Mount Laurel   11/16   (1984)

analysis of the consensus methodology
to specify present + prospective
Mount Laurel Need

w/ Note from Judge Serpentelli

10 pgs

ML000389E

Memo

The Honorable
EUGENE D. SERPENTELLI

11/16/84

To

Philip M. Caton

For your information and comments at your convenience.

Eugene D. Serpentelli

p. 1   Def. of Region

 # 1 and 3 contradict each other

p. 2   #1 "Present Need" & Prospective Need do draw on diff. mkts - Present need reflects past patterns of location of low income people & results of exclusion, plus changes in transportation patterns (devel of cities vs suburbs) - present need reflects much old hsg. predating auto-commuting patterns.

 Prosp. Need <u>does</u> relate to employment nodes.

p. 3   39# in decision - check footnote 8

J.E.S. 101

ANALYSIS OF THE CONSENSUS METHODOLOGY
TO SPECIFY PRESENT AND PROSPECTIVE
MOUNT LAUREL NEED

Principal Investigator

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Sponsor

New Jersey State
League of Municipalities

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Date

12 November 1984

INTRODUCTION

The purpose of the following report is to summarize the results of a larger report which was commissioned by the New Jersey State League of Municipalities on the Consensus Mount Laurel II methodology. This methodology initially appeared in what is known as the Warren Report and authored by Carla M. Lehrman. It subsequently was drawn upon in Judge Serpentelli's opinion in AMG Realty Co., Timber Properties, Inc. v. Township of Warren.

To date, the methodology has not been empirically analyzed in the aggregate to evaluate its effects. The purpose of the report which will be delivered to the State League of Municipalities in early December will present such an analysis.

The summary contained here presents conclusions drawn from a large computer model which can calculate a municipality's fair share of present and prospective need under a variety of methodologies and compare the results.
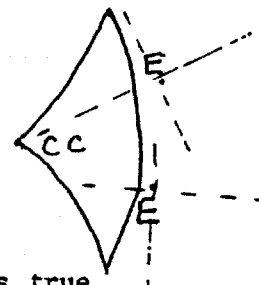
THE DEFINITION OF REGION

The Consensus method chooses an enlarged eleven-county region for present need and a point-source region for prospective need. The enlarged northern region for present need destroys the assumption of reasonable within-region commute and blurs the growth/non-growth character (and requisite housing responsibility) of the three, Rutgers-established northern regions.

The point-source approach for the prospective need region incorrectly utilizes or defines the center of such a region as the community center where the residential settlement will take place instead of a major regional employment node. This is done without regard to the latter's location relative to the particular community under litigation. A residential market area is subsequently constructed from the center of a community in which the residential settlement will take place.

This incorrectly describes an individual community as a center of an amoeba-like commutation pattern to jobs. In reality the commuter flow from the community under litigation, may be in all one direction to an employment node which itself is the center of the commuting zone. Failure to recognize this concept incorrectly specifies the journeys-to-work which surround a community and, as such, the counties which are included within its calculated market area. This is in direct conflict with established market analysis techniques which specify how a residential market area should be delineated.
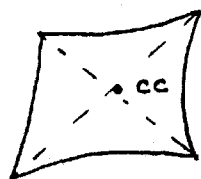
cc's current
market area

cc's true
market area

2.

Both of these decisions within the Consensus methodology fly in the face of Mount Laurel II recommendations for the definition and purpose of a region, i.e., a fixed area drawn together by reasonable commute, and neither approach is empirically justified or suggested by any reference to housing or land-use literature. Statements are made by the Consensus group which functionally divide housing need related to deterioration and housing need related to future growth to an enlarged fixed region or to a point source region, respectively. Neither the housing market literature nor the Mount Laurel II decision itself makes this distinction. Further there is no empirical evidence presented by the Consensus group to support this distinction. There is much literature in support of the delimitation of established and permanent housing regions drawn together by commutation flows. These are cited in the Rutgers report.

Further, opting for a point-source region presently disallows any trading of other region Mount Laurel responsibilities because of inherent limitations in accurately specifying regional housing needs (to be described subsequently). A current component of the Lipman bill (S-2046), which contains many innovative approaches to delivering Mount Laurel housing need, calls for an ability to specify current and future housing need in permanently established regions so that regional and local responsibilities may be predetermined and available for every community and possibly shared in terms of development credits. This is not currently possible with the Consensus method. Section I of the forthcoming report deals in detail with the limitations of both the expanded region and point source regional delineations for Mount Laurel purposes.

