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IN THE MATTER OF THE TOWNSHIP	:	SUPERIOR COURT OF NEW JERSEY
OF BRANCHBURG'S HOUSING ELEMENT	:	LAW DIVISION
AND FAIR SHARE PLAN	:	SOMERSET COUNTY
	:	DOCKET NUMBER: SOM-L-898-15
	:	
	:	Civil Action
	:	
	:	CERTIFICATION OF
	:	MARK S. ANDERSON
	:	

I, Mark S. Anderson, being of full age, hereby certify as follows:

1. I am a principal in the law firm Woolson Sutphen Anderson, P.C., attorneys for the Township of Branchburg ("Branchburg"). I make this certification in support of the Branchburg's Opposition to Fair Share Housing Center's Motion for Summary Judgment in the above-captioned case.


2. Attached hereto as Exhibit "A" is a true and correct copy of the report entitled Econsult Solutions, Inc. Analysis of the Gap Period (1999-2015) dated February 8, 2016.

I hereby certify that the foregoing statements are true. I understand that if any of the foregoing statements is found to be willfully false, I am subject to punishment.



Mark S. Anderson

Dated: May 5, 2016

EXHIBIT "A"



**ECONSULT SOLUTIONS, INC.
ANALYSIS OF THE GAP PERIOD
(1999 – 2015)**



February 8, 2016

REPORT SUBMITTED BY:
Econsult Solutions
1435 Walnut Street
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Peter A. Angelides, Ph.D., AICP
Principal



INTRODUCTION

This report addresses one of the central issues to calculating fair share need in response to the Mt. Laurel IV ruling – how to treat the “gap period.” ESI’s analysis indicates that there is no affordable housing need or obligation from the gap period, whereas other parties have identified and quantified a need from the gap period.

Econsult Solutions, Inc. (ESI) addressed the issue of affordable housing need and obligation arising from the gap period from 1999 – 2015 in both our December 8, 2015 expert submission to the Court in Ocean County (entitled *Econsult Solutions Inc. Response to Ocean County Third Revised Case Management Order*) and in Section 7 of our methodology report (entitled *New Jersey Affordable Housing Need and Obligations*).

Subsequent to the preparation of those documents, ESI has had the opportunity to review the analysis of Regional Master Richard Reading with respect to the gap period submitted to the Court on December 29th. We have further reviewed a series of submissions from the Fair Share Housing Center (FSHC), New Jersey Builders Association (NJBA), Highview Homes LLC (“Highview”) and their respective experts, including briefs and submissions to the court on December 8th, responses to the Reading report from early January, proposed methodologies for calculating gap period obligations on Jan 22nd, and response reports to the ESI methodology report submitted on January 29th. ESI was also present for a substantial part of the oral argument on the gap argument on January 7, 2016 in Ocean County Superior Court and has reviewed a transcript of the final portion of the proceedings on that day.

Our submission and report establish a consistent treatment of affordable housing need and obligation arising from prior periods, built on straightforward logical principles and analysis and a plain reading of the text of the Fair Housing Act (FHA). Our analysis also incorporates the Supreme Court’s rulings in In re Adoption of N.J.A.C. 5:96 & 5:97 by the New Jersey Council on Affordable Hous., 221 N.J. 1,30 (2015) (“Mount Laurel IV”), which repeatedly relied on the FHA for guidance and which required municipalities to address the prior round obligations COAH had established as the second round obligations. Our analysis that the “gap period” from 1999 – 2015 yields **no legal affordable housing obligation nor identifiable additive housing need** within the FHA framework and the requirements of Mount Laurel IV remains unchanged.

Our analysis of the gap period necessarily includes a mix of analytical principles and precedent from relevant statutes, court decisions, and prior round regulations. This is also true of our entire methodology for calculating affordable housing need and obligations. We are not lawyers, but the task of updating and calculating such a methodology in accordance with the directives of the Supreme Court necessarily involves reckoning with the relevant legal and analytical precedents.

This report proceeds in several parts. After the summary of the overall conclusions, the report analyzes the issues in more detail:

- It provides an overview of gap period and the underlying principals;
- It responds directly to issues raised about the gap period in various submissions;
- It analyzes Dr. Kinsey's proposed (and inappropriate) methods for calculating a gap period obligation; and
- It shows how facts provided by Dr. Kinsey's gap period calculation directly contradict his preferred fair share model.

This report addresses issues pertaining to the gap period only. It does not address any additional issues raised by the same parties in their January 29 responses to other aspects of ESI's methodology, which will be addressed in a forthcoming rebuttal report.

SUMMARY

ESI's Analysis

The premise of the ESI analysis is that the object is to determine the Present Need and Prospective Need as accurately as possible. ESI's December 8th expert submission and *New Jersey Affordable Housing Need and Obligation* report set forth a consistent analysis as to why the calculation and addition of housing need emerging from the gap period to current affordable housing obligations is inappropriate. Those principles, stated simply, are follows:

- The Prospective Need period covers ten years, is forward-facing, and relates to affordable housing need attributable to likely development and growth;
- Present Need represents all currently identifiable affordable housing need, and by design and by definition incorporates all prior population, household and housing characteristics;
- Present Need and Prospective Need comprise all affordable housing need under the FHA framework. Therefore, no legally assigned obligation nor identifiable current affordable housing need arises from the gap period; and
- Attempts to calculate housing "need" from that time period based on the retrospective application of a Prospective Need methodology do not accurately describe housing need as of today.

Response to Issues Raised

FSHC, NJBA, Highview and their respective experts have offered briefs on the gap period, through submissions to the Court on December 8, 2015 and additional responses to the December 29, 2015 report of Regional Special Master Richard Reading summarizing and commenting on the Master's Report and, on January 22, 2016, providing additional calculations on the gap period. For all of those

voluminous submissions, little response has been offered that bears on the clear logical and analytical framework set forth in the ESI submission and methodology report. Rather, these submissions fail to reconcile with the core principle that a retrospective calculation of "need" arising from a prior time period is not appropriate within the FHA framework, and that a calculation of "residual need" from the gap period would be both speculative and outside of existing methodologies.

The core failing of the approach of FSHC is their inability to account for the current housing conditions of New Jersey's LMI households. As set out in our prior submissions, some LMI households emerging during this period are living in inadequate housing, and are captured within the Present Need. Those that are living in sound housing do not represent a currently identifiable housing need under the FHA framework. These households are indistinguishable from every other LMI household living in sound housing in New Jersey which formed or became LMI prior to 1999 with regard to their current income and housing status, and thus their treatment under the FHA. Nonetheless, as explained below, the justification advanced by FSHC and NJBA for a gap period attribution of "need" treats LMI households emerging during the gap period differently from LMI households from before the gap period. For example, a cost-burdened LMI household created in 1998 currently living in sound housing would not be an identifiable need, but a cost-burdened LMI household created in 2002 current living in sound housing would be counted as part of the need. This differential treatment is without basis.

Flaws in Dr. Kinsey's Proposed Calculations

Rather than reckon with this fundamental issue, these gap period calculations are supplemented with arguments that a retrospective calculation using a Prospective Need methodology is appropriate despite its failure to accurately quantify affordable housing need as COAH has defined the need, which excludes cost-burdened households. These arguments include misleading analogies to prior round precedents and an attempt to obfuscate the clear overlap with the calculation of Present Need. Primarily, however, they focus on the issue of cost-burdened households, whose existence is positioned as direct evidence that the entirety of LMI household growth during the gap period represents a current housing need. We address this point at length, and demonstrate that the statistics on cost-burdened households presented by the expert for the NJBA do not in fact demonstrate this case. Further, we demonstrate that the use of cost-burden has no precedent in the fair share methodology, and that its exclusion is based on sound analytical principles set forth in 1984 in *AMG Realty vs. Warren Twp.* which are still true today.

More broadly, we discuss the impossibility of "rewinding the clock" and attempting to quantify a counterfactual scenario for the housing conditions of New Jersey's households since 1999 absent the administrative failings of COAH. In this point, we agree with Regional Master Richard Reading's assessment in his December 29 report that "the dynamic rather than static nature of the housing market defy an empirical calculation" and further, that such an assessment would be "speculative" and "would still be contrary to prior round methodologies" (15).

