 52) to the Parkway Exit # 114. My odometer reading was 52.8.

I drove to Exit # 105. My odometer was 60.2 (A distance of 7.4 miles).From Exit # 105, I continued to the Ocean County sign on the Parkway (slightly south of the Microwave Tower). My odometer readings were 69.8 entering and 81.7 at the County sign; a distance of 11.9 miles. Collectively, the distance from Exit # 114 to the county line on the Parkway was measured to be 19.3 miles.

I exited at Exit # 91, the first entrance into Ocean County with an odometer reading of 82.7 and re-entered the Parkway northbound with a reading of 83.6 on the odometer. I observed the Microwave Tower at marker 95+ 0 on the Garden State Parkway approximately ½ mile north of the county line. The Monmouth County sign was observed at odometer reading 84.8 and I exited at odometer reading 104.0 or a distance of 19.2 miles.

The time distances using the stated speed limits in the Consensus formula results in the following :

1. 3.1 miles @ 30mph = 6.20 minutes travel time.

2. 19.2 miles @ 50 mph= <u>23.05</u> minutes travel time.

TOTAL TIME 29.25 minutes or 29 minutes 15 seconds

TOTAL TRAVEL TIME IN OCEAN COUNTY = 45 seconds

TOTAL DISTANCE TRAVELLED IN OCEAN COUNTY $\frac{0.75}{60} \times 50$ mph = 0.625 miles

DISTANCE FROM COUNTY LINE TO TOLL BOOTH = 1.2 miles
        ODOMETER 83.6 EXIT AT # 91
        ODOMETER 84.8 AT COUNTY LINE

malcolm kasler & associates, p.a.

M E M O R A N D U M

TO	:	RONALD REISNER, ESQ.
FROM	:	MALCOLM KASLER AND ASSOCIATES, P.A.
SUBJECT	:	REVIEW OF ROBERT BURCHELL, PHD.
		REPORT CONCERNING <u>MOUNT LAUREL PRESENT</u>
		<u>NEED</u> FOR HOLMDEL TOWNSHIP, DATED NOVEMBER
		30, 1984
REVIEW DATE	:	DECEMBER 21, 1984

INTRODUCTION

The purpose of this memorandum is to review the above captioned report prepared by Dr. Burchell as it applies to the matter of <u>Palmer Associates v Holmdel Township</u> and to comment upon same.

OVERVIEW OF DR. BURCHELL'S REPORT

In the matter of <u>Countryside Estates v. Borough of Ringwood</u>, a <u>Mount Laurel</u> litigation case involving a purely conservation community, the Consensus method-ology was challenged by planners Kasler and Burchell. The indigenous need of the community was overstated and the Court accepted the Rutgers bases for the community's obligation, with one exception.

Dr. Burchell noted that the public use sample divided the State into a series of sub-regions - 52 in number. Of that total, six sub-regions comprise the Monmouth-Ocean region. These sub-regional areas number thirty-two (32) through thirty-seven (37).

Burchell's Exhibit 3 provides a comparison of four separate methodologies in calculating present need for the Monmouth-Ocean region. The four areas of analysis are :

1. The Consensus methodology of three surrogates using an 82 percent factor to estimate the number of low and moderate income families;

2. Using the same three surrogates and income qualifying the occupants according to HUD standards;

3. The Rutgers methodology of six surrogates which are income qualified concerning low and moderate income families, and

4. The Rutgers methodology + any overcrowded units built since 1940 as per the Skillman amendment.

TABLE 1
COMPARATIVE ANALYSIS OF CONSENSUS METHODOLOGY OF
COMPUTING PRESENT NEED AND THREE OTHER TECHNIQUES
MONMOUTH - OCEAN REGION

<u>CONSENSUS METHODOLOGY</u>   10,680 units

<u>CONSENSUS INCOME QUALIFIED</u>
    Absolute Difference   - 2,880 units
    Percent Difference   -   27.0

<u>RUTGERS METHODOLOGY</u>
    Absolute Difference   - 5,680 units
    Percent Difference   -   53.2

<u>RUTGERS   SKILLMAN ADJUSTMENT</u>
    Absolute Difference   - 3,080 units
    Percent Difference   -   28.8

malcolm kasler & associates, p.a.

For the two-county region, the present need analysis indicates the Consensus methodology produces a substantially higher need than the other three techniques. The Consensus technique indicates a need of 10,680 units. This statistic is almost 3,000 greater than the Consensus method with qualified income and the Rutgers technique as modified by Judge Skillman, and is more than 5,000 units greater than the Rutgers methodology. The data is presented in the accompanying table. It is clear that the Consensus technique substantially overstates the need - ranging from 27 to 53 percent. However, it should be noted that the deviation presented for this portion of the State is not the same for other areas of New Jersey. The differences statewide, however, are still considered excessive.

PRESENT NEED CALCULATIONS - COMPARATIVE ANALYSIS

The Consensus methodology utilizes the three surrogates of inadequate heating and plumbing and overcrowding. The sum of these three factors multiplied by an 82 percent factor, erroniously identified as the Mount Laurel households residing in substandard housing, produces the Consensus methodology of present housing need. That number according to Consensus methodology for Holmdel. is 25 units.

The so-called Rutger's methodology looks to the sub-region in which the community is situated and allocates a proportionate amount of housing according to the three surrogates to determine the community's share. Judge Skillman amended the procedure to permit the inclusion of overcrowding in units built since 1940. (Burchell argues in his paper that it is inequitable to count these units since they are only overcrowded and give no evidence of being substandard).

Holmdel is located in sub-region # 32. A total of 1,120 units are identified as substandard using the Rutgers methodology and 1,400 units using the Skillman adjustment.

According to the 1980 New Jersey public use sample, there are a total of ten (10) municipalities in sub-region # 32. These are noted below with their respective deficiencies identified :

	OVERCROWDED UNITS	LACKING PLUMBING NOT OVERCROWDED	LACKING ADEQUATE HEAT	TOTAL
Aberdeen	151	33	80	264
Atlantic Highlands	27	17	10	54
Hazlet	123	11	32	166
Highlands	48	17	50	115
Holmdel	18	5	7	30
Keansburg	182	34	118	334
Keyport	94	73	17	184
Matawan	63	19	22	104
Middletown	272	56	127	455
Union Beach	94	18	33	145
TOTAL	1,072	283	496	1,851

1,851 x 0.82 = 1,518 units

malcolm kasler & associates, p.a.

The statistical data indicates that there are thirty (30) units of deficient housing in Holmdel compared with 1,851 units in the 10 community sub-region. This is equal to 1.62 percent of the total region.

If one assumes a total of 1,120 deficient units in the sub-region, using the Rutgers' methodology, Holmdel's proportion of the sub-region is 18.14 housing units. If Holmdel's sub-region totals 1,400 units using the Skillman adjustment, Holmdel's indigenous need would total 22.68 units, say 23 dwellings.

The Kasler estimates of indigenous housing need for Holmdel was 14 units. The Consensus methodology results in a total of 24.6 units or 25 units rounded. The difference in the two procedures as it applies to Holmdel is very small due to the particular circumstances of this community.

In other municipalities, the differences can be substantial.

malcolm kasler & associates, p.a.

EXHIBIT 3

LOW-INCOME HOUSING-DEFICIENT HOUSEHOLDS
(MOUNT LAUREL PRESENT NEED) FOR SUBREGIONS IN
MONMOUTH AND OCEAN COUNTY REGION
(by Alternative Procedures)

SUBREGION	Three Surrogate-Identified Deficient Units-(Consensus Method - 82%)	Three Surrogate Identified Deficient Units (Consensus Method - Properly Income Qualified	Six Surrogate-Identified Deficient Units (Rutgers Method)	Six Surrogate-Identif Deficient Units + y Crowding (Skillman Al tion of Rutgers Metho
32 North Monmouth (Holmdel)	1,480	1,080	1,120	1,400
33 Northeast Monmouth	1,080	880	800	960
34 Southeast Monmouth	2,560	1,960	1,520	1,920
35 West & Central Monmouth	1,000	560	280	520
36 Northern Ocean	2,360	2,200	640	1,720
37 South & Western Ocean	2,200	1,120	640	1,080
Region 4, Monmouth & Ocean Counties - Total	10,680	7,800	5,000	7,600

Source: U.S. Census 1980. New Jersey Public Use Sample.

MNCPLTY	Overcrowded Units (STF-1 Tbl 18)	Ttl Units Lack Com Plumbing (STF-1 Tbl 13)	Net Units Lack Com Plumbing not o/c (STF-1 Tbl 15)	Units Lack Ctrl Heat not o/c (STF-3 XII-35)	Room Heaters w/flue (STF-3 X-17)	Other Units lack ctr htn, heating (STF-3 X-17)	Z Units w/o ctrl htn, with inad htng	Units Lacking Adequate Heating	Total Present Need	Adjusted Present Need	Occupied Dwelling Units	Fair Share Cap	Surplus Present Need
MONMOUTH													
Aberdeen	151	35	33	209	141	87	.38157895	80	264	216	5293	191	25
Allenhurst	1	0	0	13	10	5	.33333333	4	5	4	328	12	-7
Allentown	17	5	5	23	19	6	.24	6	28	23	662	24	-1
Asbury Pk	477	300	299	810	863	250	.22461815	182	958	786	7207	260	525
Atl Hghlnd	27	18	17	39	33	12	.26666667	10	54	45	1776	64	-20
Avon	3	9	9	34	33	45	.57692308	20	32	26	1004	36	-10
Belmar	55	66	55	191	152	209	.57894737	111	221	181	3019	109	72
Brdly Bch	71	43	37	124	76	113	.59788360	74	182	149	2013	73	77
Brielle	17	2	2	44	38	19	.33333333	15	34	28	1489	54	-26
Colts Neck	12	12	12	7	7	0	0	0	24	20	2151	78	-58
Deal	3	4	4	0	0	0	0	0	7	6	650	23	-18
Eatontown	83	28	27	69	73	25	.25510204	18	128	105	4959	179	-74
Englshtwn	11	9	9	21	18	3	.14285714	3	23	19	339	12	7
Fair Haven	11	2	1	69	44	25	.36231884	25	37	30	1895	68	-38
Farmngdale	7	3	3	19	11	11	.5	10	20	16	521	19	-3
Freehld Br	148	41	35	137	148	68	.31481481	43	226	185	3573	129	56
Freehld Tp	57	31	30	107	113	39	.25657895	27	114	94	5565	201	-107
Hazlet	123	12	11	193	174	34	.16346154	32	166	136	6595	238	-102
Highlands	48	19	17	244	240	62	.20529801	50	115	94	2216	80	14
Holmdel	18	5	5	22	15	7	.31818182	7	30	25	2229	80	-56
Howell	226	49	48	384	290	156	.34977578	134	408	335	7822	282	52
Interlaken	1	1	1	7	3	4	.57142857	4	6	5	389	14	-9
Keansburg	182	39	34	421	337	131	.27991453	118	334	274	3431	124	150
Keyport	94	75	73	70	55	18	.24657534	17	184	151	2957	107	44
Lttle Slvr	6	3	0	30	11	19	.63333333	19	25	20	1840	66	-46
Loch Arbr	0	0	0	9	5	4	.44444444	4	4	3	125	5	-1
Long Brnch	586	229	201	529	383	248	.39302694	208	995	816	11672	421	394
Manalapan	88	25	23	120	50	94	.65277778	78	189	155	5578	201	-46
Manasquan	27	31	29	82	19	63	.76829268	63	119	98	2119	76	21
Marlboro	35	43	41	85	76	23	.23232323	20	96	79	4542	164	-85
Matawan	63	20	19	48	26	22	.45833333	22	104	85	3086	111	-26
Middletown	272	57	56	431	332	138	.29361702	127	455	373	18841	680	-307
Millstone	35	17	15	118	54	64	.54237288	64	114	93	1146	41	52
Mon Beach	12	7	7	4	4	37	.90243902	4	23	19	1336	48	-29
Nptne Twp	334	164	157	522	408	236	.36645963	191	682	559	9917	358	201
Nptne City	44	18	18	107	99	20	.16806723	18	80	66	2204	80	-14
Ocean Twp	67	40	40	149	122	53	.30285714	45	152	125	8449	305	-180
Oceanport	13	3	3	19	7	12	.63157895	12	28	23	1768	64	-41
Red Bank	135	66	62	209	161	96	.37354086	78	275	226	4908	177	48
Roosevelt	6	0	0	16	6	11	.64705882	10	16	13	282	10	3
Rumson	23	6	4	58	42	35	.45454545	26	53	44	2502	90	-47
Sea Bright	16	8	7	80	69	15	.17857143	14	37	31	941	34	-3
Sea Girt	3	1	1	11	9	2	.18181818	2	6	5	977	35	-30
Shrewsbury	11	0	0	10	4	6	.6	6	17	14	995	36	-22
Shrews Twp	22	4	3	17	11	9	.45	8	33	27	400	14	12
S. Belmar	17	6	6	40	39	34	.46575342	19	42	34	654	24	11
Spring Lke	12	4	3	66	46	39	.45882353	30	45	37	1476	53	-16
S.L. Hghts	21	6	6	40	26	14	.35	14	41	34	2341	85	-51
Tinton Fls	67	7	6	56	48	14	.22580645	13	86	70	2315	84	-13
Union Bch	94	20	18	161	154	39	.20207254	33	145	119	1967	71	48
Up Freehld	16	15	14	47	26	37	.58730159	28	58	47	892	32	15
Wall Twp	63	27	24	331	211	167	.44179894	146	233	191	6533	236	-45
W Long Br	16	7	7	32	34	6	.15	5	28	23	2241	81	-58
TOTALS	3947	1642	1537	6684	5375	2886	.34935238	2295	7779	6379	170130	6142	237