SPECIFICATION OF THE MOUNT LAUREL POPULATION

The Mount Laurel population in terms of income requirements is inaccurately specified by the Consensus method for both present and prospective need. For present need, a figure of 82 percent is applied to all income groups which previously have been identified as living in deficient housing. This percentage, which cannot be empirically replicated by the Consensus group, is based on a Tristate Transportation Commission report which dealt with New York, Connecticut and New Jersey, and which (1) contained different criteria for identifying deteriorated housing, and (2) used housing information that was tabulated in 1970. A more accurate figure for New Jersey is approximately 65 percent statewide (using the Consensus' definition of deterioration) or 69 percent using Rutgers' criteria for deterioration. There is significant variation in this figure by subregion. It may be as low as 50 percent in certain suburban areas and as high as 85 percent in more urban locations. The simple application of a single percentage ignores these differences which occur by geographic location in the State: it overallocates present need obligations to areas with lower percentages of the poor relative to all, and underallocates to those areas where the poor represent a greater proportion.

Further, since the current Consensus procedure merely randomly chooses 82 percent of the supposed lower-income households from all deteriorated households, those households that are chosen are not necessarily low income. We know from the above percentages that, in New Jersey, close to 30-40 percent of household living in deteriorated housing are going to be middle or high income. Using the Public Use Sample (a much more current

approach) to check the Consensus procedure finds that those "lower"-income households identified by this procedure at the 80th percentile had 1984 household incomes of $45,000. This means that twenty percent of these households were more than $10,000 over established Mount Laurel income cutoffs and the procedure was incorrectly including them in tabulations of present need.

The Rutgers procedure uses the New Jersey Public Use Sample to pre-qualify all households as either low- or moderate-income before analyzing their housing quality. As such, when the surrogates of housing deterioration are applied, the resultant present need number is only low- and moderate-income households living in deteriorated housing. Failure to appropriately initially qualify households by income, causes an overstatement of present housing need as well as a distorted picture of where that need is located.

In determining prospective need, the Consensus procedure applies 39.4 percent to the projection of all households to estimate the percent of the future household population that is low and moderate income. This percentage, taken from the Rutgers study, relates to a statewide average that was calculated for 1980. This was determined by isolating the share of all households that were lower income by age cohort, determining a county percentage, and summing to a statewide average. Rutgers used 1980 age cohort percentages of Mount Laurel lower-income households and applied these to projected growth in age cohorts by county. As such, each county had a different percentage of future Mount Laurel population based on different future age cohort distributions. This occasions a different aggregate percentage by county. These percentages by county range from 15 to 57 percent; thus, the application of an across-the-board 39.4 percent can seriously over or undercount prospective need by county and skew resultant numbers to one location or another. This failure to understand that a single percentage cannot be applied to overall county growth to determine the share of the future poor, causes a net overcount of close to 15,000 future lower-income households.

Section II of the forthcoming report clearly delimits the implications of failure to accurately describe the Mount Laurel population on the resultant need estimates by region.

THE DETERMINATION OF PRESENT NEED

The Consensus procedure uses three separate surrogates, the inclusion of any one which is defined as present need related to local housing deterioration. (A surrogate of housing deterioration means that a unit containing such a deficiency, would likely be classified as deteriorated by an independent field survey of housing quality.) Each surrogate index separately specifies a unit which is claimed to be deficient — multiple surrogates are not employed. In addition, the household occupying the unit is not checked for income to be assured that they meet Mount Laurel standards.

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 specifications 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 surrogate method including income to isolate the poor living in deteriorated housing.)

The Consensus procedure thus has a significant potential for erroneously classifying 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. Thus the surrogate signals potential deficiency, but field examination fails to confirm it. The surrogate overstates the count of truly deficient. A good unit may often be classified as bad using the Consensus procedure. Using information tabulated from HUD studies of deterioration, the Rutgers procedure has a 65 percent less chance of identifying a housing unit as bad that would not be so classified in subsequent field examination. In addition, the Consensus procedure, by only using three single index surrogates and then, those most found in suburban areas, overestimates need in non-urban locations and underestimates need in urban locations. Thus not only does the current Consensus method overcount present need by approximately 10,000 households, it projects this need overly to suburbs.

THE DETERMINATION OF PROSPECTIVE NEED

The Consensus procedure employs a combination of two models and divides their results in half to estimate population growth by county. This invalidates the assumptions used by each model. Further, the Consensus procedure rejects historical migration trends based on employment change as its model of growth (the Demographic Cohort Model) and yet, in a subsequent step, uses these historical results to allocate growth. (Covered Employment Trends 1972-1982).