What is left, therefore, is the need that can be identified and quantified within the FHA framework, i.e. the Present Need and Prospective Need. We have done so rigorously and accurately in our methodology report. Attempts to generate additional calculations of need emerging from the gap period rely on faulty analytical principles and are inconsistent with the methodologies for quantifying affordable housing need within the FHA framework.

Finally, consideration attention is given to the "alternative calculation" of the gap period offered by Dr. Kinsey in his January 22, 2016 brief and its implications for the calculations set forth in the original Kinsey model. In his January 22nd submission, Dr. Kinsey explains that this alternative model is "based on changes in population, households, headship rates and housing market conditions that actually took place during 1999 – 2015" (2) and therefore represents his best estimate of current population and household characteristics as of 2015. Simultaneously, FSHC's January 22, 2016 submission assures the Court that the original July 2015 Kinsey model still "best calculates Third Round obligations" (1), notwithstanding the alternative model submission.

It is instructive, therefore, to perform a simple mathematical comparison of these outputs to determine if the population and household growth required to achieve the 2025 projections of the Kinsey model are reasonable or realistic in relation to the current conditions as of 2015 estimated by Dr. Kinsey himself in his alternative gap period model. This simple comparison reveals that achieving Dr. Kinsey's 2025 projections not only would require an acceleration of LMI household growth to nearly three times the annualized pace observed in the gap period, according to Dr. Kinsey's own calculations, but would require more LMI household to be created than total households. The Kinsey model results are thus fundamentally inconsistent with Dr. Kinsey's own calculation of the current reality of New Jersey's households and their characteristics. This basic analysis demonstrates conclusively that the Kinsey model, the flawed assumptions of which have been detailed at length, does not and cannot serve as a reliable basis for the assignment of affordable housing obligations for the current cycle.

OVERVIEW OF GAP PERIOD AND RELEVANT PRINCIPLES

ESI's December 8, 2015 submission and December 30, 2015 methodology report set forth the why it is neither appropriate nor possible to accurately calculate retrospective "need" arising from the gap period.

Prospective Need is Forward-Facing

The Fair Housing Act states that it is the duty of COAH to:

Adopt criteria and guidelines for...municipal determination of its present and prospective fair share of the housing need in a given region **which shall be computed for a 10 year-period.**

[N.J.S.A. 52:27D-307(c)(1), (emphasis added)]

Further, the definition of Prospective Need in the FHA is as follows:

Prospective need means a **projection** of housing needs based on development and growth which is reasonably **likely to occur** in a region or municipality...

[N.J.S.A. 52:27D-304(j), (emphasis added)]

This plain text, along with other precedents discussed in ESI's prior submissions and report, indicate that the Prospective Need is clearly defined on a forward-facing basis, based on incremental housing need anticipated to emerge in the future, rather than need that has emerged in the past or exists today. Therefore, Special Master Reading's December 29th report appropriately notes that the inclusion of a retrospective gap period in the calculation of Prospective Need is "contrary to the prior round methodologies, the language of the FHA, and the history of determining prior round needs" (Reading cover letter).

Dr. Kinsey appears to regard this distinction as merely semantic. His first gap calculation submitted to the Court on January 22nd simply truncates the 26 year Prospective Need period from his original methodology at 2015, arguing that this calculation is appropriate "as part of and subsumed by total LMI need for 1999-2025." His alternative approach does the Court the courtesy of incorporating data on "changes in population, housing and headship rates and housing market conditions that actually took place 1999-2015" (2) but still performs the calculation exactly as if the need were prospective.

This approach is non-responsive to the analytical challenges and precedent identified by the Regional Master. As that analysis makes clear, gap period "need" cannot simply be assessed as Prospective Need for 1999-2015 by another name. Dr. Kinsey's approach represents a slavish adherence to a particular interpretation of a formula at the expense of the facts.

The fundamental economic difference between the gap period and the 2015-2025 Prospective Need period is that the gap LMI households *currently have housing*, and the Prospective Need households *do not*. Thus, while incremental LMI household growth in the future gives rise to a quantifiable volume of affordable housing need over that future period, incremental LMI household growth in the past does not equate with housing need that needs to be satisfied as of today. Applying this forward-looking methodological approach retrospectively simply does not describe identifiable existing need in any meaningful sense.

Categories of Affordable Housing Need

ESI uses the term "identifiable existing need" and "FHA framework" to distinguish theoretical definitions of housing "need" from those identified as relevant to the calculation of affordable housing need and obligations under the Fair Housing Act, pursuant to the Mt. Laurel constitutional obligation. Individuals may vary on which households they would personally describe of as "in need" or housing, and any of a number of standards, including cost-burden, could be reasonably introduced into such a conversation. Fortunately, there is a clear standard and precedent as to which households do and do not constitute affordable housing need for which there is an obligation. As described in Section 7.1 of the ESI report:

The Fair Housing Act provides specific guidance on the categories need that comprise fair share housing obligations. The FHA provides for the determination of Present Need and Prospective Need at both the regional and municipal level, and does not define any additional categories of need beyond those two (N.J.S.A. 52:27d-301 et. seq.)...

Taken together, Present Need and Prospective Need completely describe the identifiable need for affordable housing within this framework, and any additional calculated *obligation* assigned above and beyond it does not change this *need*.

[ESI December 30 report, p. 87-88]

Said another way, the FHA requires satisfaction of the Present Need and Prospective Need, not the past, present and prospective need.

The ESI report goes on to describe the current housing circumstances of the incremental LMI households added to New Jersey within this "gap period" in relation to the Present Need and Prospective Need framework.

- If they are LMI households currently living in deficient housing in New Jersey, those new households are captured within Present Need.
- If they are LMI households currently living in adequate housing in New Jersey, they do not represent a currently identifiable need.

Therefore, as stated above, **no additive need for the current cycle emerges for this group beyond what is already covered in Present Need and Prospective Need.**

From the standpoint of accurately quantifying the need, these housing circumstances mirror those at the start of Round 1, or indeed any round. Then as now, Prospective Need is forward-facing, and Present Need by definition and design incorporates the contributions of all population shifts, income changes, housing market dynamics, and municipal affordable housing activities up to that time.

This methodological construction of Present Need, incorporating all existing housing conditions, and Prospective Need, incorporating all future housing conditions, is entirely reasonable in light of the practical impossibility of any other approach. A retroactive definition of need untethered from any current circumstances could be calculated and aggregated for any period of time back to the founding of the state. Such a calculation and accumulation of "need" could produce astronomical figures. Yet it would tell us nothing about the current need for affordable housing.

Dynamic Nature of Housing Market

The December 29 report issued by Regional Master Reading showed a clear recognition of the concept that current conditions supersede theoretical calculations of retrospective "need" using a Prospective Need methodology. His "Summary of Findings and Conclusions" rightly notes that those LMI households emerging during the gap period:

...would be partially included by the LMI households in over crowding or deficient housing units that are encompassed in the new calculation of Present Need. Those LMI households that have occupied sound non-deficient housing are already housing (housed) and would not represent an identified need.

[December 29 Reading Report to the Court, p. 14]

Beyond those specific conditions, the Regional Master's report recognizes the broader point that the housing market is "dynamic rather than static." This concept has implications for any attempt to "turn back the clock" to re-create conditions as if the past sixteen years have not occurred. Certainly, calculations which attempt to simply identify incremental LMI household growth from the period and label it as existing "need" fail to appreciate this distinction. More broadly, attempts to recreate what housing conditions "would have" occurred under a more effective COAH administrative regime are merely conjecture which fail to account for the responsive nature of the private housing market. Said another way, it is not the case that if additional deed-restricted affordable housing had been built during the past 16 years, all other housing market activity would be identical and the differential in affordable housing need could be plainly measured. As the Regional Master's report rightly concludes:

...practical difficulties and the dynamic rather than static nature of the housing market defy an empirical calculation of the affordable housing needs remaining from past years...although it might be possible to generate an estimate of such residual need, such an estimate would be speculative (and) would still be contrary to prior round methodologies...