SUMMARY FINDINGS

Of the four techniques utilized in the Burchell analysis, the Consensus
formula results in the greatest deviation in estimating deficient housing
occupied by Mount Laurel households. As was noted in the case, the 82 percent
factor does not represent actual conditions in New Jersey. The proportion
of households that qualify for low and moderate income resident in substandard
housing varies throughout the State.

Data presented by Burchell, using the Consensus surrogates with properly
qualified income data, appears to have a similar numerical correlation with
the six surrogates and the Skillman adjustment. However, there continues to
be considerable deviation among the two approaches despite the close total
correlation. As noted below, the three surrogates income qualified are
reasonably close to the six surrogates, Skillman adjusted in only four of
the six sub-regions. One would expect a more accurate correlation.

SUB-REGION	THREE SURROGATES INCOME QUALIFIED	SIX SURROGATES SKILLMAN ADJUSTMENT
# 32 (North Monmouth)	1,080	1,400
33 (Northeast Monmouth)	880	960
34 (Southeast Monmouth)	1,960	1,920
35 (West and Central Monmouth)	560	520
36 (Northern Ocean)	2,200	1,720
37 (South and Western Ocean)	1,120	1,080
TOTAL	7,800	7,600

Although the Rutgers' methodology, in this instance, provides the lowest
number of deficient units, in other portions of the State, it results in
even higher numbers than the Consensus methodology. Its utility and reliability
must be considered superior to the other three technqiues since it utilizes
income related data that is interfaced with reliable and accurate representations
of substandard housing.

malcolm kasler & associates, p.a.

PLANNING REPORT
REVIEW OF CURP REPORT
"RESPONSE TO THE WARREN REPORT :
RESHAPING MOUNT LAUREL IMPLEMENTATION

PREPARED FOR :

RONALD REISNER, ESQ.
GAGLIANO, TUCCI, IADANZA AND REISNER
1090 BROADWAY
WEST LONG BRANCH, NEW JERSEY

DECEMBER, 1984

malcolm kasler & associates

INTRODUCTION

We have reviewed the document "Response to the Warren Report : Reshaping Mount Laurel Implementation" prepared by Robert Burchell, PhD. and David Listokin, PhD.of the Center for Urban Policy Research of Rutgers University. The sixty-four page document dated December 10, 1984, was prepared for the New Jersey State League of Municipalities.

This review, requested by legal counsel in the matter of Palmer Associates v. Township of Holmdel will evaluate Messrs. Burchell and Listokin's evaluation of the Warren Consensus procedure as well as the position maintained by Malcolm Kasler, AICP,P.P. in the Holmdel case.

In order to provide a relatively simple form of analysis, we will follow the Rutgers organizational format and provide our imput and evaluation in the same order as presented in their report.

The report is divided into eight component sections. These are :

1. Historical Background
2. Definition of Region
3. Identifying the Mount Laurel Population
4. Calculating Present Need
5. Calculating Prospective Need
6. Housing Allocation
7. Compliance
8. Summary Findings

Historical Background

In order to establish a framework for the current evaluation, the authors review some of the predecessor efforts for low and moderate income housing. The first six pages of the report trace back to the 1960's , Mount Laurel I and Mount Laurel II. There is relatively no mention of early Court decisions in Mahwah, Bedminster, Chester, Washington and Madison.

There is vitually no technical review of some of the procedures that were utilized during these earlier formulative years "relating to region, growth area v. developing community status, fair share calculations or allocation.

The reference to the Statewide Housing Allocation Plan for New Jersey , May, 1978,was as a point-in-fact , totally ignored in almost all of these cases by plaintiffs and defendants.

The historic overview , however, is important in establising the framework for subsequent litigation.

Regional Definition

The authors take issue with the dual region approach established by the Concensus methodology. They indicate that the fixed regions for the present need, defined by the Warren case do not reflect housing market and journey-to-work considerations.

> "In contrast, the Warren Report's present-need regions do not reflect housing market and journey-to-work considerations. Their Region I brings together Bergen-Passaic-Hudson (Rutgers Region 1), Essex-Union-Morris - Region 3) , despite negligible residence-to-job linkages between these areas --- only one percent of the residents of Bergen-Passaic-Hudson commute to work in Middlesex-Somerset-Hunterdon-Warren (See Exhibit 1). Similarly, only a tenth or fewer of the residents of Essex-Union-Morris-Sussex work in Bergen-Passaic-Hudson. Despite such weak ties, the Warren approach lumps these areas together in their eleven-county Region I."

Burchell/Listokin guestimate the reason for selecting the eleven county are. They summarize that the region may have been viewed as "too small" to absorb all of the required reallocated housing. They state :

> "The Warren method never affirmatively explains why they decided on their particular delineation. For the most part, only a negative declaration is given, namely (e.g. in the Warren decision) that "a region which focuses on enabling people to live in proximity to their work may satisfy prospective housing demands, but it may be too small to provide the resources necessary to absorb the excess present need generated by the urban areas."[28] The "may be too small" consideration is directed toward the state's older, urban-ring counties; the assumption is made that since these areas contain relatively high shares of inadequate housing, satisfying their considerable present need must be dispersed over a large area---"

Kasler's position is similar to that of Burchell and Listokin . In the Kasler Report, Mount Laurel II- Fair Share Housing Analysis, Planning Report for Holmdel Township , dated September 1984, it is stated :

> "The present need region for Holmdel,as previously noted,is Ocean and Monmouth County. While this region is consistent with the Rutgers study, which we support, we do not support the eleven county designation for the northern portion of New Jersey. We find the differences between this one region and the remaining portions of New Jersey to be inequitable and unfair."

Kasler further discusses the fixed region concept in the matter of East Hill `Associates v. Borough of Norwood` which is reviewed in the study *Review of Fair Share Housing Report in the matter of Urban League of Greater New Burnswick v. Carteret et al as it relates to Potential Impact on Norwood Borough*, dated March, 1984. In this document Kasler states :

"The concept of two "regions", particularly the large region, has never been fully expressed by the Court as we understand it. The original Mount Laurel case spoke of a 20-mile radius centered upon Camden which was adjudged to be a three-county region. This was, in effect, a journey-to-work concept. Similarly, the Madison case was based upon journey-to-work concepts. The Amicus brief filed by the American Institute of Certified Planners supported journey-to-work as the preferred methodology for fair share housing programs, although it did recognize the need for "statistical regions."

"Lerman indicates, on page 2 of her report, that "Many of the planning experts had recognized the need to define a broad region representing need and resources, at the same time as recognizing the relevance of a region reflecting a housing market.

"This condition is not a function of the concept of journey-to-work but is a resultant of two factors :

(1) The most urbanized areas of the State have housing needs that cannot be accomodated solely within the confines of their journey-to-work region.

(2) The reallocation of housing units beyond the limits of the journey-to-work region is likely to be of Statewide concern rather than of any geographic area.

"From a planning perspective as well as from a legal framework, we believe the regional obligations of communities must be equitable as well as fair.

"It doesn't seem fair to create a reallocation region of eleven counties in northern New Jersey and a different number of counties in central and southern New Jersey. If reallocation is to be equitable, it should be borne by one Statewide region in a predetermined fashion.

"We do not totally concur with the distinctions raised between "present" and "future" needs. However, we can support the concept of the dual region if journey-to-work is used for prospective housing and the present housing need region represents the entire State or other "equitable regional allocation."

3

"Since present need includes at least "indigenous housing need" which is the responsibility of every municipality, there seems to be a basis for using the State as a whole as one big region for a portion of the reallocation.

"The major distinction between our proposal and the Lerman region is that in the latter, a large metropolitan region of eleven counties was chosen. As noted in Table 1, the Northern Region

... contains 36.4 percent of the vacant land in New Jersey;

... 52.8 percent of all the municipalities in New Jersey;

... 63.8 percent of the population in the State;

... 69.7 percent of all private jobs, and

... 78.3 percent of the total present housing need.

"Table 2 compares present housing need by categories for the four regions. This table indicates the relative inequity of the regions as selected. For example, there are 315 present housing units needed per municipality in the north compared with 58 units per municipality in the Shore Area, 117 units per community in the southwest , and 113 in the South.

"On a population basis, the northern region averages 20 housing units per 1,000 people, compared with 5.8 units at the Shore, 10 units need per 1,000 people in the southwestern area, and 6.1 per 1,000 people in the south."

Kasler , therefore, fully supports the criticisms raised by Burchell and Listokin as it relates to the eleven county region.

Prospective Region

Burchell and Listokin take exception to the concept of journey-to-work as propounded by the Consensus methodology. The Rutgers methodology utilizes the same six stable regions. Burchell and Listokin view their six regions through commutershed analysis. They note :

"... the employment center (is) the node aroung which the commutation area is drawn. The employment site is the pivot because it is the point to which the journey-to-work will orient."

4

This prospective viewpoint is contrary to most planners that we are aware of relative to this issue. The concept of journey-to-work is actually a two-tiered affect which describes :

1. The locus of all employment activities in a specified travel distance from a given community, and

2. The locus of all persons within a given travel distance from a given community who work in the community.

We tend to disagree with Burchell and Listokin's criticism relative to the journey-to-work concept versus the fixed region utilized in the Rutgers Study. Burchell argues the present and prospective regions should be the same.

"It is further suggested that the present-need region is uniquely different than what would be required for prospective need. The difference might be related to a population with jobs (present need) versus one seeking jobs (prospective need). There is not one indication of empirical evidence or literature citation in the Warren Report providing credence to any recognition of such a difference. People choose housing for many reasons, prime among them relationship to work. Whether they are underhoused (present need) or yet to be housed (prospective need), the criterion is the same. There is no literature pointing to housing-market differentiation by stage in the employment cycle."

We also agree that there does not appear to be any technical support in planning literature concerning two varying regions in support of a determination of a fair share obligation. There continues to be a schism in the planning community concerning the regional determination. We suspect that the Consensus methodology was an attempt to deal with the controversy through this form of compromise.