Much of the Consensus approach is based on a belief that we are not where we appear to be in terms of the Demographic Cohort model's predictions. This determination is made by the Consensus group by taking 1983 population estimates and comparing this to three-tenths of the way towards each model's 1980- 1990 projections. This is a simplistic and incorrect procedure. For a correct comparison, you must age the population into the future, use mortality and migration data to adjust these totals and then convert to both estimates and models households for a comparison. If this is done, the Demographic Cohort model is right on target in 1983. It is impossible to view the accuracy of any projection model without using this technique.

Further, the Economic Demographic Model, which is averaged with the Demographic Cohort model, shows 1980-1990 population growth in New Jersey at 2.5 times the 1970-1980 rate. This is not verified by the latest projections from the U.S. Census. Further, this Economic Demographic Model projects slight, as opposed to significant, decade (1980-1990) household gains in Monmouth, Ocean, and Cape May Counties, and household gains as opposed to declines in Bergen, Passaic, and Union Counties. Neither of these trends are verified by latest population estimates, nor are they supported by 1980-1983 Covered Employment trends.

Prospective need does not add up to the totals projected for the county and the region when all of the municipalities are independently

solved for and totaled to county and region. Parenthetically they may not add up to the county need, for county need is future need sent to the region and the county housing total is what can be absorbed by that county relative to all others in the region. County need is very different from county allocation. This is never made clear in the Consensus procedure discussions of need or in the Warren decision.

The Consensus procedure for municipalities further does not add up to regional totals when the subunits of demand are tallied. This is due to a specific flaw in the allocation procedure (to be discussed) as well as the non-pyramiding quality of the point source region. In the first case, this has to do with the creation of an erroneous arithmetic; in the second, it is related to numerous allocation cross-overs which are caused by the point-source region.

ALLOCATION

The Consensus group never undertook a statewide analysis of the municipal and county implications of various alternative allocation strategies on a statewide basis. This relates to choice of regional determination for prospective need which complicated this task as well as the time constraints of working within litigation schedules.

Without checking the implications of weighting, the Consensus group uses three variables to allocate present need and four variables to allocate future need. Supposedly, each variable is equally weighted. This is not true as the income variable is an artificial arithmetic contrivance (claimed alternately to be a percentage) yet is a ratio of local to regional median incomes multiplied by another percentage.

To make these three factors truly equal, a community's share of regional gross income must be used. For present need, for instance, a community's allocation then would rest with its share of regional jobs, growth area and income, not with its share of regional employment/growth area and with a ratio of median incomes converted to a percent-like arithmetic that has no substantive basis. The inappropriateness of this measure causes allocation to go awry and contributes to a mismatch of community totals pyramided to the region versus the regional number separately determined.

Throughout the discussion of both the Warren decision and the Warren report, there are procedures which allude to the fact that median household income can be multiplied by the number of households in a jurisdiction to obtain total gross income. This is an incorrect procedure. Mean household income x number of households creates total gross income. Any procedure which calls for an estimate of the share of gross income (such as that recommended here for an income allocation procedure) should use mean income before multiplying by a population number (municipal, region, etc.).

Using the municipal share of regional gross incomes and fixed regions, prospective need was independently calculated by Rutgers University for each municipality following the Consensus approach. This calculation used the Consensus model for future growth (averaging both projection models) and their share of projected household growth that was lower income (39.4%). This was allocated to local levels and then summed for a regional

total. It exactly added to the separately estimated regional total. Correct
allocation procedures and fixed regions enable both "top down," "bottom-up"
<u>Mount Laurel</u> verification.

SUMMARY

A series of incorrect/inadequate procedures in the Consensus group
methodology prevent careful implementation of <u>Mount Laurel</u> solutions: they
may be summarized as follows:

<u>Choice of Region</u>

Point source region for present need presents
regional tallies for allocation purposes and
contributes to inaccuracy of "bottom-up" ver-
sus "top down" specification of need.

Expanded region for present need disregards
commuting distance as a housing need require-
ment.

<u>Specifying the Mount
Laurel Population</u>

Unsubstantiated 82 percent figure for low-
and moderate share of deteriorated housing
overstates present housing need. Three single
versus six multiple indices bias need speci-
fication to suburban rather than urban areas.