[December 29 Reading Report to the Court, p. 15]

Some have argued that the relevant principle in analyzing the gap period is not housing need as identified today, but some quantification of LMI households negatively impacted by the administrative failings of COAH. Given the dynamic nature of the housing market (not to mention the related dynamic nature of employment, lifestyle preferences, etc.) **such a calculation would be, as Special Master Reading describes, impossibly speculative, in addition to being inconsistent with the FHA framework.**

A full analysis of this counter-factual would have to consider more than just the growth of LMI households. It would have to account for what would have happened had COAH offered viable rules for the 1999-2015 period. Such an analysis would have to answer a series of questions about what would have happened had COAH offered viable rules for the 1999 – 2015 period, such as:

- How many additional deed-restricted affordable units, if any, would have been built in the gap period?
- How many fewer market rate units would have been built between 1999 and 2015, if any, because of financial burdens caused by fair share requirements?
- How many additional private sector market units would have been displaced from the housing stock by newly constructed deed-restricted affordable housing units?
- Where and at what quality would these units have been built, and what impacts would their production have had on local real estate markets?

These represent just a sampling of known factors that would need to be addressed. The full range of implications is simply not known. We do know that none of these considerations, nor any others like

them, have been addressed in the analysis set forth by Dr. Kinsey and FSHC. We also agree with the characterization of the Special Master that attempts to produce a calculation of residual need through such a process are inherently speculative, and do not have a basis in the prior round methodology.

Actual Growth

Additional facts about the population and housing trends observed in New Jersey over this period illustrate the challenge in "rewinding the clock" in service of a theoretical analysis.

As a stark illustration of the dynamic nature of housing markets, recent history tells us that housing and commercial markets have taken very different directions from what was typically envisioned at the beginning of the gap period. Indeed, the basic assumptions underlying the Prior Round methods – that most of the growth was going to occur in the suburbs – has shifted. A study from the Bloustein School of Planning and Public Policy at Rutgers, "The Receding Metropolitan Perimeter: A New Postsuburban Demographic Normal" documents population shifts occurring in a four-state metropolitan region surrounding New York City encompassing 35 counties in Connecticut, New Jersey, New York and Pennsylvania.¹ The study found that:

Twenty-seven of the suburban-ring counties in the four states witnessed explosive growth in the 30-year period from 1950 to 1980, gaining more than 5.3 million residents, and nearly doubling their population. By contrast, the regional core of eight urban counties in New York and New Jersey contracted sharply during the same period, losing nearly a million people.

Then, during the 2010–2013 period, the trend reversed: the regional core grew at a rate more than double that of the suburban ring, adding 85,284 persons per year. The regional core accounted for most of the total population growth, a phenomenon unparalleled since World War II. All of the suburban counties with population losses were on the metropolitan outer ring with the exception of Monmouth County, which suffered impacts from Superstorm Sandy.

[Bloustein School of Public Policy, *The Receding Perimeter: A New Postsuburban Demographic Normal*]

The time frame for the first period of the study illustrates the economic background influencing the writing of the first round rules, while the second time frame is reflective of the conditions on the ground during the gap period. Housing and jobs are now growing faster in the urban core than in the outer ring, in many cases in communities that LMI households had been presumed to be trying to move from. The September 24th report prepared by Robert Powell for the New Jersey League of Municipalities discusses these demographic trends in more depth, and includes a detailed discussion of market considerations that impact the realistic production of affordable housing through the inclusionary zoning mechanism.

¹ Available online at: (<http://bloustein.rutgers.edu/new-rutgers-regional-report-compares-population-shifts-following-major-economic-changes/>)

It is also possible to use detailed data from the U.S. Census Bureau on rental costs and household incomes to determine the number of apartment units affordable to households at various income levels over time. ESI has undertaken such an analysis using Public Use Micro Sample (PUMS) data from the 2000 Census and the One-Year 2014 American Community Survey. The results of this analysis are presented in the table below, which demonstrates that there has in fact been a significant increase in the number of apartment units affordable to a household at the LMI threshold over the "gap" time period. In total, the number of apartments affordable to a household at the LMI income limit increased by approximately 90,000 units during the gap period.² This increase is reflective of a combination of factors including new construction, filtered units, affordability policies (such as rent controls), changes in household income, etc.

STATEWIDE APARTMENT UNITS AFFORDABLE TO AN LMI HOUSEHOLD, 2000-2014

Household Size	2000	2014	Increase
1	178,400	153,310	(25,100)
2	693,280	746,100	52,810
3	61,770	86,210	24,440
4	26,570	65,720	39,150
Total Affordable	960,030	1,051,330	91,300

[ESI analysis of Census 2000 and American Community Survey 2014 One-Year Public Use Microsample data]

RESPONSES REGARDING THE GAP PERIOD

Since the release of the Regional Master's report, FSHC, NJBA, and their respective experts, Dr. Kinsey and Art Bernard, have offered multiple responses, including the submission by Dr. Kinsey of two calculations of affordable housing "need" arising from the gap period. None of the arguments offered in these submissions are responsive to the core points and calculation challenges identified by the Regional Master. Instead, those submissions seek to justify the use of retrospective data, seek to obfuscate or simply ignore the clear double counting in retrospective "need" and Present Need, and most prominently, seek to shift the conversation from the Legislature's requirement to determine the Present Need and Prospective Need to the question of whether we should seek to increase the present and prospective need based upon an increase in the number of cost-burdened lower income households that came into existence in the 16 year period prior to July 1, 2015. Each of these issues is addressed in turn below.

² These calculations are based on ESI analysis of rental costs and household income as reported in the PUMS data from the 2000 Census and 2014 One-Year American Community Survey. Affordability is defined as 28% of household income, and LMI thresholds are set using Census and ACS data on 80% of median income by region by household size (as detailed in Section 4.4.1 of ESI's methodology report). Household size categories are exclusive, meaning that rental units are counted at the lowest income group (in practice, the smallest household size) for which they are affordable at the LMI limit. Full detail on this calculation is provided as an electronic appendix to this report.

Inappropriate Use of Retrospective Data

Various parties have suggested that the time between the end of Round 1 and the release of the adopted Round 2 housing obligations for 1993 – 1999 in June of 1994 constitutes a “gap period” analogous to the current situation within the prior round methodology. This argument is outlined in Art Bernard’s January 2016 response to the Special Master’s report as follows:

The record also shows... that computing a housing obligation for a gap period is consistent with the second round methodology. The record shows that there was a short gap period between the 1987-1993 need calculations...and the effective date of N.J.A.C. 5:93-1 et. seq, June 6, 1994

[January 2016 Bernard Response to Master’s Report, p. 5]

This line of reasoning fails to recognize that no data reflecting population or housing conditions for 1994 was yet available as of the release of Round 2 calculations in June 1994, nor of course when the methodology was originally calculated and released for comment in December 1993. Therefore, from a data standpoint, there was no “gap” between Round 1 and Round 2. Said another way, the calculation of Prospective Need conducted in Round 2 did not require setting aside currently known population and housing conditions, and instead substituting conditions from some prior period. Instead, the calculation relied on the most up to date data available at the time, which was current through at latest 1993 (and in many cases relied on the 1990 Census). The attempted analogy to the 1993-1994 “gap” therefore fails due not only to a distinction in the magnitude of the gap, but a distinction in kind.

It has also been argued that the recalculation of Round 1 Prospective Need (1987-1993) undertaken in the Round 2 methodology in 1994 is analogous to the proposed calculation of need emerging from the gap period. Indeed, Dr. Kinsey’s alternative model submitted on January 22 cites this calculation as the basis for his methodological approach, which is essentially to calculate the period in an identical manner to a Prospective Need period.

This comparison makes a logical leap from an update of a prior projection with known results to the generation of an entirely new quantification of “need.” In 1994, COAH faced a situation in which it had legally assigned obligations to municipalities for the 1987 – 1993 Prospective Need period, only to discover that population growth during those years was in fact approximately half of the level that had been projected. The function of this recalculation of First Round obligations was thus not to determine the residual need associated with that growth as of 1993, but to adjust obligations that had already been assigned to a level commensurate with the latest available data on actual population growth during the Round 1 period. Put another way, the Second Round recalculation was the *elimination* of an obligation when it exceeded the need. Dr. Kinsey’s calculation is an attempt to *impose* an obligation where there is no need, which is the opposite situation.