Burchell presents six regions which he alleges to be journey-to-work regions. We have always viewed these regions as statistical regions that are fixed. Burchell's second point deals with the difficulty of added the two needs together. He indicates :

"This causes aggregate prospective need for a region difficult to quantify and impossible to view simultaneously with present need. It further produces an unsolvable mathematical problem wherein the aggregate of bottom-up solutions do not add to the number estimated for the region or the state. This is because there is a constantly varying contributing population base which is being drawn on for the regional population projection number on which the local solution is based. Since this base is neither whole nor consistently drawn, the numbers do not add up. Approximately 10 percent of the statewide projected need remains unaccounted for when one approach   to all individual solutions is tallied."

5

We do agree with Dr. Burchell that the issue of any extension into the County requires calculation of the entire County to be excessive and could represent an extensive aboration of the so-called "housing market" area.

The issue of region is a notable one and one that is significant Statewide. It is not as critical an issue in the Holmdel case. Relative to present need, the plaintiff, defendant and Rutgers all agree that the reigon should be Monmouth and Ocean counties. For the prospective region, the plaintiff alleges the region to be Ocean, Monmouth and Middlesex Counties. The defendant accepts Monmouth and Middlesex counties and the Rutgers position would retain Monmouth and Ocean counties only.

IDENTIFYING THE MOUNT LAUREL POPULATION

The Rutgers professors provide an extensive amount of detail (see pages 19-26) concerning this methodology. Relying upon cross-referenced data utilizing income statistics correlated with surrogates of housing quality , the data, we believe, is substantially more accurate of realworld conditions than is the case of the Warren methodology.

Warren relies upon three criteria- overcrowding, heating deficiencies and plumbing deficiences to determine the amount of substantard housing in the State. The procedure then utilizes · the statistic by qualifying 82 percent being low and moderate income families. Rutgers indicates in their study that the 82 percent factor is erroneous. Statewide, the number of persons of low and moderate income residing in substandard housing is only 64 percent and in Holmdel's region, it is less than 50 percent.

The Rutgers procedural utilizes six surrogates, three of which tend to be the greater producer of housing needs. However, the Rutgers procedure with one exception, requires two surrogate deficiencies to flag down a housing unit as being deficient. The process is documented by HUD analysis of housing conditions in five cities in the United States.

Burchell and Listokin confirm similar findings as indicated by Kasler. The Concensus methodology substantially overstates Mount Laurel household needs. Burchell states :

> "What becomes immediately obvious at the state level is that
> the unsubstantiated 82 percent figure overcounts Mount Laurel
> need by 33,000 households. At the regional level, the Warren
> Report's Northern 11-county Region is overspecified by 23,000,
> the East Central Region (Monmouth-Ocean) by 3,000 and the Southern
> Region, also by about 3,000."

Kasler's position is similar to that of Burchell. In the Holmdel report, Kasler states :

> "1. The calculations for indigenous need will be based
> upon the 'Rutgers' procedure of utilization of a "double
> surrogate" system as established and utilized in the manner
> of Countryside Estates v. Borough of Ringwood, which was
> recently decided by the Honorable Stephen Skillman.

6

"2. The calculations concerning reallocation housing will
    also be based upon the number of substandard units id-
    entified by Rutgers within the region and the community."

Burchell also finds that the procedure mis-specifies prospective need as
well as present need.

"For the 21 counties of New Jersey, the Warren-method total-
household change projections are shown in the first column. In
the second column, the .394 percentage is applied to household
change, and the Mount Laurel household population is calculated.
A total of approximately 159,000 emerges from this total. In the
third column, the application of a Mount Laurel percentage
across all age cohorts of a county is shown , and the results
of all counties summed at the bottom. For comparative purposes,
the Warren Report combined population projection model is used.*

"The shortcut Warren procedure overcounts Mount Laurel house-
holds for prospective-need purposes by nearly 14,000. For
counties such as Bergen, Morris, Somerset, Sussex and Union,
the overcount may be 2:1 or more. As an extreme example, Hudson
County, using the Warren Report projections, will lose nearly
13,000 households over the period 1980 to 1990. This aggregate
household loss , if accompanied by the Rutgers procedure
which supplies different percentages of age cohorts, sums these
age cohorts to a total, and then subtracts the previous decade's
Mount Laurel households, would show a net gain in Mount Laurel
households in this county of close to 1,250. The Warren proce-
dure, with a simple percentage, would show a loss of just over
5,000 households if the county was projected to lose 13,000
households. Clearly, the simple procedure masks the fact that
different Mount Laurel percentages by age structure contribute
to a far different total gain or loss in a jurisdiction."

EXHIBIT 7

CALCULATION OF MOUNT LAUREL PROSPECTIVE NEED BY COUNTING
USING ONE GENERAL MOUNT LAUREL PERCENTAGE VERSUS PERCENTAGES BY AGE COHORT

COUNTY	(1) Household Change 1980-1990	(2) Application of Average Mount Laurel Percentage (39.4%) to Entire Population Change	(3) Application of Specific Mount Laurel Percentage to Each Age Group (Summing and Subtracting)	Difference [2] (Column 2 Minus Column 3)
Atlantic	18,874	7,436	7,565	− 129
Bergen	40,256	15,860	8,632 [1]	7,228
Burlington	40,097	15,798	13,082	2,716
Camden	21,389	8,427	10,944	− 2,517
Cape May & Salem	10,800	4,256	6,163	− 1,907
Cumberland	7,653	3,015	3,667	− 652
Essex	−12,925	− 5,092	− 2,257	− 2,835
Gloucester	19,763	7,787	8,170	− 383
Hudson	−12,893	− 5,080	1,247	− 6,327
Hunterdon & Warren	15,242	6,005	4,463	1,542
Mercer	13,178	5,192	5,410	− 218
Middlesex	49,281	19,417	17,322	2,095
Monmouth	44,443	17,510	14,798	2,712
Morris	39,872	15,702	6,043	9,659
Ocean	42,637	16,798	22,436	− 5,638
Passaic	9,739	3,837	4,793	− 956
Somerset	22,313	8,791	4,196	4,595
Sussex	16,608	6,543	3,821	2,722
Union	16,514	6,506	4,608	1,898
TOTAL	402,841	158,708	145,103	+13,605

[1] Warren Group Model Choice (Economic Demographic + Demographic Cohort ÷ 2)

[2] −) = underestimate relative to Column 3

+) = overestimate relative to Column 3

Source: Warren, p. 117.

Burchell further states :

> "This failure to understand that a single percentage
> cannot be applied to overall county growth to determine
> the share of the future poor is a basic misinterpretation
> that contributes to a new overcount of close to 14,000
> future lower income households statewide."

In Monmouth County, the Rutgers professors indicate an overcount of 2,712
units and in Middlesex County, an overcount of 2,095 units.

CALCULATING PRESENT NEED

The Rutgers study begins a definitive analysis of the short-comings of
the Consensus process (pages 28-34). Burchell notes that the Consensus
methodology, if qualified for income purposes, produces a differential of
8,000 household units statewide . Non-qualified income units, actually
exceed the Rutgers procedure by more than 20,000 units. However, Burchell
points out that the small differential statewide (8,000 units)

> "masks the kinds of flip-flop and differences which
> can appear at the regional and subregion level."

For example, the Monmouth-Ocean region, exceeds the Rutgers study by 58
percent (7,800 units versus 5,000) , which is a substantial differential
for the regional and subregional level.

Burchell argues for the use of multiple-deficiencies as the primary basis for signaling substandard housing. He indicates the reliance that Judge Skillman placed upon its utilization in <u>Countryside Estates v. Borough of Ringwood</u>. He does not concur, however, that overcrowding in units built after 1940 should be separately counted as computed by Judge Skillman.

> "Using the multiple-deficiency approach, replacements for newer units which may exhibit only crowding at any one point in time are not signaled immediately, but rather this housing is allowed to reshuffle and unbundle as additional housing is provided for all income classes within the market area. Crowding is a unique variable in that when a household moves from a crowded unit, this unit is available as a non-deficient unit for a smaller household. When this happens, should we not take credit for another unit made standard?"

Burchell and Listokin conclude that the concept of independent variables without income verification is not viable. They state :

> "This procedure is in direct contrast to the housing literature from the U.S. Census and the Department of Housing and Urban Development which call for multiple-deficiency surrogates for specification of a deteriorated housing unit. Further, when HUD specifies housing need related to income, each household is viewed according to Section 8 requirements prior to qualification. (The Rutgers procedure uses a three joint-surrogates method including income to isolate the poor living in deteriorated housing) .

> "The Warren procedure thus has a significant potential for classifiying a good unit as bad. This is because a unit with only one deficiency is not likely to be counted as deficient in subsequent field examination. Using information tabulated from HUD studies of determioration, the Rutgers procedure has a 60 percent less chance of identifying a housing unit as bad that would not be so classified in subsequent field examination. In addition, the Warren procedure, by using only three single-index surrogates and then, those most found in suburban areas, overestimates need in non-urban locations and underestimates need in urban locations."

CALCULATING PROSPECTIVE NEED

Burchell and Listokin point out that the Consensus methodology is based upon population projections that are substantially greater than that actually being experienced.

This criticism is similar to that of Kasler. Kasler's critique "Evaluation of Consensus Methodology concerning housing projections in the matter of Palmer Associates v. Holmdel Twp." Kasler, projecting forward the Consensus formula for the entire State, indicates a population increase of more than 370,000 persons , while the Rutgers formula would indicate a population growth of 207,000 persons. Significant deviations in individual county estimates were noted on page 12 of Kasler's report.

Kasler further projected current building in the State with a 4 year total of 101,700 dwelling units being authorized to be built. A 10-year projection would result in 254,300 units of new housing Statewide. The Consensus methodology projects more than 396,000 units - 56 percent more units than current existing trends would indicate.

Burchell verifies the population estimates for the entire State as prepared for the Consensus methodology and calculated by Kasler. This is noted on the following table .

EXHIBIT 11

NEW JERSEY DEPARTMENT OF LABOR (ODEA),
ECONOMIC DEMOGRAPHIC (1), DEMOGRAPHIC COHORT (2) MODELS
AND COMBINED PROJECTIONS (3) FOR 1990

	(1)	(2)	(3)
	1990 Estimated ODEA Economic Demographic Model	1990 Estimated ODEA Demographic Cohort Model (Rutgers)	1990 Combined Projection (1 + 2) / 2 (Warren)
Atlantic	240,200	220,000	230,100
Bergen	915,600	767,100	841,350
Burlington	407,300	422,300	414,800
Camden	508,900	497,400	503,150
Cape May	87,800	109,100	98,450
Cumberland	139,300	143,700	141,500
Essex	789,400	785,400	787,400
Gloucester	233,200	233,600	233,400
Hudson	530,500	524,400	527,450
Hunterdon	98,600	101,300	99,950
Mercer	340,000	306,300	323,150
Middlesex	690,400	601,200	645,800
Monmouth	534,400	546,400	540,400
Morris	467,700	418,200	442,900
Ocean	393,500	470,200	431,850
Passaic	451,000	434,800	442,900
Salem	66,600	68,700	67,650
Somerset	246,800	201,700	224,250
Sussex	141,200	156,700	148,950
Union	526,500	467,800	497,150
Warren	89,100	96,300	92,700
Total	7,898,000	7,572,300	7,735,150
Change from 1980	(+) 532,989	(+) 207,289	(+) 370,139

Source: New Jersey Department of Labor, Office of Demographic and Economic Analysis, July 1983.

Burchell and Listokin are critical of both the inability to sum-up prospective need and to recognize that the Demographic Cohort population model is the more accurate of the two projection procedures.