Application of 39.4 percent of prospective
population as a uniform <u>Mount Laurel</u> percent-
age by county ignores county differences in
lower income as a share of total population.
This causes an overstatement of future <u>Mount
Laurel</u> need.

<u>Calculating Present
Need</u>

Single index surrogates overstate present
need. Choice of surrogates target need to
the suburbs.

<u>Calculating Perspective
Need</u>

Choice of blended models overstates future
growth and directs growth to incorrect areas.
Model choice for <u>projection</u> is inconsist-
ent with the assumptions for <u>allocation</u> of
prospective need.

<u>Allocation</u>

No study of the effects of choice of allo-
cation indices or methods. Artificial
arithmetic created which incorrectly
weights allocation factors relative to one
another and contributes to misallocation.

Use of median income times population in
households continuously misemployed as an
estimate of gross income.

The report which will be presented to the State League of Municipal-
ities in early December 1984 will discuss in detail the procedural limita-
tions summarized above.

MOUNT LAUREL PRESENT NEED

for the

(1) State of New Jersey

(2) Northern 11 County Region

A. Consensus Method
b. Consensus Method-Income Qualified
c. Rutgers Method
d. Rutgers Method-Skillman Alteration

Robert W. Burchell, Ph.D.   29 November 1983

EXHIBIT 1

TOTAL AND DEFICIENT HOUSEHOLDS FOR THE STATE OF NEW JERSEY
(Deficient Housing Identified by Alternative Procedures)

	Middle and Upper Income		Low and Moderate[1] Income		All Households	
	Number	Percent	Number	Percent	Number	Percent
Total Households (Including subfamilies)	1,584,155	(60.9)	1,015,920	(39.1)	2,601,240	(100.0)
Three surrogate-identified deficient units (Consensus method – 82%)	30,080	(17.2)	145,000	(82.8)[2]	175,080	(100.0)
Three surrogate-identified deficient units (Consenus method–properly income qualified)	62,640	(35.8)	112,440	(64.2)	175,080	(100.0)
Six surrogate-identified deficient units (Rutgers method)	52,800	(30.5)	120,120	(69.5)	172,920	(100.0)
Six surrogate-identified deficient units + any crowding (Skillman alteration of Rutgers method)	69,400	(32.0)	147,560	(68.0)	216,960	(100.0)
Overhoused (< .5 Persons per room)	704,400 (44.4% of middle- and upper-income households	(60.5)	459,640 (45.2% of low- and moderate-income households	(39.5)	1,164,040 (44.7% of total households)	(100.0)

Note: 1. Mount Laurel present need.
2. 145,000 represents Consensus procedure to identify low- and moderate-households. These are not actual low- and moderate-income households, but rather emerge from the procedure used to estimate them. The true number of low- and moderate-income households (112,440) appears in the next line.

This is very interesting "policy" statistic to pursue, but must be reduced by all single person hollds in typical 1 BR apt or even "2½" rm apt. Is figure actually less than .5 pers/rm – or at .5 pers per rm – if latter, then all studios, efficiencies would probably be excluded.

EXHIBIT 2

TOTAL AND DEFICIENT HOUSEHOLDS FOR THE NORTHERN ELEVEN COUNTY REGION
(Households Occupying Deficient Housing Identified by Alternative Procedures)

	Middle and Upper Income		Low and Moderate[1] Income		All Households	
	Number	Percent	Number	Percent	Number	Percent
Total Households (Including subfamilies)	1,020,130	(61.4)	641,320	(38.6)	1,661,450	(100.0)
Three surrogate-identified deficient units (Consensus method – 82%)	22,000	(17.4)	105,000	(82.6)[2]	127,000	(100.0)
Three surrogate-identified deficient units (Consenus method-properly income qualified)	44,560	(35.1)	82,440	(64.9)	127,000	(100.0)
Six surrogate-identified deficient units (Rutgers method)	41,440	(30.6)	94,040	(69.4)	135,480	(100.0)
Six surrogate-identified deficient units + any crowding (Skillman alteration of Rutgers method)	52,880	(32.0)	112,560	(68.0)	165,440	(100.0)
Overhoused (< .5 Persons per room)	439,120 (61.7) (43.0% of middle- and upper-income households		272,080 (38.3) (42.4% of low- and moderate-income households		711,200 (100.0) (42.8% of total households)	

Note: 1. Mount Laurel present need.
2. 105,000 represents Consensus procedure to identify low- and moderate-households. These are not actual low- and moderate-income households, but rather emerge from the procedure used to estimate them. The true number of low- and moderate-income households (82,440) appears in the next line.

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