In the current case, there is no need from the gap period, nor are there legally assigned obligations to be adjusted. The comparison of a technical change undertaken to reflect updated data to a newly created assignment of retrospective obligations based on an aggregation of past “need” irrespective of current conditions is unwarranted.

This comparison also fails to recognize the distinction between affordable housing need, as defined in the Fair Housing Act, and affordable housing obligations assigned to municipalities. The appropriate use of the Prospective Need methodology is to quantify the anticipated need for affordable housing over a defined period in the future. This need is then translated into municipal obligations related to fulfilling that need in the future. As the ESI methodology report recognizes, once these obligations are legally assigned, COAH could choose to maintain them as part of a compliance framework, regardless of the relationship of those obligations with currently identifiable need:

The core reason for this divergence (between need and obligation), and the primary challenge in reconciling the identifiable need into assigned obligations, is the need to create a system that provides compliance incentives for municipalities. While unfulfilled obligations from prior cycles do not represent additional identifiable need, ignoring them entirely would discourage municipalities from complying with legally assigned obligations.

[ESI December 30 report, p. 86]

In 1994, COAH chose to undertake a technical adjustment to those Round 1 obligations, which were still in effect, based on the most up to date data available. In 2008, by contrast, COAH chose to maintain Prior Round obligations as calculated in 1994 as part of its Round 3 methodology, rather than adjusting them with updated data. COAH's stated reason for doing so was to provide municipalities with predictability with respect to their obligations, a rationale that clearly contemplates compliance issues rather than any statistical determination of residual need. The Appellate Court in 2010 specifically found that COAH's rationale constituted a reasonable basis, and Mt. Laurel IV approves the imposition of those very same obligations without recalculation as an appropriate determination with respect to Prior Round obligations from 1987-1999:

...our decision today does not eradicate the prior round obligations; municipalities are expected to fulfill those obligations. As such, prior unfulfilled housing obligations should be the starting point for a determination of a municipality's fair share responsibility. Cf. In re Adoption of N.J.A.C. 5:96 & 5:97, supra, 416 N.J. Super. at 498-500 (approving, as starting point, imposition of "the same prior round obligations [COAH] had established as the second round obligations in 1993").

[221 N.J. 1 at 42]

The Supreme Court's requirement to address the Prior Round obligations that COAH legally established recognizes that these carryover responsibilities represent obligations to be fulfilled due to their legal force rather than any accurate quantification of currently identifiable housing need. While the Supreme Court imposed an obligation for the second round obligations COAH assigned, it imposed no such obligations for the gap period.

Further, no methodology exists for the determination of residual need emerging from this period, including the technical correction undertaken to Round 1 obligations in 1994. FSHC and Dr. Kinsey do not in fact advance such a methodology. Rather than seeking to quantify need associated with the gap period that actually exists in New Jersey as of today, they have instead undertaken a calculation of theoretical obligations yielded by a Prospective Need-style calculation applicable only for incremental LMI households that are not housed. They thereby propose to assign an affordable housing obligation

that exceeds the actual need for affordable housing as defined in the FHA. Further, they do so in the absence of the compliance rationale that COAH and the courts have rightly applied to ensure that legally assigned obligations are not "eradicated." Instead, they generate new obligations, which have never been legally assigned, based on a methodological approach conceptually suited to be applied forward rather than backwards, and divorced from the reality of current housing need as identified in the FHA.

Overlap with Present Need

As noted above, Present Need represents the current housing conditions of LMI households, with those estimated to be living in deficient housing quantified as the Present Need. The ESI calculation of Present Need conducts this estimate as of July 1, 2015, matching the start of the Prospective Need period. As a result, any LMI households added during the gap period that live in deficient housing as of the end of the gap period (June 30, 2015) will be captured within the Present Need calculation, and do not represent any additive need. Their inclusion as a part of a gap period "need" would therefore be double-counting of the same household.

However, in its responses to the Regional Master's Report, NJBA and its experts attempt to obscure this straightforward concept. Stephen Eisdorfer of Hill Wallack LLP writes on behalf of the NJBA that:

...present need, unlike prospective need, is a measure of the characteristics of the housing stock – not a count of needy households. It is remedied by rehabilitating existing substandard housing....Because present need and prospective need, whether arising in years past or in years future, address different problems and require different solutions, COAH has not found any substantial overlap between the two and never found it to be a form of double counting.

[January 2016 Supplemental Trial Brief, p. 18-19]

First, the calculation of Present Need is not based solely on the characteristics of the housing stock. After the initial identification of deficient housing units, only the portion of those units estimated to be occupied by an LMI household are counted in the Present Need. Said another way, there is no Present Need that does not represent an LMI household. The notion that a LMI household formed in the recent past and living in deficient housing would not be captured in a retrospective "need" calculation based on its LMI status and a Present Need calculation based on the combination of its income status and housing status defies logic. Present Need captures the number of LMI households currently living in deficient housing, and quite clearly some of those households would also be captured in the incremental LMI household growth calculation from the prior period.

Secondly, the statements that Present Need "is remedied by rehabilitating existing substandard housing" and that Present Need and Prospective Need "require different solutions" is incomplete and misleading. As discussed in footnote 81 on page 80 of the December 30th ESI report, the majority of Present Need is attributable not to inadequate kitchen or inadequate plumbing facilities, but rather to housing that is overcrowded and old, a circumstance that is not easily addressed through rehabilitation. This same point was raised in FSHC's August 2014 comments on COAH's un-adopted Round 3 rules:

...overcrowding is the most significant factor contributing to (present need)...the housing improvements typically funded by a local housing rehabilitation program to address (present need), such as weatherization, do not remedy overcrowding. Rather, overcrowding is remedied by creating additional new affordable units”

[FSHC August 2014 Comments on COAH’s Proposed Round 3 Rules, Comment 32, page 13]

COAH has never prohibited a municipality from satisfying its indigenous need (the prior term for present need) with new affordable units.

Present Need is therefore clearly a compatible and additive component of the municipal summary obligation, and the same LMI households should not simply be assigned to multiple categories which are then summed. Interestingly, Dr. Kinsey and FSHC decline to sum the housing obligations in the various categories calculated in their report, and consistently present a comparison between the Kinsey and ESI methodology only in terms of the magnitude of Prospective Need, not summary obligations, which yield a far less significant percentage difference.

Similarly, Dr. Kinsey’s approach to the overlap with Present Need in his gap calculation (and indeed his original model, which creates a 26 year Prospective Need period with a Present Need calculation situated in year 11) appears to be simply to ignore it. On pages 16-17 of his January 22 submission on the gap calculation, Dr. Kinsey names LMI households in a variety of categories (children, young adults, families, etc.) emerging during the gap period, and claims that all are appropriately included in his model. Notably, nowhere does Dr. Kinsey address the current housing circumstances of any of these households. Doing so would no doubt yield the inevitable conclusion that those households either currently live in deficient housing, and thus are already captured in the Present Need, or currently live in adequate housing, and therefore do not represent a current housing need under the FHA framework.

Cost-Burdened Households

FSHC, NJBA and their respective experts discuss at length the fact that many New Jersey households are cost-burdened. The increase in cost-burdened households over the gap period is presented as evidence for the existence of unaddressed gap period need, which is in turn used to justify a Prospective Need-style quantification of all incremental LMI households emerging during the gap period as representative of the additive need. This interpretation lacks not only precedent in the treatment of cost-burdened households throughout the history of fair share calculations, but also lacks the establishment of a direct causal relationship with COAH’s administrative failures or a means of quantification in a non-speculative manner.

Cost-Burden: Precedent

First, precedent starting with *AMG Realty Co vs. Warren Twp*, continuing through each round (and proposed round) of COAH methodology, and affirmed in *Mt. Laurel IV* is unambiguous that cost-burdened households do not fall within the Present Need, and have never been a factor in the quantification of the Prospective Need. The Supreme Court in *Mt. Laurel IV* addresses the subject of cost-burden as follows:

Five, in addressing the first iteration of the Third Round Rules, the Appellate Division also approved the "exclu[sion of] the cost burdened-poor from the present need or rehabilitation share calculation. In so, the appellate panel noted that pre-FHA courts had also allowed exclusion of the "cost-burdened poor" from the fair share formula. The court found that COAH's decision to exclude the cost-burdened poor was a permissible exercise of discretion.