HOUSING ALLOCATION

The Rutgers professors are critical of the income factor as utilized in the Warren formula for reallocation. They argue that the procedure produces a base that does not add to 100 thereby over or underassigning _Mount Laurel_ need on an individual basis. This is noted as follows:

> "As indicated, in order to include an income measure
> to allocate present and prospective need, the Warren Report
> uses a ratio of median incomes (the community's to the region's)
> multiplied by two or three averaged percentages to create a
> new "percentage" which is added back in with the two or three
> previously calculated percentages, and divided by three or
> four (the number of percentages included in the numerator),
> respectively. The report offers this as the "percentage" that
> the specific community that was the object of the ratios to
> the region should take of the region's _Mount Laurel_ need.
> This is a fallacious procedure which creates an artifical arith-
> metic that does not add to 100 as the base. As a result, com-
> munities may be over or underassigned _Mount Laurel_ need on an
> individual basis. Just the shorter calculation, or the present-
> need procedure, will be shown here. The criticism equally per-
> tains, however, to the longer procedure used for prospective
> need."

Listokin and Burchell also argue and properly so that all growth area land is not vacant and suitable for development. They also point out that jobs should not be considered as an equal factor along with other determinants such as growth area.

> "One way of preserving this linkage is via weighting the employ-
> ment measures so that they count more than the growth area and median
> income variables. The _Warren_ decision discounts a weighing strategy
> on the grounds that it is arbitrary and unnecessary. It this correct?
> If fair share is underlined by a strong employment-housing linkage,
> should this not be incorporated into the allocation? Other fair share
> plans nationally have incorporated weighting to reflect those con-
> siderations deemed most important. Should not New Jersey follow
> suit?"

Prior to Mount Laurel II litigation, Kasler's procedure in allocation also employed a weighted-factor with the greatest emphasis upon jobs.

13

COMPLIANCE

Listokin and Burchell take issue with the issue of compliance as does Kasler. The Rutgers professors note that the order of magnitude is considerable under both the Rutgers and Warren approaches. According to Rutgers, approximately 174,000 Mount Laurel units must be provided, under Warren, "an ever higher need of 206,000 units" is indicated.

The Rutgers professors raise the issue of how so-much housing is to be delivered. Kasler raised the same issue in Holmdel and indicated to the Court, if plaintiff is successful, and the Court provides a complete builder's remedy

> "... one out of every 24 housing units in the State of New Jersey will be built in Holmdel Township over the next six years. This is inane."

If one utilizes the Rutgers projection of 174,000 units for low and moderate income housing and assumes that approximately 250,000 housing units will be built Statewide during the decade of the '80's, a total of 69.6 percent of all housing built in New Jersey will be low and moderate income units. This will not happen since there is no financial basis for this type of projection.

They suggest that crediting non-new houisng construction towards Mount Laurel needs, through conversions and rehabilitation to be an important step in compliance. They support Kasler's position that

> "... it is unrealistic to respond to Mount Laurel solely via new production ... satisfying Mount Laurel entirely via new construction means that about seven Mount Laurel units would have to be built for every ten market units produced (assuming a vigorous 500,000 unit production over the full decade) --- an overwhelming share."

Burchell and Listokin conclude that solutions to Mount Laurel should extend beyond the Four to One Bonus ratio. They indicate :

> "Other incentives besides bonus ratios should also be considered as a means to foster Mount Laurel housing production. The national experience with respect to inclusionary zoning suggests the way. To realize the inclusionary mandate, jurisdictions imposing this requirement have offered a range of developer incentives. In Orange County, California, for example, builders were encouraged to comply with a mandated affordable housing percentage by being offered density bonuses and modifications to subdivision requirements, accelerated processing, and tax-exempt financing. Further, compliance with the inclusionary mandate could be met in other ways : (1) building the mandated share in each project, (2) "overbuilding" (going above the set percent share) affordable units in one development and then transferring the excess from other builders who have an excess to sell, and (4) through other means, such as land donation or in-lieu cash payments to the county. In sum, the meansto foster construction of new Mount Laurel units

go beyond a rigid bonus program. "

Kasler is basically supportive of this concept.

EVALUATION OF CONSENSUS
METHODOLOGY
CONCERNING HOUSING PROJECTIONS
in the matter of
PALMER ASSOCIATES V. HOLMDEL TWP.

PREPARED FOR :

RONALD REISNER, ESQ.
GAGLIANO, TUCCI, IADANZA
  AND REISNER
1090 BROADWAY
WEST LONG BRANCH, N.J.

OCTOBER 30, 1984

malcolm kasler & associates, p.a.

INTRODUCTION

During the trial in the matter of Palmer Associates v. Holmdel Township, being heard before the Honorable Eugene D. Serpentelli ,JSC , an issue was raised by the Court concerning the reliability of housing projections made by the "Consensus" methodology in blending the two ODEA formula.[1]

Malcolm Kasler had testified that the "Consensus " formula tended to be very optomistic and therefore he had relied upon the more conservative formula utilized in the Rutgers study.[2] Mr. Kasler based his opinion , in part, upon published data concerning the issuance of building permits from 1980 to 1983 as an indices of the housing needs being met under actual conditions.

The Court then requested verification of this information which is included in this report.

---

[1]See Appendix for greater detail.

[2]Mount Laurel II : Challenge and Delivery of Low-Cost Housing.

CONSENSUS METHODOLOGY

The "Consensus" methodology for future population growth and housing projections needs was employed and identified in the Fair Share Report in the matter of Urban League of Greater New Brunswick v. Carteret et al., prepared by Carla Lerman, P.P., which is dated April 2, 1984. The document states :

> "Projection of population growth is subject to many variables and most demographers give ranges that are based on the possible occurrence of events or trends that together or separately could be expected to have an impact on future population. Fortunately, the court recognized the problems inherent in projecting growth:

>> "We recognize that the tools for calculating present and prospective need and its allocation are inprecise ... What is required is the precision of a specific area and specific numbers. They are required not because we think scientific accuracy is possible but because we believe the requirement is most likely to achieve the goals of Mt. Laurel. 92 NJ 158 at 257

> "Prospective need is being projected to 1990. Although that is less than 10 years, which is generally considered a reasonable period for forecast, most of the currently available data is from the 1980 Census. In 1990, the next decennial census will provide new data which will be more appropriate for an evaluation of the impact of the Mt. Laurel doctrine and for further projections to the year 2000.

> "The base to be used for projecting population to 1990 will be a combination of the ODEA Economic/Demographic (1) and ODEA Demographic Cohort (2) Models prepared by the New Jersey Office of Demographic and Economic Analysis.

> "The essential difference between the two models is in the way migration of persons under age 65 is projected. In Model 1 (economic model) the migration is based on projected labor market conditions, whereas in Model 2 (demographic) the migration is projected based on the patterns which occurred in the 1970's. In Model 2, the migration patterns of people under and over 65 years of age are projected in the same way. The projected labor market conditions used in Model 1 are based on national labor force projections produced by the U.S. Bureau of Labor Statistics. If the labor demand is higher than the supply, then in-migration is projected to match the demand. If there is

2

an excess of labor over demand, the out-migration rates would be projected to increase.

"The two Models are considered to project a range of population change in the future. Therefore, a combination of the two methods and bases for projections might avoid extreme projections in either direction. The Economic/Demographic Model and the Demographic Cohort Model were averaged, by age cohort, and each age cohort was multiplied by the headship rate for the State of New Jersey, as projected for 1990.[3] The headship rate is the expected percentage of individuals in any age cohort who will be heads of household. The application of the headship rate to the projected 1990 age cohort population in each county will result in the projected number of households in 1990, by county. This methodology will be used to provide the base number of households for the counties in each commutershed as computed by driving time.

"The projected number of those households who will be lower income will be based on the percentage in New Jersey as prescribed in Footnote 8 in the court's opinion. Assuming consistency with the State figure, 39.4 percent of the projected 1990 households will be assumed to be lower income households."[4]

The Lerman report provided calculations for projected Mt. Laurel households for 1990 by county (Table 8 in the Appendix). That table provided projected 1990 households, using the Rutgers "headship" rates and provided the 1980 households identified in the U.S. Census . This was undertaken for 15 of New Jersey's twenty-one (21) counties.

The difference between the 1980 and 1990 households so identified represented the formation of net new households which when multiplied by the Mt. Laurel percentage, yields the total new Mt. Laurel households created during the 1980's requiring standard housing.

In order to provide a complete analysis of the Consensus methodolody, we have provided the missing data for six other counties and have computed the 1990 estimated households using the Rutgers "headship" rates which is presented in Table 1 .

The data indicates that in 1980 there were 2,548,594 households reported as of April 1. The Concensus methodolody would increase the number of households by 396,187 to a total of 2,944,781 during the 1980's decade. The number of new Mt. Laurel households assuming a 39.4 percent ratio would

_____

[3] Rutgers University Center for Urban Policy Research , Mt. Laurel II: Challenge and Delivery of Low Cost Housing, p. 123.   .

[4] Lerman, Carla, pgs. 16-18

3

TABLE 1
NEW 1980 DECADE HOUSEHOLDS
BY COUNTY
USING CONSENSUS METHODOLOGY

COUNTY	1990 HOUSEHOLDS	1980 HOUSEHOLDS	NEW 1980 DECADE HOUSEHOLDS
Atlantic	85,080	71,806	13,274
Bergen	340,666	300,410	40,256
Burlington	154,987	114,890	40,097
Camden	183,896	162,508	21,388
Cape May	40,188	32,347	7,841
Cumberland	51,193	44,287	6,906
Essex	287,009	300,303	-13,294
Gloucester	84,952	65,129	19,823
Hudson	194,964	207,857	-12,893
Hunterdon	37,857	28,515	9,342
Mercer	118,997	105,819	13,178
Middlesex	245,989	196,708	49,281
Monmouth	214,573	170,130	44,443
Morris	171,692	131,820	39,872
Ocean	170,941	128,304	42,637
Passaic	163,202	153,463	9,739
Salem	25,292	22,330	2,962
Somerset	89,681	67,368	22,313
Sussex	53,829	37,221	16,608
Union	194,487	177,973	16,514
Warren	35,306	29,406	5,900
TOTAL	2,944,781	2,548,594	396,187

SOURCE: Fair Share Report, Urban League of Greater New Brunswick v. Carteret et al., prepared by Carla Lerman, P.P., April 2, 1984; and Calculations by Malcolm Kasler and Associates, P.A.

therefore total <u>156,098.</u>

In order to more fully understand the significance of these projections, it is necessary to review the sources which are identified in the ODEA Economic/Demographic Model #1 and the ODEA Demographic Cohort Model #2. The present (1980) and the 1990 projected populations by county for the two models are noted in Tables 2 and 3.

Model #1 projects a population increase of 532,989 persons for the 1980's decade. By the year 1990, it indicates a statewide population of 7,898,000 people. It projects substantial population increases in the central and shore area portions of New Jersey. For example, Morris County is projected to gain 60,070 people and Middlesex County more than 94,500 additional people. Monmouth and Ocean Counties are projected to increase by 31,200 and 47,400 persons respectively.

Essex County and Hudson Counties are the only counties losing population and are projected to lose 61,900 and 26,400 persons respectively. Population in Bergen County is projected to be the second largest of the 21 counties.

Model #2 is more conservative in nature. This model projects a population increase of 207,289 persons statewide. It indicates population losses in five counties including Bergen , Hudson, Essex, Union and Mercer.

Substantial population increases are noted for Ocean, Sussex, Burlington, and Monmouth Counties. This data is presented in Table 3.

Table 4 indicates the projected population changes for Models 1 and 2 and indicates the average between the two methods ., upon which the Consensus methodology is based.

Thus, a population change of 370,139 people is estimated as a result of combining the two procedures. In some cases it produces results that appear to relate to actual conditions and in others provides a divergent pattern.