[221 N.J. 1 at 45]]

NJBA expert Art Bernard initially sought to obscure the clear precedent as it relates to cost-burden, reasoning in his early January response to the Regional Master's report:

Econsult has argued that the Supreme Court has ruled that cost-burdened households are not required to be included in the housing obligation. However, the Supreme Court decision (AMG Realty) relates to present need, not prospective need.

[Bernard Response to Dec. 29 Master's report, p. 10]

Mr. Bernard's latest report, however, allows that:

...the prior round methodologies do not include any households in the need because they are cost-burdened.

[Bernard Jan 29 Response to ESI methodology report, p. 12]

We agree with this statement, and accordingly are puzzled by the attempts at FSHC and NJBA to introduce this factor into the housing need calculation.

It is worth quoting the AMG opinion at length on the subject of cost-burden, because it provides a variety of bases for the exclusion of cost-burden as a factor in fair share calculations, each of which remain as relevant today as when they were written:

In the first instance, it must be recognized that many people do not fully report their income. Second, there are many people who by choice are willing to pay a disproportionate amount of their income for housing. Third, there is a considerable housing "mismatch." On the one hand, some rental units which meet the affordability standards are occupied by families not in a lower income category. On the other hand, lower income families are occupying units which they cannot afford. If the families and units could be matched up, more affordable units, particularly for moderate income households, could be occupied by needy families. Fourth, it must be recognized that many people of retirement age have developed substantial assets which allows them to acquire homes. However, based upon their reported income, they could nonetheless fall into the category of financial need at least within the Mount Laurel II definition. Fifth, some argue that the needs of lower income households can be met more appropriately through income maintenance programs or other extended rent supplement programs rather than the construction of new housing. Sixth, many families in financial need are occupying substandard units thereby creating a duplication in the count of present need. For all of these reasons, it is most difficult to develop a trustworthy count of financial need which should be satisfied through Mount Laurel solutions.

In summary, notwithstanding that there is some unmet need, the untrustworthiness of the data and the desire to avoid questionable assumptions compels me to not incorporate this category.

[*AMG Realty Co vs. Warren Twp* at 423, emphasis added]

Taken together, the variety of reasons set forth in AMG decision illustrate why the incorporation of cost-burden into the fair share methodology is both unreliable from a calculation standpoint (instances 1, 3, and 6 above) and undesirable from a conceptual standpoint (instances 2, 4 and 5 above). Some additional discussion of these factors is warranted.

Cost-Burden: Calculation Problems

Judge Serpentelli offers several reasons that the cost-burden calculation is methodologically problematic within the fair share calculation, including misreported income, duplication with the Present Need, and what he terms the "housing mismatch." The issue of duplication with the Present Need has been addressed at length in this report and does not require additional comment, other than to note that the *AMG Realty* decision clearly recognizes that duplicative counting involving households already captured in Present Need is indeed possible and should be avoided.

Data offered by NJBA expert Art Bernard in his December 2015 submission on the gap period is instructive to illustrate the concept of "housing mismatch." That submission includes the following table on the proportion of households in various income bands that Mr. Bernard believes to be cost-burdened in 1992 and 2011:³

Income (% of Median)	Percentage of Cost Burdened Households	
	1992	2011
<30% ³		80.1
>30 and <50%	68.0	83.2
>50 and <80%	30.0	61.7
>80 up to 100% ⁴	14.2	46.0

[December 2015 Bernard *Response to Nov 18 Case Management Order Regarding Period*, p. 4]

Two clear points emerge from this statistical comparison. First, **not all LMI households are cost-burdened, and not all cost-burdened households are LMI.** According to Bernard's calculations, 80 percent of households in the lowest income band are cost-burdened, 83 percent in the ">30 and <50%" of median income band are cost-burdened, and 62 percent of households in the moderate income band ">50 and <80%" are cost-burdened. Thus, many but not all LMI households are cost-burdened. Further,

³ Note that we have not verified the accuracy of this information, as we do not consider it material to the calculation, but present it only as information submitted by Mr. Bernard. The source cited by Mr. Bernard is the State Comprehensive Housing Affordability Strategy for 1992 and "similar data" for 2011.

the data shows that 46 percent of households in the ">80 up to 100%" of median income band, which do not qualify as LMI, are cost-burdened (by inference, it is likely that some households above the median income are cost-burdened as well). This is important from a calculation standpoint because it indicates that cost-burden and LMI are not interchangeable – a given household that is in one category is not by definition in their other. Instead, as described in *AMG Realty*, there is a considerable "mismatch." From the standpoint of incremental LMI households emerging during the gap period, the overlap with cost-burden is indeterminate.

Second, and importantly to the issue at hand of the gap period, the chart shows that **the rate of cost-burden has increased far more rapidly for those households that are not LMI than for LMI households.** According to Bernard's calculations, the cost-burden proportion among households in the ">80 up to 100%" of median income band, who do not qualify as LMI, more than tripled between 1992 and 2011. Thus, while NJBA presents these data as evidence that COAH's administrative failures are responsible for these conditions (Bernard writes on the following page: "the census data illustrates the impact of New Jersey's failure to address the cumulative obligation") the data in fact show that the incidence of cost-burden has risen most rapidly for non-LMI households who are outside of the purview of COAH and the fair share framework.⁴ Clearly, therefore, the cost-burdened status of New Jersey's households are not solely tied to the effectiveness or ineffectiveness of the COAH process. Indeed, broader economic forces (such as the Great Recession that occurred during this period) are likely far more consequential. The attempt to attribute increases in cost-burden among LMI households to COAH's administrative failings is without basis in Bernard's own data.

From an empirical standpoint, the questions of causality and attribution are impossible to disentangle. We simply cannot rewind the clock and establish exactly how many households would be in a different condition had COAH proceeded differently. We do know, based on information presented by NJBA's expert, that not all LMI households are cost-burdened and that not all cost-burdened households are LMI, and that the rate of cost-burden among non-LMI households appears to be growing faster than the rate of cost-burden among LMI households. As concluded by the Regional Master's report, this "residual need" appears to "defy empirical calculation" (15).

Dr. Kinsey's proposed approach fails to recognize these facts. He simply states as fact a causal connection between COAH's administrative failings and the increase in cost-burdened households that has not been demonstrated:

The sharp increases in cost-burdened LMI HH are evidence of the repeated failures of COAH to adopt and enforce constitutional housing obligations.

[Kinsey January 6 Supplemental Report on Gap Period Need, p. 9]

His gap methodology is thus built on the premise that incremental LMI households emerging during the gap period that are currently living in sound housing but are cost-burdened represent current "need"

⁴ It should of course also be noted that the time period chosen covers seven years of the prior round, and that affordable housing has continued to be produced since 1999, furthering undermining the connection between the data presented and COAH's administrative failings.

because their housing condition is the result of the administrative failings of COAH. What portion of the incremental LMI households emerging from the gap period does Dr. Kinsey estimate to comprise this category? Apparently all of them, as every incremental LMI household from 1999-2015 is included as "need" in his retrospective calculation based on a Prospective Need methodology (under each of his approaches).⁵

As reviewed above, this claim is unsupported by the evidence presented. Thus, not only have FSHC, NJBA and their respective experts failed to reckon with the precedents, which clearly and rightly exclude cost-burden from consideration in the calculation, they have failed to demonstrate or offer any credible calculation on the degree to which COAH's administrative failures during the gap period have caused the current cost-burden circumstances of LMI households emerging during the gap period, as discussed in the "Dynamic Nature of the Housing Market" section.

Cost-Burden: Conceptual Problems

Next, we turn to the reasons identified by Judge Serpentelli that cost-burden is conceptually problematic as a part of the fair share calculation.

First, some people choose willingly to pay a larger percentage of their income than standards say they "should" pay based on the value they place on housing as an amenity. This can be a matter of personal choice, and not a public policy issue, as people value goods, such as housing, differently from one another. It therefore does not imply that these people (LMI or not) are "in need" of housing. Further, the standards set forth by NJBA and FSHC to determine "cost-burden" do not account for all costs associated with housing decisions. Most notable among these is transportation costs. It may be rational and indeed less expensive for a person choosing between two housing options to pay a higher proportion of their income in order to live close to their place of employment or close to public transit in order to save on transportation spending. Again, this is not indicative of housing "need" requiring intervention.

Second, Judge Serpentelli rightly notes some households that appear in the cost-burden calculation may be retirees that have substantial housing assets already accumulated, and are not in need of housing. The clear implication is that the methodology should not encourage the construction of homes for households that do not need them. This is the conceptual basis for the significant housing asset test, which is incorporated into ESI's broader methodology based on Uniform Housing Affordability Controls (UHAC) eligibility standards (to which FSHC and NJBA have objected).

Finally, and most fundamentally, Judge Serpentelli rightly observes that the needs of cost-burdened lower income households may be "met more appropriately" remedies other than the construction of new housing. This distinction goes to the heart of the conceptual problem with attributing a housing need to LMI households from a prior period who currently live in sound units. Above and beyond the fact that there is no legal basis in the FHA to attribute a need to these households, there are coherent policy

⁵ In fact, his answer for Ocean County is "more than all of them," since, as reviewed below, Dr. Kinsey's mistreatment of secondary sources contributes to a calculation of Countywide "need" in his alternative model (9,778) that far exceeds the incremental LMI household growth that he identifies in the model (8,061).

reasons for not mandating such an additional housing obligation on top of the Present Need and Prospective Need. Constructing additional housing for people who *already have* adequate housing would be a waste of society's scarce resources. Further, the mandated additional housing would impact the private market, driving many existing housing units to vacancy and demolition. As the ESI methodology report notes "while these households have an *income* need, they do not have a *housing* need, and thus any remedy is outside of the fair share affordable housing framework" (89). The *AMG Realty* decision recognizes this very point explicitly in its exclusion of the cost-burdened from the quantification of the need.

Cost-Burden: Summary

In summary, the increase in cost-burden households in New Jersey represents the primary argument put forward by FSHC, NJBA and its respective experts as to how incremental LMI households emerging during the gap period and living in sound housing represent a currently identifiable, additive affordable housing need. As detailed above, this concept is without basis in precedent, unquantifiable (in particular as it relates to its relationship with COAH's administrative failings), and has been previously considered and rejected for sound reasons as a basis for fair share need.

By all accounts, cost-burden has never been a consideration in the fair share methodology, let alone as a factor to justify a retrospective calculation based on a Prospective Need methodology. Yet, the parties who have heretofore argued that the Prior Round methodology is unassailable and must be followed as exactly as possible are now advancing the cost-burden as a relevant factor, despite its exclusion from Prior Rounds. Indeed, the standard suggested appears to be that cost-burden is a relevant consideration for those incremental LMI households emerging between 1999 and 2015, but for no other households before or after that time, even though those households are indistinguishable with regard to their current housing circumstances.

Further, as established in *AMG Realty*, cost-burden defies appropriate quantification within the fair share methodology, and in any event its inclusion is conceptually problematic. These challenges apply additionally to the attempt to demonstrate and quantify causality between COAH's administrative failures during the gap period and the increase in cost-burden households during that time. As demonstrated by data from NJBA's expert, not all LMI households are cost-burdened, and not all cost-burden households are LMI. In fact, the data demonstrates that the increase in cost-burdened households has been most pronounced for those households that do not qualify as LMI, undermining the proposed direct linkage between COAH's failures and the rise of cost-burdened households. Rather than wrestling with this attribution challenge, Dr. Kinsey instead proposes that all incremental LMI households represent current housing need, due to the general existence of cost-burden. This position is demonstrably incoherent based on the evidence above, and non-responsive to the empirical issue in question.

Finally, as established in *AMG Realty*, there are a number of reasons why even to the extent that cost-burden is quantifiable, it should not serve as a consideration in the fair share methodology. Households may choose rather than be "forced" to spend more than a set percentage of income on housing, and may be completely rational in doing so, whether because they value housing over other amenities, because their housing option allows them to save on transportation costs, or for some other reason.

Some households may be retirees who qualify as cost-burden based on their current income but have accumulated significant real estate assets. None of these cases represent a housing need requiring a policy intervention. More generally and more fundamentally, those LMI households living in sound housing units have an income problem rather than a housing problem. Including this broad category of households in the need is certainly not a policy that has been advanced or required as part of any fair share methodology.

DR. KINSEY'S ALTERNATIVE CALCULATION OF THE GAP PERIOD (1999-2015)

Dr. Kinsey's submission on January 22nd sets forth two calculations attempting to quantify affordable housing need emerging from the gap period. As noted above, neither is responsive to the legal or empirical impediments to this task. Nonetheless, a review of these submissions is instructive for what it reveals about Dr. Kinsey's original model (1999 – 2025), which he and FSHC continue to maintain in their letter accompanying the January 22nd submission "best calculates Third Round obligations" (1). This section discusses the two "gap" models submitted by Dr. Kinsey and the distinction between the two, as well as the conceptual and analytical flaws they contain. The section that follows discusses the implications of the alternative calculation of the gap period submitted by Dr. Kinsey for the results of his original model.

The first calculation submitted by Dr. Kinsey for "need" arising from the gap period simply truncates the calculations of the 1999 – 2025 Kinsey model to the 1999 – 2015 period. Dr. Kinsey notes that this approach incorporates "actual data for 13/14 years" (14), since the basis for the calculations of 2015 are generally data points from 2012 or 2013. In this respect, the approach should by definition provide a more accurate picture of population and household change than the full model, which uses these same data points to extrapolate out to 2025 (rather than 2015). Interestingly, as noted by Dr. Kinsey on page 12, the incremental LMI household growth projected by the model for 1999 – 2015 of 146,000 constitutes 51% of the 285,000 total incremental LMI household growth projected by the Kinsey model over the 26 year period, despite the fact that the time period covered represents 62% of the 26 year period. This indicates that the Kinsey model projects future LMI household growth to be significantly faster than observed trends from recent years, a point which we will return to below.

Ultimately, however, this model makes no serious attempt to accurately quantify need emerging from the gap period. Not only is it non-responsive to the legal and empirical challenges of quantifying how incremental LMI household growth relates to housing conditions today in the quantification of need, but it fails even to update its data inputs or assumptions with currently known information, instead simply truncating the flawed Prospective Need model offered by Dr. Kinsey for the 1999 – 2025 model at an earlier date.

Dr. Kinsey's submission also presented an alternate calculation (referred to in his Summary as "Alternative #2" and herein as the "alternative model") of affordable housing "need" from the gap period. Dr. Kinsey's submission "Summary" describes this calculation as "based on changes in households, headships rates and housing market conditions that actually took place during 1999 – 2015" (2). As previously noted, this alternative model shares the central flaws of Dr. Kinsey's attempt to define a gap obligation by truncating his original model. Fundamentally, it applies a Prospective Need framework

retrospectively, and in so doing ignores the current housing circumstances of LMI households emerging during the gap period, instead incorrectly attributing them all as representative of a current "need."

FHSC and Dr. Kinsey have presented no evidence on how many additional units, if any, would have been built in that time period had rules similar to the Prior Round Rules been in effect since 1999. Nor do they present evidence on how many fewer private sector units might have been built between 1999 and 2015, if any, because of financial burdens caused by fair share requirements. Nor do they present evidence on whether additional private sector market units would have been displaced from the housing stock by newly constructed deed-restricted affordable housing units. Any calculation of what "would have happened" would have to consider these and other quantities. Put another way, FSHC is contending that COAH's inaction caused more than 100,000 LMI households to be harmed. That contention is not supported by any evidence they have put forward. It implicitly assumes, incorrectly, that all units "obligated" would have been built, and that the housing market would have otherwise unfolded the same way.