Table 5 represents a compilation of projections and comparisons with the State's own estimate a current population (July of 1983) by County and compares a projection of these most current estimates , based upon changes that have taken place since 1980 with that of those population changes utilizing the consensus methodology.

As presented in Table 5, column 1 identifies the official 1980 Census of population by county. New Jersey at that time contained 7,365,011 persons. Each of the 21 counties population is noted in column 1.

5

ODEA ECONOMIC / DEMOGRAPHIC MODEL (PERFERRED)

COUNTY	APRIL 1980	PROJECTIONS FOR JULY 1 1990	POPULATION CHANGE 1980 - 1990
NEW JERSEY	7,365,011	7,898,000	532,989
Atlantic	194,119	240,200	46,081
Bergen	845,385	915,600	70,215
Burlington	362,542	407,300	44,758
Camden	471,650	508,900	37,250
Cape May	82,266	87,800	5,534
Cumberland	132,866	139,300	6,434
Essex	851,304	789,400	-61,904
Gloucester	199,917	233,200	32,283
Hudson	556,972	530,500	-26,472
Hunterdon	87,361	98,600	11,239
Mercer	307,863	340,000	32,137
Middlesex	595,893	690,400	94,507
Monmouth	503,173	534,300	31,227
Morris	407,630	467,700	60,070
Ocean	346,038	393,500	47,462
Passaic	447,585	451,000	3,415
Salem	64,676	66,600	1,924
Somerset	203,129	246,800	43,671
Sussex	116,119	141,200	25,081
Union	504,094	526,500	22,406
Warren	84,429	89,100	4,671

SOURCE : Office of Demographic and Economic Analysis
Division of Planning and Research
New Jersey Department of Labor

TABLE 3
PROJECTED NEW JERSEY TOTAL POPULATION BY COUNTY
FOR THE YEAR 1990

ODEA DEMOGRAPHIC COHORT MODEL (PERFERRED)

COUNTY	APRIL 1 1980	PROJECTIONS FOR JULY 1 1990	POPULATION CHANGE 1980 - 1990
NEW JERSEY	7,365,011	7,572,300	207,289
Atlantic	194,119	220,000	25,881
Bergen	845,385	767,100	-78,285
Burlington	362,542	422,300	59,758
Camden	471,650	497,400	25,750
Cape May	82,266	109,100	26,834
Cumberland	132,866	143,700	10,834
Essex	851,304	785,400	-65,904
Gloucester	199,917	233,600	33,683
Hudson	556,972	524,400	-32,572
Hunterdon	87,361	101,300	13,939
Mercer	307,863	306,300	- 1,563
Middlesex	595,893	601,200	5,307
Monmouth	503,173	546,400	43,227
Morris	407,630	418,200	10,570
Ocean	346,038	470,200	124,162
Passaic	447,585	434,800	12,785
Salem	64,676	68,700	4,024
Somerset	203,129	201,700	1,429
Sussex	116,119	156,700	40,581
Union	504,094	467,800	-36,294
Warren	84,429	96,300	11,871

SOURCE : Office of Demographic and Economic Analysis
Division of Planning and Research
New Jersey Department of Labor

7

TABLE 4
POPULATION CHANGE 1980 - 1990
USING ODEA MODELS 1 AND 2

COUNTY	MODEL 1	MODEL 2	AVERAGE
NEW JERSEY	532,989	207,289	370,139
Atlantic	46,081	25,881	35,981
Bergen	70,215	-78,285	- 8,070
Burlington	44,758	59,758	52,258
Camden	37,250	25,750	31,500
Cape May	5,534	26,834	16,184
Cumberland	6,434	10,834	8,634
Essex	-61,904	-65,904	-63,904
Gloucester	32,283	33,683	32,983
Hudson	-26,472	-32,572	-29,522
Hunterdon	11,239	13,939	12,589
Mercer	32,137	- 1,563	16,850
Middlesex	94,507	5,307	49,907
Monmouth	31,227	43,227	37,227
Morris	60,070	10,570	35,320
Ocean	47,462	124,162	85,812
Passaic	3,415	12,785	8,100
Salem	1,924	4,024	2,974
Somerset	43,671	1,429	22,550
Sussex	25,081	40,581	32,831
Union	22,406	36,294	29,350
Warren	4,671	11,871	8,271

SOURCE : Office of Demographic and Economic Analysis
Division of Planning and Research
New Jersey Department of Labor

TABLE 5
COMPARATIVE ANALYSIS OF POPULATION ESTIMATES
CONSENSUS METHODOLOGY AND DEPARTMENT OF LABOR CURRENT ESTIMATES

COUNTY	CONSENSUS COLUMN(1) 1980 POPULATION	CONSENSUS COLUMN(2) 1980-1990 CHANGE	CONSENSUS COLUMN (3) 1990 POPULATION	DEPARTMENT OF LABOR CURRENT ESTIMATES COLUMN(4) JULY 1, 1983 EST. POPULATION	COLUMN(5) ESTIMATED 3.3 YEAR GROWTH RATE	COLUMN(6) ESTIMATED 10 YEAR GROWTH RATE BASED UPON CURRENT TRENDS
NEW JERSEY	7,365,011	370,139	7,735,150	7,468,000	103,000	316,923
Atlantic	194,119	35,981	230,100	197,900	3,800	11,692
Bergen	845,385	-8,070	837,315	843,700	-1,700	-5,231
Burlington	362,542	52,258	414,800	373,600	11,100	34,154
Camden	471,650	31,500	503,150	479,500	7,900	24,308
Cape May	82,266	16,184	98,450	87,000	4,700	14,461
Cumberland	132,866	8,634	141,500	133,200	300	923
Essex	851,304	-63,904	787,400	842,600	-8,700	-26,769
Gloucester	199,917	32,983	232.900	204,900	5,000	15,384
Hudson	556,972	-29,522	527,450	560,300	3,300	10,154
Hunterdon	87,361	12,589	99,950	90,500	3,200	9,846
Mercer	307,863	16,850	329,713	312,900	5,100	15,692
Middlesex	595,893	49,907	645,800	610,900	15,000	46,154
Monmouth	503,173	37,227	540,400	515,100	11,900	36,615
Morris	407,630	35,320	442,950	413,800	6,200	19,077
Ocean	346,038	85,812	431,850	364,000	17,900	55,077
Passaic	447,585	8,100	455,685	454,600	7,000	21,538
Salem	64,676	2,974	67,650	65,800	1,100	3,385
Somerset	203,129	22,550	225,679	206,800	3,700	11,384
Sussex	116,119	32,831	148,950	119,300	3,200	9,846
Union	504,094	29,350	533,444	505,900	1,800	5,538
Warren	84,429	8,271	92,700	85,200	700	2,154

SOURCE : Office of Demographic and Economic Analysis
Division of Planning and Research
New Jersey Department of Labor

CALCULATIONS: Malcolm Kasler and Associates, P.A.

Column 2 presents the change in population for the State for 1990 based upon
the consensus formula. This data is derived from the last column in Table 4.
A population increase of 370,139 persons is indicated. Column 3 is the projected
1990 population, representing the addition of columns (1) and (2).

Column 4 represents the official population estimate of the State of New Jersey
as of July 1, 1983 as prepared by the New Jersey Department of Labor published in
September of 1984 . At the current time, the population for the State is
placed at 7,468,000 persons , or an increase of 103,000 persons since the
1980 Census.

Column 5 represents the population change from 1980 to 1983 for each county.
Column 6 projects the 1980-1983 rate of change to the year 1990 and provides a
basis of comparing the original consensus methodology with current data projec-
tions.

By 1990, using this technique, the State's population would increase by 316,923
persons. From a statewide perspective, this increase is approximately 85 percent
of that utilized by the consensus formula resulting in an esimate of 370,139
persons.

While the overall population estimate is in the "ballpark", the individual
county estimates are not. There appears to be wide fluctuations in the pro-
jection methodology.

Table 6 provides a comparison between the two population projection techniques.

The "Consensus" indicates a greater population increase in 16 of 18 counties
and greater population losses in 3 counties. . In only 2 counties, Passaic
and Salem, are the DOL estimates greater than than of the "Consensus" group.
The degree of deviation is extraordinary.

On an absolute basis, population differences of 10,000 persons or more occurred
in eleven of the twenty-one counties. For example, the "Consensus" methodology
estimated a population increase of 85,812 persons in Ocean County. The DOL
estimates as projected would be less by more than 30.000 persons. The "Consensus"
methodology finds a population loss of 64,000 persons in Essex. The DOL estimate
as projected would show a population loss of almost 27,000 persons - a
difference of more than 37,000 people. In Union County, a population gain of
29,350 is estimated by Consensus - the DOL technique estimates an increase of
5,500 people. The differences in Atlantic County exceed 24,000 persons; in
Burlington County - 18,000 persons; in Hudson County, the difference totals
almost 40,000 persons. In fact, in Hudson County the Consensus methodology
predicts a population loss of 29,522 persons. The DOL estimate as projected
would produce a population gain of more than 10,000 persons.

Table 7 presents a ratio analysis of the "Consensus" methodology compared with
the Department of Labor (DOL) estimate as projected. The division of the "Con-
sensus" technique by the DOL estimate results in a ratio . If the two are

equal, it will produce a ratio of 100. If the "Consensus" technique is twice that of the DOL method, it will produce a ratio of 200. If "Consensus" is half that of DOL, a ratio of 50 will result.

The analysis reveals that 18 of the 21 county estimates exceed the Department of Labor current estimates as projected. Seven of the 18 counties had ratio estimates at least double that of DOL, of which five at least tripled the DOL estimates. The remaining eleven estimates exceeding DOL includes four estimates that were more than 50 percent greater than the DOL estimate. There are only three estimates that are within 10 percent of one another - Mercer, Middlesex and Monmouth Counties.

Statewide, the deviation between the two techniques is 16.8 percent. Amongst the twenty-one counties there are only four counties that correlate at a closer percentage than the statewide average.

The conclusion that must be reached is that there are substantial differences between the two methodologies. If the State Department of Labor estimates are correct, the deviation with the "Consensus" methodology must be viewed as considerable.

TABLE 6
DEVIATION IN POPULATION ESTIMATES

| COUNTY | POPULATION CHANGE | | NUMERICAL DIFFERENCE |
	CONSENSUS	1983 LABOR PROJECTIONS	
Atlantic	35,981	11,692	- 24,289
Bergen	- 8,070	- 5,231	+ 2,839
Burlington	52,258	34,154	- 18,104
Camden	31,500	24,308	- 7,192
Cape May	16,184	14,461	- 1,723
Cumberland	8,634	923	- 7,711
Essex	-63,904	-26,769	+ 37,135
Gloucester	32,983	15,384	- 17,599
Hudson	-29,522	10,154	+ 39,676
Hunterdon	12,589	9,846	- 2,743
Mercer	16,850	15,692	- 1,158
Middlesex	49,907	46,154	- 3,753
Monmouth	37,227	36,615	- 612
Morris	35,320	19,077	- 16,243
Ocean	85,812	55,077	- 30,735
Passaic	8,100	21,538	13,438
Salem	2,974	3,385	411
Somerset	22,550	11,384	- 11,166
Sussex	32,831	9,846	- 22,985
Union	29,350	5,538	- 23,812
Warren	8,271	2,154	- 6,117
TOTAL	370,139	316,923	- 53,216

SOURCE :   Office of Demographic and Economic Analysis
           Division of Planning and Research
           New Jersey Department of Labor
           Carla Lerman, "Fair Share Report"

CALCULATIONS : Malcolm Kasler and Associates, P.A.