The alternative methodology also makes an unwarranted reduction in estimates of filtering. On page 8, Dr. Kinsey quotes COAH's explanation of how these secondary sources were "scaled down accordingly by the ratio of lower new-period (1993-1999) to higher old period (1987-1993) secondary source incidence rates" in the recalculation of Round 1 undertaken by COAH in 1994. Dr. Kinsey therefore calculates the ratio by which COAH's 1999 – 2018 methodology over-projected household growth for the 1999 – 2015 and reduces the filtering estimates by this proportion (0.71). Unfortunately, no population projection factor is included in the Econsult model of filtering, which estimates the likelihood of filtering of the current housing stock as of the time of the calculation. Thus, the approach employed is not only inappropriate, but is not successfully executed with respect to filtering.

Dr. Kinsey's alternative method does, however, seek to incorporate updated information from that included in his original model. Dr. Kinsey describes the calculation on page 19 as based on "actual, observed growth." As such, Dr. Kinsey represents these calculations as his best and most current estimates of the current population and household characteristics in New Jersey as of 2015. The result of these calculations is an estimate of 109,000 incremental LMI households between 1999 and 2015. This increment is significantly lower than the 146,000 estimated under the truncated Kinsey model, a difference of 37,000 (or 25%).

The key driver of this differential, as Dr. Kinsey rightly identifies, is a change in the calculation of the proportion of the New Jersey population estimated to be LMI. The treatment of this specific calculation in the original Kinsey model has been the subject of considerable debate up to this point. As discussed at length in ESI's methodology report and in ESI's September 24th "Review and Analysis" report for the New Jersey State League of Municipalities, the Kinsey model utilizes a faulty standard to define the median income and then fails to follow the statistical properties of the median in his future projections. These errors result in an estimate that the LMI proportion of the population will grow from 41.2% in 1999 to 43.3% in 2013 to 45.0% in 2025, which in turn results in the classification of 77% of incremental households during this period as LMI. By way of context, this increasing rate alone accounts for approximately half of the incremental LMI household growth of 285,000 for the 26 year period estimated in the Kinsey model.

The Regional Master's October 30 review of the Kinsey methodology described this as a "very significant methodological issue" that "requires an adjustment to the foundation of Dr. Kinsey's prospective need estimate" (12). This common sense assessment would perhaps be shared by the authors of Fair Share Housing Center's August 2014 comments on COAH's proposed methodology, who opined as follows regarding COAH's determination of the LMI ratio:

COAH determined that low and moderate income households represent 40.622% of all households in New Jersey....this is intuitively correct, as the income definitions for these is those with incomes less than 80% of the median, i.e. 40% of the total, and reasonable. No change is recommended.

[FSHC Comments on N.J.A.C 5:98 and 5:99, August 1, 2014, Comment 58, p. 20]

This assessment is apparently not shared by Dr. Kinsey, who has not adjusted his original model and its treatment of this issue, and accordingly estimates in his January 22nd gap period submission that the appropriate LMI ratio for 2015 using his truncated 1999 – 2015 model is 43.5%. However, Dr. Kinsey's alternative model includes an updated calculation of this crucial component, due to the fact that "HUD in 2015 changed its methodology for calculating income limits" (26). This technical adjustment has significant implications for the LMI ratio calculated by Dr. Kinsey.⁶ Dr. Kinsey details those implications as follows:

It so happens that when this calculation is made, it results in a significantly lower share of LMI households as of 2015 than the share of LMI households calculated in the July 2015 Model based on 2013 data. Statewide, the ACS data as adjusted for 2015 income limits shows 41.3 percent of households are LMI, as compared to 43.3 percent for ACS data. This 41.3 percent figure happens to be almost exactly the same as the 41.2 percent of households that were LMI as of the 2000 Census long-form data. Thus, LMI households remain a relatively constant share of total households in this alternative gap period model based on this new methodology, which is the primary reason that the prior cycle prospective need methodology produces lower 1999-2015 prospective need than the July model.

[Kinsey Gap Period Submission, p. 28]

This discovery is, to put it mildly, not a small matter in the context of the Kinsey model (setting aside ESI's objection to the use of this flawed metric in the first place). As previously referenced, the upward shift in the LMI rate in Dr. Kinsey's model to 45% is responsible *by itself* for approximately half of the Prospective Need estimated by Dr. Kinsey over the 26 year period. In the course of the extended discussion of this issue in reports produced by ESI, Dr. Kinsey, and the Special Master concerning this methodology, Dr. Kinsey has offered multiple defenses of this bizarre result, most notably asserting that it presented a "hollowing out of the middle" that in his telling rendered any typical distribution of income

⁶ Dr. Kinsey explains on page 27 of his January 22nd gap period submission that this adjustment relates to the inflation and growth factors utilized by HUD to estimate the median income.

around the median in New Jersey obsolete.⁷ Dr. Kinsey now reports in the context of his January 22nd gap model that the significant increase in the LMI proportion from 41.2% in 1999 to 43.3% in 2013 in his original model, from which he extrapolates to the still higher LMI proportion of 45.0% in 2025 (albeit incorrectly due to the statistical properties of the median, as ESI has explained a length) **has now been effectively eliminated based on a correction issued by HUD.**

Dr. Kinsey does not dispute this HUD correction or its accuracy. Indeed, he incorporates it into his alternative gap model, which has as its basis "changes in households, headships rates and housing market conditions that actually took place during 1999 – 2015" (2). Astonishingly, however, in the face of this new information, Dr. Kinsey and FSHC maintain in their January 22nd submission the original Kinsey model, **unadjusted to correct for this change to a highly consequential input identified by Dr. Kinsey himself**, "best calculates Third Round obligations." Further, and equally astonishingly, a week after including this new information in his submission to the Court, Dr. Kinsey's January 29th submission writes as follows with respect to ESI's calculation of the LMI proportion:

The impact of Econsult's misbegotten 40% of median absolutist approach to defining LMI HH on housing need is no doubt very significant. The Kinsey-FSHC R3 Model July 2015 found that 41.2% of New Jersey's 3.0 million households as of 1999 were LMI based on 2000 Census PUMS data, and projected that 45.0% of New Jersey's projected 3.4 million HH in 2025 would qualify as LMI based on 2013 ACS PUMS data, in both cases, using the HUD-based, COAH-calculated regional income limits required by the Prior Round methodology. The difference between the change in households calculated by FSHC based on actual data from the 2000 Census PUMS and the 2013 ACS PUMS in the Kinsey-FSHC R3 Model July 2015 and the applying the 40.0% of HH standard championed by Econsult is approximately 136,417 LMI HH over the 1999-2025 projection period.

[January 29 response to Econsult Report, p. 22]

Thus, in the face of his own evidence that the LMI proportion in the Kinsey model is seriously flawed (as has been maintained by ESI and the Special Master throughout), Dr. Kinsey offers not a correction but a re-affirmation that his model has accurately quantified incremental LMI HH growth and thus affordable housing need.

Given this claim, we turn to the statistical implications of Dr. Kinsey and FSHC's simultaneous contention that the original Kinsey model "best calculates Third Round obligations," and thus population and household conditions as of 2025, and that the alternative Kinsey model represents Dr. Kinsey's best estimate of what "actually took place during 1999 – 2015," and thus population and household conditions as of today.

⁷ In his October 28 *Response to Special Regional Master's Inquiry on Qualifying Low and Moderate Income Households in the Fair Share Methodology*, Dr. Kinsey writes:

There is a well-known phenomenon of "the hollowing out of the middle" and increased income polarization may explain some of the increase in the LMI share of total HHs... there is no reason to think that household incomes necessarily follow a distribution such that 40% of all households are below 80% of median household income. In an area in which there are fewer middle-class jobs and more households at the extremes, it is not surprising to see in the Census data a reflection of this trend. While Econsult proposes various ways to ignore this reality, it is simply what the data reflect that is experienced by families and people with disabilities throughout New Jersey.

IMPLICATIONS OF THE DR. KINSEY'S ALTERNATIVE MODEL FOR THE PROSPECTIVE NEED PERIOD (2015-2025)

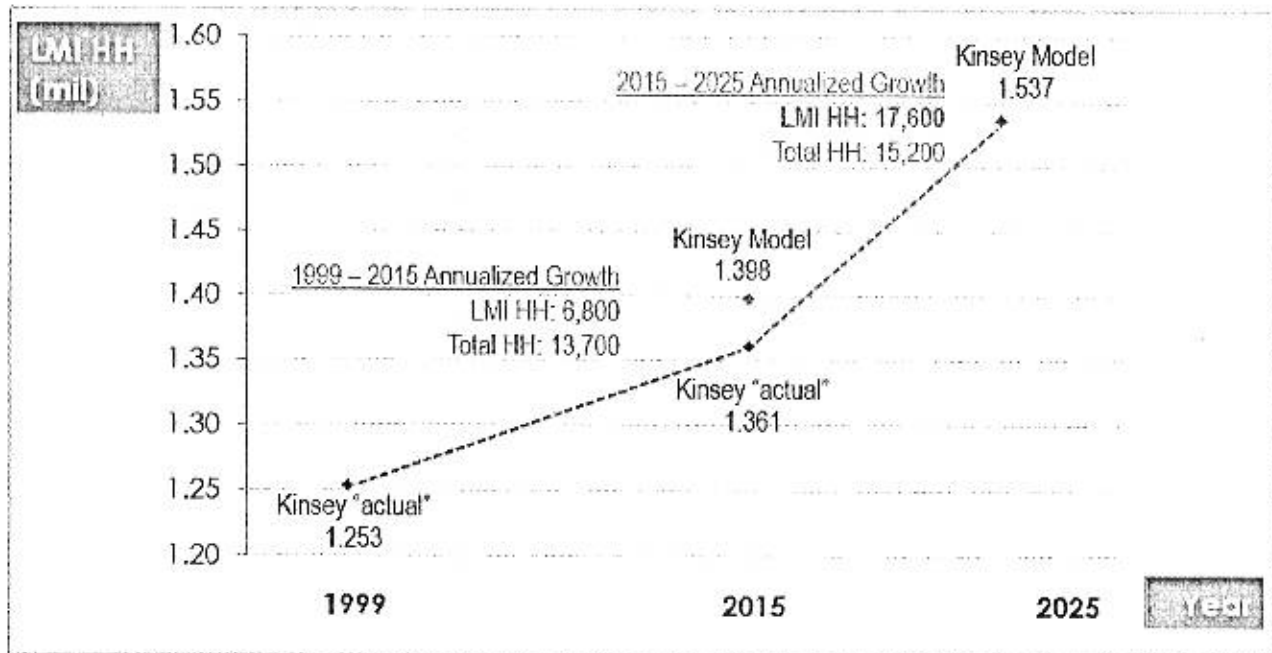
As previously described, ESI maintains that the gap period does not generate any additive affordable housing need within the FHA framework to that calculated within Present Need and Prospective Need for the 2015-2025 period. Therefore, no calculation of this need is necessary or appropriate, and attempts to do so inevitably result in double-counting or miscounting of need (as outlined in our December 8 submission, our December 30 methodology report, and throughout this analysis). Further, as described in this report, attempts to calculate "residual need" based on cost-burdened households are without precedent or empirical basis, nor are they appropriate. We also maintain that Dr. Kinsey has not submitted such a calculation, or made any allowance for information on the current housing conditions of New Jersey's LMI households, but instead has offered two attempts to apply a Prospective Need framework to a retrospective calculation of "need."

It is nonetheless instructive to examine the results of the alternative model submitted by Dr. Kinsey for 2015 with the results of the original model submitted by Dr. Kinsey for 2025. Despite these calculations emerging from two different models, this comparison is relevant for the simple reason that Dr. Kinsey has submitted his alternative calculation as his best and most up to date estimate of current population and household conditions in 2015, and maintains that his original model provides the best and most appropriate calculations of these conditions as of 2025. For each of these claims to simultaneously be correct, the changes in the population and household conditions currently estimated by Dr. Kinsey for 2015 and those estimated by the July 2015 Kinsey model for 2025 must by definition be reasonably likely to occur of the 2015 - 2025 period. The table and figure below provides a comparison of these key metrics, as calculated by Dr. Kinsey himself, for the relevant time periods. Note that both models start from the same estimates for 1999.

COMPARISON OF POPULATION, HOUSEHOLDS AND LMI IN JULY 2015 KINSEY MODEL AND KINSEY ALTERNATIVE GAP MODEL

Year	1999	2015	2025	1999 - 2015	2015-2025
Source	July 2015 Kinsey Model & Alt. Gap Model	Kinsey Alternative Gap Model	July 2015 Kinsey Model	Annualized	Annualized
Population	8,360,000	8,958,000	9,377,000	37,400	41,900
All Households	3,043,000	3,262,000	3,415,000	13,700	15,200
LMI HH	1,253,000	1,361,000	1,537,000	6,800	17,600
LMI %	41.2%	41.7%	45.0%	49.6%	<u>116%</u>

STATEWIDE LMI HOUSEHOLD GROWTH, JULY 2015 KINSEY MODEL AND KINSEY ALTERNATIVE GAP MODEL



The original Kinsey model projects a significant uptick in annual LMI household growth within the later portion of its 26 year Prospective Need period as it moves from the period for which actual data is available to its projection period (resulting in an estimate that 49% of need will be generated in the final 10 of the 26 years). The alternative gap model representing Dr. Kinsey's best estimate of current actual conditions now yields a significantly lower calculation of LMI households in 2015 than that original Kinsey model. Dr. Kinsey and FSHC are apparently undeterred by these calculations, produced by Dr. Kinsey himself, and maintain that their 2025 projections are appropriate.

Achieving the projections for LMI household growth set forth in the Kinsey model for 2025, based on the current conditions as calculated by Dr. Kinsey for 2015, would now require an annual growth rate in LMI households nearly three times as large as that calculated by Dr. Kinsey based on observed data for the 1999 – 2015 period. More stunningly, to achieve this projection would require the creation of significantly **more LMI households per year (17,600) than total households (15,200), according to Dr. Kinsey's own calculations.** This means that 116% of all new households would be LMI households. In other words, the number of non-LMI households would have to *shrink* by 2,400 households per year while the number of LMI households was growing at an unprecedented pace (keeping in mind that LMI households are defined relative to the median income) to achieve this projection.

The projections of the July 2015 Kinsey model for the forthcoming Prospective Need period are therefore incompatible with the current conditions in New Jersey as calculated by Dr. Kinsey himself, due to a number of faulty and disproven assumptions and calculations, most notably a significant jump in the statewide LMI proportion. **The Kinsey model, its calculations, and its projections are simply**

untenable as a basis for calculating affordable housing need and assigning affordable housing obligations.

It is a well-worn military adage that "no battle plan survives first contact with the enemy." Dr. Kinsey's January 22nd calculations of what he characterizes as "actual, observed growth" for the 1999-2015 gap period appear provide the first contact of his theoretical model with reality, and indeed the model does not survive. Instead, it collapses under its contradictions with the current conditions as estimated by Dr. Kinsey himself.

No doubt Dr. Kinsey could generate a list of differences in assumptions and inputs between his alternative gap model and his original model, and advance a claim that their outputs somehow cannot be compared. Such a claim might work as a theoretical exercise, but would discard with it the core purpose of the model, which is (supposed to be) to accurately quantify affordable housing need. The utility of his model with respect to that question can be evaluated using some very basic questions:

- Does Dr. Kinsey's alternate model represent his best estimates of the current number of households and LMI households in New Jersey (as of 2015)? He maintains that it does.
- Does Dr. Kinsey's original model represent his best projection of the number of households and LMI households in New Jersey in 2025? He maintains that it does.
- Is the growth in households and LMI households required to get from those current conditions (as estimated by Dr. Kinsey) to the 2025 projections (maintained by Dr. Kinsey) plausible or reasonable? It plainly is not.

The Kinsey model results are thus fundamentally inconsistent with Dr. Kinsey's own calculation of the current reality of New Jersey's households and their characteristics. This basic analysis demonstrates conclusively that the Kinsey model, the flawed assumptions of which have been detailed at length, does not and cannot serve as a reliable basis for the assignment of affordable housing obligations for the Third Round.