TABLE 7
PERCENT DEVIATION IN POPULATION
ESTIMATES

COUNTY	PERCENT DEVIATION IN POPULATION ESTIMATES CONSENSUS / 1983 LABOR PROJECTION
Atlantic	307.7
Bergen	154.3
Burlington	153.0
Camden	129.6
Cape May	111.9
Cumberland	935.4
Essex	238.7
Gloucester	214.4
Hudson	Not Calculable
Hunterdon	127.9
Mercer	107.4
Middlesex	108.1
Monmouth	101.7
Morris	185.1
Ocean	155.8
Passaic	37.6
Salem	87.9
Somerset	198.1
Sussex	333.4
Union	530.0
Warren	384.0
TOTAL	116.8

SOURCE : Office of Demographic and Economic Analysis
Division of Planning and Research
New Jersey Department of Labor
Carla Lerman, "Fair Share Report"

CALCULATIONS : Malcolm Kasler and Associates, P.A.

BUILDING PERMIT EVALUATION

A second method of evaluating the "Consensus" methodology is to compare
the issuance of building permits as projected to estimates for new house-
holds projected by the "Consensus" technique.

Table 8 presents data concerning the issuance of building permits for the
four years 1980 through 1983 by county. The table indicates a total of 101,745
building permits issued. Approximately 39 percent of all permits issued took
place in three counties - Middlesex, Monmouth and Ocean.

Tbe table also projects total building permits during the ten year period based
upon the numbers issued during the first four years. The projection results in
a total of 254,363 permits being issued for the entire state for the 1980-1990
decade.

This data is compared with the estimates of future households utilized by
"Consensus". Estimates are 155.8 percent greater than the Dwelling Unit Projection
(DUP) statewide. A total of 17 of the 21 county estimates are exceeded by the
"Consensus" technique with substantial differences noted in almost all counties.

In the three major construction counties of Middlesex, Monmouth and Ocean
Counties, the "Consensus" method calls for 136,361 new households during the
80's, the DUP technique results in 97,728 units - 38,633 units less than
that by "consensus".

If these statistics are correct, it would affect the difference of 15,221 low
and moderate income units for the three counties.

TABLE 8
RESIDENTIAL BUILDING PERMITS
BY COUNTY
1980 - 1983

COUNTY	1980	1981	1982	1983	1980 1983- TOTAL	PROJECTED 10 YEAR BUILDING PERMIT
Atlantic	1,290	2,071	1,076	2,375	6,812	17,030
Bergen	1,310	1,821	1,423	1,790	6,344	15,860
Burlington	924	775	1,288	2,016	5,003	12,508
Camden	1,460	920	1,200	2,409	5,989	14,973
Cape May	1,564	1,651	1,059	1,247	5,521	13,803
Cumberland	223	270	134	257	884	2,210
Essex	1,225	931	604	446	3,206	8,015
Gloucester	993	492	526	1,083	3,094	7,735
Hudson	1,188	522	1,037	682	3,429	8,573
Hunterdon	472	437	449	818	2,176	5,440
Mercer	512	428	522	1,343	2,805	7,013
Middlesex	1,918	2,830	3,737	6,701	15,186	37,965
Monmouth	2,358	2,152	2,096	4,217	10,823	27,058
Morris	1,773	1,026	1,151	2,324	6,274	15,685
Ocean	2,950	2,589	2,646	4,897	13,082	32,705
Passaic	661	459	240	664	2,024	5,060
Salem	170	88	82	109	449	1,123
Somerset	453	797	803	1,864	3,917	9,793
Sussex	370	269	401	639	1,679	4,198
Union	319	510	780	562	2,171	5,428
Warren	124	255	150	348	877	2,192
TOTAL	22,257	21,293	21,404	36,791	101,745	254,363

TABLE 9
COMPARISON OF NEW HOUSEHOLD FORMATION
UNDER THE "CONSENSUS" METHOD AND NEW DWELLING
UNITS ISSUED AS EXTENDED

COUNTY	NUMBER OF NEW HOUSEHOLDS (CONSENSUS)	NUMBER OF NEW DWELLING UNITS PROJECTED 10 YEAR PERIOD	NUMERICAL DIFFERENCE "CONSENSUS"— PROJECTION
Atlantic	13,274	17,030	- 3,756
Bergen	40,256	15,860	24,396
Burlington	40,097	12,508	27,589
Camden	21,388	14,973	6,415
Cape May	7,841	13,803	- 5,962
Cumberland	6,906	2,210	4,696
Essex	-13,294	8,015	-21,309
Gloucester	19,823	7,735	12,088
Hudson	-12,893	8,573	-21,466
Hunterdon	9,342	5,440	3,902
Mercer	13,178	7,013	6,165
MIDDLESEX	49,281	37,965	11,316
MONMOUTH	44,443	27,058	17,385
Morris	39,872	15,685	24,187
OCEAN	42,637	32,705	9,932
Passaic	9,739	5,060	4,679
Salem	2,962	1,123	1,839
Somerset	22,313	9,793	12,520
Sussex	16,608	4,198	12,410
Union	16,514	5,428	11,086
Warren	5,900	2,192	3,708
TOTAL	396,187	254,363	141,824

SOURCE : Office Of Demographic And Economic Analysis
Division of Planning and Research
New Jersey Department of Labor

CALCULATIONS : Malcolm Kasler and Associates, P.A.

CONCLUSION

The official population estimates of the State of New Jersey, promulgated on July 1, 1983 indicates that the State is growing but at a slower pace than projected by the "consensus" methodology. The "Consensus" procedure estimates a population of 7.735 million by 1990. The Department of Labor current estimates of 1983, projected forward, yields a population of 7.682 by 1990. The difference in population estimates by 1990 statewide is not considerable. Statewide, a population differential of 53,216 persons is noted.

However, the variation by counties is considerable. As noted in Table 6, the "Consensus" methodology estimates higher populations in 16 of 18 counties. If one excludes Essex, Hudson and Bergen Counties, the population estimates would differ by 132,866 persons. The magnitude of the deviation is noted in Table 7.

The substantial overstatement of the average ODEA projections is also exemplified by a comparison with the issuance of building permits. The "Consensus" methodology calls for a total of 396,000 new household formations during the 1980's. A total of almost 102,000 new building permits were issued during the first four years of this decade. In order to meet that target projected by the "Consensus" procedure, more than 294,000 units would have to be constructed during the next six years, averaging more than 49,000 housing units per year during that time period.

The last time the State of New Jersey constructed more housing than this level was in 1973 when interest rates were in the 7½ - 8½ percent range. It is most unlikely that the level being projected and the volume of housing would be built during the next six years. This overstatement by the "Consensus" formula is also observed in the Rutgers study which states:

> "Rather than attempting to project these many practically imponderable future conditions, the share of Mount Laurel households as a percent of the regional population base is assumed to remain constant over the time period projected in this study. What this says is that the proportion of those households at 80 percent of median income or less and observed in 1980, will be assumed to remain constant by age cohort into the future. The size of the cohort may change due to the effects of assumptions regarding births, deaths, and migration by age cohort, but the share of Mount Laurel eligibles within each age-cohort will remain the same."[5]

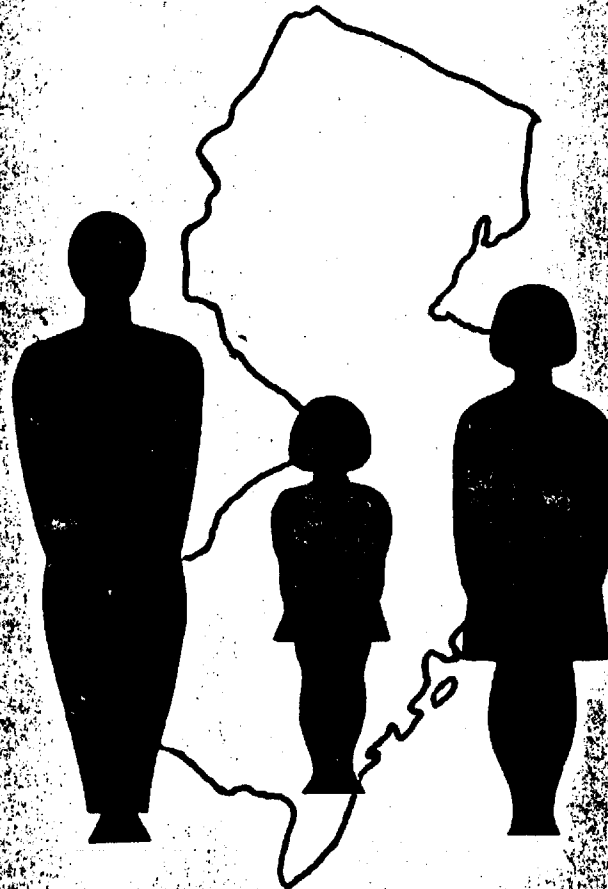[5]Mount Laurel II: Challenge and Delivery of Low Cost Housing.., pg. 125.

We believe this analysis of two separate techniques is supportive of the overstatement using the "Consensus" methodology.

APPENDIX

Table B. Counties — Population and Households

County	Population, 1980 (Apr. 1) —Con.							Households, 1980 (Apr. 1)						
	Age									Family			Nonfamily	
	Born in State where now residing (Percent)	Percent—			18 yrs. and over	Median (Yrs.)	Living in group quarters	Total	Persons per household	Total	Married couple	Female householder, no husband present	Total	One-person¹
		Under 5 yrs.	5 to 17 yrs.	65 yrs. and over										
	16	17	18	19	20	21	22	23	24	25	26	27	28	29
NEVADA—Con.														
Lander	27.2	10.4	21.5	5.3	2 777	26.4	9	1 426	2.84	1 053	929	62	373	304
Lincoln	32.9	10.6	25.4	12.8	2 386	27.8	101	1 270	2.86	920	804	80	350	316
Lyon	31.1	8.1	21.0	11.5	9 638	32.8	24	5 039	2.69	3 924	3 471	332	1 115	1 002
Mineral	34.8	7.4	22.8	10.8	4 340	32.5	243	2 271	2.63	1 620	1 317	238	651	598
Nye	24.9	7.9	20.9	9.0	6 447	31.5	96	3 434	2.61	2 362	2 079	188	1 072	914
Pershing	34.6	8.7	19.2	11.4	2 456	30.5	26	1 256	2.69	915	805	56	340	279
Storey	21.7	7.6	16.6	8.7	1 140	32.9	53	593	2.45	404	356	34	189	154
Washoe	23.9	6.1	17.8	8.5	147 343	30.8	3 438	77 204	2.46	50 044	40 974	6 645	27 160	20 057
White Pine	41.0	8.2	22.1	12.0	5 695	32.3	128	3 003	2.68	2 188	1 906	217	815	739
Independent City														
Carson City city	19.6	5.7	19.8	10.3	23 848	32.3	1 938	12 074	2.49	8 448	7 073	1 063	3 626	2 939
NEW HAMPSHIRE	49.3	6.8	21.2	11.2	662 528	30.1	29 556	323 493	2.75	238 667	203 487	27 298	84 826	68 643
Belknap	57.8	7.0	20.7	13.2	31 034	32.1	1 113	15 573	2.68	11 411	9 725	1 288	4 162	3 491
Carroll	42.0	6.0	18.8	16.3	20 978	34.8	179	11 074	2.51	7 805	6 707	831	3 269	2 748
Cheshire	49.6	6.5	20.4	12.3	45 389	30.5	2 934	21 832	2.71	16 075	13 721	1 800	5 757	4 631
Coos	69.7	6.8	21.2	14.2	25 308	32.7	433	12 938	2.68	9 556	8 158	1 102	3 382	2 990
Grafton	49.4	6.1	18.6	12.4	49 557	29.3	5 439	23 221	2.60	16 098	13 750	1 800	7 123	5 671
Hillsborough	51.8	7.0	22.3	10.2	195 581	29.8	6 277	95 820	2.82	71 424	60 450	8 714	24 396	19 855
Merrimack	58.5	6.7	20.6	12.6	71 477	30.8	4 365	34 674	2.71	25 291	21 436	2 967	9 383	7 655
Rockingham	33.2	7.1	22.3	9.4	134 368	29.9	2 769	65 951	2.84	50 256	43 547	5 092	15 695	12 505
Strafford	53.5	6.4	19.8	10.3	63 048	27.5	5 653	29 104	2.74	20 954	17 642	2 633	8 150	6 129
Sullivan	54.2	6.9	21.6	13.3	25 788	31.6	394	13 306	2.68	9 797	8 351	1 071	3 509	2 968
NEW JERSEY	58.5	6.3	20.7	11.7	5 573 962	32.2	135 512	2 549 594	2.84	1 931 576	1 553 090	305 237	617 018	537 510
Atlantic	54.8	6.1	20.2	15.9	143 057	33.1	2 804	71 806	2.66	49 733	37 714	9 832	22 073	18 523
Bergen	49.8	5.0	18.6	12.5	646 250	35.5	7 596	300 410	2.79	231 642	197 596	26 526	68 768	60 479
Burlington	45.7	6.8	22.8	7.9	255 200	29.2	16 163	114 890	3.01	92 370	78 127	11 241	22 520	18 990
Camden	50.6	7.2	21.9	10.4	334 213	30.5	4 174	162 506	2.88	123 146	96 328	22 086	39 362	34 042
Cape May	42.7	5.8	17.7	20.3	62 935	37.4	2 380	32 347	2.47	22 380	18 516	3 100	9 967	8 786
Cumberland	65.1	7.2	23.2	11.7	92 435	30.4	4 197	44 287	2.91	33 993	26 153	6 318	10 294	9 073
Essex	57.7	6.7	21.5	11.6	610 644	31.4	12 736	300 303	2.79	215 344	147 797	58 777	84 959	75 502
Gloucester	55.3	7.6	22.5	8.9	139 717	29.1	2 291	65 129	3.03	51 782	43 660	6 321	13 347	10 853
Hudson	53.4	6.7	19.3	12.6	412 149	32.2	6 009	207 857	2.65	144 185	102 170	34 121	63 672	57 947
Hunterdon	62.3	6.3	23.2	9.3	61 626	32.0	2 254	28 515	2.98	22 932	20 384	1 856	5 583	4 650
Mercer	60.7	5.9	19.5	11.4	229 447	31.6	14 987	105 819	2.77	77 909	60 630	14 157	27 910	23 674
Middlesex	61.4	5.8	20.1	8.8	441 557	30.6	19 137	198 708	2.93	153 696	129 336	19 065	43 012	35 677
Monmouth	58.4	6.2	22.4	11.8	359 252	32.3	9 234	170 130	2.90	129 943	108 467	17 295	40 187	34 885
Morris	59.0	5.9	22.5	8.8	291 921	31.8	8 970	131 820	3.02	106 186	93 154	10 053	25 634	21 253
Ocean	61.6	6.7	19.6	20.8	254 872	35.5	3 015	128 304	2.67	98 351	84 884	10 831	29 953	27 029
Passaic	59.4	6.8	20.7	11.9	324 589	31.6	6 867	153 463	2.87	116 977	90 057	22 042	36 486	32 239
Salem	66.5	7.2	22.4	11.7	45 525	31.3	802	22 330	2.86	17 357	14 129	2 513	4 973	4 330
Somerset	57.9	5.5	21.3	9.0	148 817	32.8	4 452	67 368	2.95	53 790	46 539	5 615	13 578	11 292
Sussex	64.1	8.2	23.9	8.7	78 866	30.0	1 484	37 221	3.08	30 747	27 292	2 535	6 474	5 422
Union	58.5	5.6	19.0	12.8	380 217	34.7	4 834	177 973	2.81	136 375	110 760	20 373	41 598	36 985
Warren	66.4	6.6	21.5	12.1	60 673	31.9	1 126	29 406	2.83	22 740	19 397	2 580	6 666	5 829
NEW MEXICO	51.8	8.8	23.3	8.9	884 987	27.4	22 573	441 466	2.90	332 058	274 575	44 635	109 408	92 862
Bernalillo	47.5	7.7	21.3	8.1	297 847	28.2	5 310	151 037	2.74	108 439	87 028	16 826	42 598	34 217
Catron	50.4	8.8	22.6	13.5	1 866	30.9	48	960	2.78	737	638	61	223	206
Chaves	45.2	8.3	21.9	14.1	35 685	30.4	1 348	16 194	2.73	13 779	11 702	1 648	4 415	4 018
Colfax	63.2	8.1	24.1	13.0	9 262	29.6	312	4 901	2.73	3 528	2 952	432	1 373	1 247
Curry	40.5	9.7	23.1	9.6	28 254	26.2	1 332	14 419	2.82	11 121	9 542	1 278	3 298	2 981
De Baca	58.6	6.3	19.2	21.0	1 828	39.6	41	989	2.44	713	615	75	276	270
Dona Ana	44.8	8.7	23.7	7.2	65 192	24.8	3 568	30 402	3.05	23 127	19 131	3 064	7 275	5 752
Eddy	49.9	9.1	22.6	12.5	32 717	29.1	410	16 669	2.85	13 224	11 497	1 347	3 445	3 183
Grant	61.5	9.6	24.2	10.5	17 352	28.3	495	8 566	2.99	6 797	5 834	761	1 789	1 606
Guadalupe	65.1	8.2	26.4	12.2	2 940	27.5	3	1 498	3.00	1 149	675	207	349	326
Harding	67.6	7.3	19.3	17.5	800	35.1	–	412	2.65	298	265	23	114	109
Hidalgo	50.2	11.2	26.3	9.3	3 784	26.0	57	1 905	3.13	1 522	1 311	167	383	356
Lea	31.4	10.5	23.6	8.0	36 866	26.7	281	18 947	2.94	15 143	13 337	1 377	3 804	3 369
Lincoln	48.7	7.1	21.4	12.2	7 658	32.1	191	4 108	2.63	3 024	2 586	348	1 084	951
Los Alamos	26.2	6.3	25.4	4.1	12 018	33.0	–	6 283	2.80	5 000	4 616	269	1 263	1 129
Luna	42.0	8.2	22.5	16.8	10 796	33.8	164	5 557	2.78	4 325	3 662	526	1 232	1 162
McKinley	72.6	12.4	29.4	4.9	32 857	22.0	275	15 078	3.73	12 193	9 243	2 359	2 885	2 589
Mora	83.0	7.3	26.3	14.8	2 792	29.0	–	1 390	3.03	1 077	840	173	313	299
Otero	34.5	9.3	23.5	6.8	30 008	25.6	1 471	14 608	2.95	11 640	10 113	1 206	2 968	2 480
Quay	58.4	7.7	22.9	15.7	7 335	32.6	47	3 938	2.67	2 903	2 477	338	1 033	969
Rio Arriba	83.5	9.6	26.9	8.2	18 580	25.6	120	9 078	3.21	7 217	5 821	1 086	1 861	1 729
Roosevelt	48.9	7.4	19.8	12.9	11 426	27.0	1 191	5 645	2.58	4 006	3 408	448	1 639	1 421
Sandoval	58.5	8.9	25.0	9.8	22 970	28.1	280	10 464	3.30	8 772	7 323	1 078	1 692	1 469
San Juan	53.6	11.4	26.2	5.8	50 795	24.2	456	25 020	3.24	19 597	16 622	2 181	5 423	4 775
San Miguel	82.5	8.4	23.4	11.6	15 500	27.3	1 459	7 370	2.89	5 278	3 945	1 051	2 092	1 897

¹Householder living alone.

NEW JERSEY
REVISED TOTAL AND AGE & SEX
POPULATION PROJECTIONS

JULY 1
1985 TO 2000

OFFICE OF DEMOGRAPHIC AND ECONOMIC ANALYSIS
DIVISION OF PLANNING AND RESEARCH
DEPARTMENT OF LABOR
C N 388
TRENTON, NEW JERSEY 08625-0388

July 1983

THOMAS H. KEAN
Governor

ROGER A. BODMAN
Commissioner

NEW JERSEY REVISED TOTAL AND AGE & SEX POPULATION PROJECTIONS
JULY 1, 1985 TO 2000

INTRODUCTION

Population projections for the State of New Jersey and its 21 counties are presented in this report. These are the first projections done by the New Jersey Department of Labor's Division of Planning and Research Office of Demographic and Economic Analysis (ODEA) which incorporate county level age and sex counts from the 1980 Census of Population and Housing. They revise and supersede all other projections previously issued by this department.

Four sets of projections are shown in the tables which follow. The projections are labeled: (1) "ODEA ECONOMIC/DEMOGRAPHIC MODEL" which is an economic-demographically linked projection, (2) "ODEA DEMOGRAPHIC COHORT MODEL" which is a purely demographic projection, (3) "LINEAR REGRESSION 1900 TO 1980 MODEL" which is a linear regression projection based on the decennial census population for each county from 1900 through 1980 and (4) "POLYNOMIAL REGRESSION 1900 TO 1980 MODEL" which is a polynomial regression projection based on the same data as the linear regression. Models (2) and (4) are presented in this report for the first time. Models (1) and (3) are updated versions of previously presented models. Models (1) and (2) - ODEA Economic/Demographic and ODEA Demographic Cohort - are termed preferred not because of any predictive qualities, but because they are theoretically superior to the regression models (3 and 4) and yield age and sex detail not available in those two models. The methodologies for these projections are described below.

General Assumptions

Contrary to earlier sets of population projections released by this division, no special adjustments were made for future population growth associated with the Atlantic City hotel-casino industry. The reasons for not making special adjustments were:

(a) Because of the model's economic nature and because of the availability of a somewhat larger historic data base than had been at hand for earlier projections, the ODEA Economic/Demographic Model (1) could account for the anticipated effect of employment growth in the hotel-casino industry and its relation to population growth in ways similar to any other industry in the state. Therefore, no specific adjustments to this model were necessary since anticipated population growth associated with the hotel-casino industry was incorpora-

ted directly into the model.

(b)   Because no specific demographic (i.e., survival, fertility, migration) adjustments could be made due to the lack of a data base and because economically-based adjustments yielded total populations in the purely demographic models, especially the ODEA Demographic Cohort Model (2), which were very similar to the Atlantic County projections in the Economic/Demographic Model (1), no special adjustments were made to any of the demographic models.

To the extent that the demographic effects of the hotel-casino industry were reflected in the demographic trends of the 1970s, the demographic impact would be included in the three purely demographic projections (Models 2, 3 and 4). This appears unlikely, since the first hotel-casino did not open until about mid-1978 and only three casinos were in operation by the time of 'the 1980 Census. Therefore, users of the three purely demographic models, including the Demographic Cohort Model (2), may wish to apply a special hotel-casino adjustment which is shown and explained on pages 6 and 7. No special adjustment is needed for the Economic/Demographic Model (1).

As in previously issued sets of projections, no special adjustments were made either for the impact of development restrictions of the Pinelands Comprehensive Management Plan nor for the population forecasts of the Meadowlands Commission.

In the case of the Pinelands, the assumption was made that growth will be redirected within the counties in the Pinelands and that the present projections do not indicate growth beyond limits imposed by the Pinelands plan in any county. The Pinelands plan seeks to allocate growth to designated "regional growth areas." The Pinelands Commission states that these areas will be more than adequate to accommodate regional housing demand projections for the foreseeable future."[1] The housing demand projections cited were based on higher population projections than those reported here.

Since these are baseline projections, no adjustment was made for population forecasts by the Meadowlands Commission for population growth in Bergen and Hudson county communities. Employment and population trends of the 1970s for these areas are included in the Economic/Demographic Model (1) and population trends are in the other three projections. If development occurs which indicates growth beyond the trend levels, then this projected growth will be incorporated in the models in future revisions.

A survey of county planning boards was undertaken to identify major developments which might significiantly alter trends in the counties. No

developments aside from the Atlantic City hotel-casinos, the Pinelands and the Hackensack Meadowlands were identified as having the potential to change trends substantially.

Baseline Projections - Not Forecasts and Not Goals

The numbers in this report are projections, not forecasts or predictions. A projection is the measurement of a future condition that would exist if the rules and assumptions of the method proved to be empirically valid in the future. Projections may assume continuations of past conditions, present conditions or trended changes in historical conditions. They may also assume entirely new transition rates. Given the method and the assumptions, a projection is always correct if the operations of the projection method are carried out without error. The number of possible projections for any given population is therefore infinite. A forecast, on the other hand, is a projection that is also a judgemental statement concerning the expected measurement of future conditions; it is a prediction. All forecasts are projections, but not all projections are forecasts.[2] Again, numbers in this report are projections.

Furthermore, the projections in this report are not to be interpreted as goal or policy oriented. They are not intended to constrain or to advocate specific levels of growth in any areas of the state. All series are presented as baseline, that is, independent of exogenous public or private interventionist activities of an unusual, unforeseen or undocumented nature or magnitude. They are based primarily on identifiable, demographic and economic secular trends which have been implicitly or explicitly incorporated into the models. The greatest value of the projections is as a reference framework for planning, policy evaluation and considerations of alternative growth scenarios which could be achieved through greater or less resource development.

ODEA ECONOMIC/DEMOGRAPHIC AND ODEA DEMOGRAPHIC COHORT MODELS: PREFERRED PROJECTIONS

The "ODEA ECONOMIC/DEMOGRAPHIC" and "ODEA DEMOGRAPHIC COHORT" Models are both cohort-component method projections. That is, the base population is survived five years in each iteration of the projection cycle and births are projected by applying fertility rates to survived females aged 15 to 44 years of age to determine the population due to natural increase. Net migration for persons aged 65 years of age and over is computed based on observed trends prevailing in the 1970s.

The difference between the two models is in the way migration of persons under 65 years of age is projected. In the Economic Model (1), such migration is computed based upon projected labor market conditions, whereas in the Cohort Model (2), such migration is projected based on observed trends that prevailed in the 1970s. In the Cohort Model (2), migration of persons under 65 is projected in the exact same way as the migration of persons 65 years of age and over.

Base Populations

An estimated July 1, 1980 population by age, sex and race is the base population for these projections. The July 1, 1980 population was determined by linearly projecting the 1970 to 1980 intercensal change by age, sex and race group one quarter of a year. These numbers were forced to a state control.

Prior to the projection of the July 1, 1980 population, the April 1, 1980 census data was adjusted in order to improve comparability of race data to the 1970 census. In the 1980 census, persons who did not classify themselves in one of the specific race categories but reported entries such as Mexican, Puerto Rican, Cuban, Dominican or some other entry indicating Spanish Origin were included in the "other" races category. In the 1970 census, most of these persons were included in the "white" category. Thus, for April 1980, persons of Spanish origin in the "other" races category were re-classified as white prior to projecting the July 1, 1980 population.

Group Quarters Populations

Persons in group quarters as of April 1, 1980 are removed from each age, sex and race group prior to projecting the population. These populations are held constant and, at the end of each projection iteration, are then added to the projected base populations to yield projected total populations.

Fertility Rates

The number of births in the projection interval is calculated by applying general fertility rates to women of childbearing age (15 to 44 years old). The county and race-specific general fertility rates were calculated and projected in line with the national "Middle Series" projections based on the historical relation of the state and county rates to national rates.[3]

The series assumes the ultimate level of completed cohort fertility will be 1.9 births per woman. Although this assumption appears reasonable, significant deviation from it in either direction is possible in the projection period. Additionally, shifts in the timing of births (for example, an acceleration in the trend toward postponing the birth of the first child until the late twenties) will affect these rates and, correspondingly, the validity of the projections.

Mortality Rates

The civilian populations are survived using age, sex and race-specific survival rates. The survival rates used for the projections are projected in line with the national "Middle Mortality Assumption" projections assuming no immigration.[4] The survival rate projections assume a narrowing of the historical relation of New Jersey State rates to national rates such that the rates are equal by the year 2000. No major medical developments which would have a significant impact on mortality have been assumed in the model. Survival rates are applied to births and to each age cohort. The survived population is subject to natural increase, but it is closed to net migration.

Migration of Persons 65 Years of Age and Over

Migration patterns of persons 65 years of age and over are assumed to follow migration patterns estimated from 1970 to 1980 trends. However, no age, sex and race cohort is allowed to increase or decrease its population via migration by more than 50% over any 10-year period.

Migration of Persons Under 65 Years of Age

In the Economic Model (1), the under 65 year old migration is determined by the projected labor market. In simple terms, an over-supply of labor relative to the demand for workers results in a net out-flow of persons from the county while high demand relative to supply pulls in migrants to balance the labor market. As stated previously, the group quarters populations are assumed to remain at the 1980 levels.

Labor supply is estimated by applying projected labor force participation rates to persons 16 to 64 years of age in the survived population that is closed to migration. These rates are based on national labor force projections by age, sex and race produced by the U. S. Bureau of Labor Statistics. Labor demand is determined by adjusting exogenously projected employment by coun-

ty to a residence basis.   The labor supply and demand are compared to produce
a level of unemployment within a range which has been projected as neutral
regarding migration. This range was projected based on the historical relation
of the county levels to state levels. The state unemployment rate is projected
to be 7.4% in 1985 and 6.0% in 1990 and thereafter.   The labor market, then,
determines the number of net migrants needed to bring the labor market into
balance. This figure is inflated to account for non-labor force migrants under
65 years of age such as dependents.   Total migration is distributed by age,
sex and race in the Economic Model (1) according to the estimated migration
distribution for the 1970s.

In the Cohort Model (2), the migration of persons under 65 years of age is
assumed to follow migration patterns by age, sex and race estimated from 1970
to 1980 trends. As with persons 65 and over, 50% ceilings and floors are set
on the 10-year change in population due to migration.

Total Migration

The resulting migrants are added to or subtracted from the survived popu-
lation that is under 65 years of age and is closed to migration.   The result
is the projected household population under 65 years of age. The sum of these
cohorts, of the 65 years of age and over cohorts and of the group quarters co-
horts is the total projected population for each county.

Hotel-Casino Population Adjustment for Atlantic County Purely Demographic Projections (Models 2, 3 and 4)

As explained previously, no special adjustment was made for changes in
population associated with the Atlantic City hotel-casino industry. Although,
by its economic nature, the ODEA Economic/Demographic Model (1) is able to ac-
count for the impact of the hotel-casino industry without specific adjust-
ments, it appears unlikely that population trends of the 1970s which are in-
cluded in the other projections adequately reflect the demographic impact of
the hotel-casinos.

Therefore, users of the three strictly demographic projections, including
the Cohort Projection (Model 2) may wish to apply a rather simplistic special
Hotel-Casino Population Adjustment to Atlantic County's population.   Direct
employment in hotel-casinos is projected to be 32,905 in 1985 and 38,155 in
1990 and thereafter.   This employment would be generated by 12 hotel-casinos
in operation by 1985 and 14 in operation by 1990.

About 71.3% of hotel-casino employees lived in Atlantic County as of April 1981, based on a survey done by this Division.[5] In 1980, the population under 65 to employment ratio for the county was 1.7927. Multiplying the post-1980 changes in direct employment by 71.3% and then by the population to employment ratio can yield approximate projections of the growth in population due to casino employment by 1985 and 1990. Such growth is 24,929 in 1985 and 31,064 in 1990 and thereafter. Addition of such growth to the Cohort Projections (Model 2) yields populations (rounded to the nearest hundred) for Atlantic County of 231,600 in 1985, 251,100 in 1990, 264,500 in 1995 and 276,900 in the year 2000.

Projections by Age and Sex

Beginning on page 16, the preferred projections are presented by age and sex. These breakdowns are consistent with those presented for the Economic and Cohort Models (1 and 2). Total projections and total age projections are rounded in hundreds while each age-sex projection is rounded in tens. Thus, the totals for the projections may not add.

The census counts for 1970 and 1980 are not rounded. Since the publication of the 1980 census counts, the total New Jersey and Essex County populations have been revised, respectively, to 7,365,011 and 851,304, as shown in the summary tables. But because the age-sex detail has not been revised for 1980, the totals shown for 1980 in the age and sex detailed tables for New Jersey and Essex County do not agree with the revised totals.

The population for April 1, 1970 has been revised since publication of the 1970 census. Age and sex groups were also revised. However, the age groups 75 to 79, 80 to 84 and 85 years and over were collapsed into one age category - 75 years of age and over.

Range of Preferred Projections: ODEA Economic/Demographic and ODEA Demographic Cohort Models

Users of the preferred projections may wish to view the two models as establishing a range for potential population change in the future. A narrow range is indicative that projected labor market conditions produce a migration pattern similar to the pattern prevailing in the 1970s and that a certain consistency exists between the economically based migration of the Economic/Demographic Model (1) and the demographically based migration of the Demographic Cohort Model (2). On the other hand, a wide range indicates that projected labor market conditions produce a different migration pattern from that of the

Table I
RESIDENTIAL CONSTRUCTION AUTHORIZED BY BUILDING PERMITS IN NEW JERSEY
1960-1983

Year	RESIDENTIAL CONSTRUCTION COSTS (thousands)			DWELLING UNITS AUTHORIZED (number)					
	Total	New Buildings	Additions & Alterations	Total	Single Family	Two Family	3-or-4 Family	5-or-More Family	Public
1960	$ 558,591	$ 497,534	$ 61,057	41,166	30,690	2,570	599	6,244	1,063
1961	622,482	553,029	69,453	46,963	29,555	2,784	733	10,525	3,366
1962	618,663	549,825	68,838	46,655	29,025	2,638	790	13,708	494
1963	681,597	608,660	72,937	54,488	28,685	3,036	891	21,191	685
1964	778,540	704,809	73,731	68,078	27,673	2,889	1,014	35,284	1,218
1965	804,151	727,586	76,565	64,933	30,675	3,684	822	28,040	1,712
1966	665,653	588,874	76,779	50,163	23,868	2,830	1,883	19,258	2,324
1967	652,963	572,646	80,317	46,958	24,380	2,338	1,092	17,412	1,736
1968	680,816	597,980	82,836	43,661	23,781	2,586	705	14,040	2,549
1969	661,820	562,616	99,204	37,887	21,030	2,814	787	12,854	402
1970	702,116	599,034	103,082	39,897	19,571	2,102	713	16,789	722
1971	990,471	876,144	114,327	58,040	28,424	2,912	1,098	24,589	1,017
1972	1,200,400	1,062,430	137,970	65,539	29,602	3,648	1,383	30,309	597
1973	1,187,837	1,030,506	157,331	52,145	27,851	2,322	1,138	20,376	458
1974	764,704	588,291	176,413	25,878	14,994	1,344	336	8,695	509
1975	751,581	574,101	177,480	23,215	15,720	1,220	502	5,523	250
1976	1,033,733	832,433	201,300	32,528	20,551	1,974	521	8,644	838
1977	1,206,053	998,931	207,122	34,887	23,689	1,808	459	8,220	711
1978	1,503,974	1,262,831	241,143	39,058	27,672	2,142	617	7,583	1,044
1979	1,575,051	1,274,353	300,698	34,908	22,759	1,906	618	8,845	780
1980	1,354,770	1,010,084	344,686	22,257	14,663	1,594	316	5,137	547
1981	1,367,786	1,022,130	345,656	21,293	12,479	1,380	383	6,528	523
1982	1,322,698	1,003,694	319,004	21,404	13,390	916	339	6,556	203
1983	2,257,908	1,837,655	420,253	36,791	23,674	1,404	685	10,529	499