Assessment of Small Area Median Family Income Estimates

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Introduction

A committee report accompanying the Consolidated Appropriations Act, 2017 "urges HUD to look at the current measurement methodology of area median income (AMI) in metropolitan areas in order to more accurately and locally measure AMI to offer affordable housing. Within 180 days of enactment of this Act, the Committee directs HUD to submit a report to the Committee on the options for measuring AMI using more localized methodologies, the feasibility of using these alternative measurements, and if HUD has plans to test the identified alternatives." In accordance with this request, HUD offers this report which examines these issues across the following five sections:

- Review of Current Median Family Income and Income Limits Calculation Methods
- Assessment of the Feasibility of Calculating Small Area Median Family Income Estimates
- Discussion of the Administrative Complexity of Using Small Area Median Family Income Estimates
- Enumeration of the Known Federal Programs Using HUD's Median Family Income Estimates and Associated Income Limits
- Recommendations for Future Median Family Income Estimates and the Impact on Affordable Housing

Review of Current Median Family Income and Income Limits Calculation Methods

Although the Committee requested HUD review its Area Median Income (AMI) calculation methods, it is important to note that HUD does not produce an AMI measure. Instead, for its rental assistance programs, HUD estimates values of Median Family Income (MFI) for metropolitan areas and non-metropolitan counties. These MFI estimates are then used to calculate a variety of Income Limits (percentages of the MFI estimate adjusted for family size) including the Low, Very Low, and Extremely Low-Income Limits used in the administration of the Section 8 Housing Choice Voucher and Public Housing programs. The statutory grounding for HUD's calculating Median Family Income and Income Limits is found at 42 USC 1437(b)(2).

On its own, the term Area Median Income, or AMI, refers to the income level that divides a population income distribution of an area in half, with half of the population having income above that amount, and half of the population having income below that amount. However, within the affordable housing industry, AMI is generally analogous to HUD's MFI estimates, and AMI adjusted for family size or percentages of AMI are synonymous with HUD's Very Low-Income Limits (which are generally at 50 percent of the MFI and adjusted for family size). For the purposes of this report, HUD focuses on the calculation of Median Family Income. HUD will return to the usage of the term 'AMI' in the concluding section.

In general, HUD uses a combination of American Community Survey (ACS) data and Congressional Budget Office (CBO) projections of anticipated growth in the Consumer Price Index (CPI) to annually estimate MFI. Specifically, HUD uses the 5-year ACS and Puerto Rico Community Survey (PRCS) as the basis for deriving its MFI estimates for metropolitan areas and nonmetro counties. For FY 2017, this 5-year aggregation included surveys administered from 2010 through 2014. To capture the most recent information, the 1-year ACS data are used in place of the 5-year information for areas where there is a statistically valid 1-year ACS median family income estimate available. To ensure data integrity, the 5-year estimate is used if the margin of error for the 1-year median family income estimate is greater than half the estimate itself.

The MFI estimate is calculated by using the CPI to inflate this ACS base (from either the 1-year or 5-year income data). For FY 2017, the CPI was used to inflate the ACS base figure from annual 2014 to the midpoint of FY 2017, based on a CPI forecast published by CBO in January 2017.

Median Family Income estimates are calculated for metropolitan areas and non-metropolitan counties. HUD employs policies to subdivide some metropolitan areas into smaller, component parts. For example, with the implementation of the 2000 Census-based metropolitan area definitions in the mid-2000s, HUD subdivided OMB-defined metropolitan areas along 1990 Census-based metropolitan boundaries if the underlying data showed a greater than 5 percent difference in gross rents or median family incomes between the old area definition and the new, larger metropolitan area. These subdivisions were created to prevent dramatic changes in the program parameters for an area due solely to changes in area definitions. Each of these subdivisions remains in place for current estimates. Going further, when HUD implemented the

2010-based metropolitan areas, HUD did not expand metropolitan area definitions for those metro areas with newly added counties. Such actions reflect HUD's commitment to set the program parameters for HUD's primary rental assistance program as locally as operationally feasible.[1] In this context, operational feasibility concerns refer to the administrative complexity of operating the Housing Choice Voucher program using income limits calculated for smaller areas of geography than currently used. For further information, please see the discussion on page 7.

Because HUD's current methods for calculating MFI estimates in metropolitan areas rely on ACS data, the following section addresses the feasibility of calculating area MFI estimates and Income Limits at smaller units of geography than what is currently done by reviewing the statutory requirements and the statistical reliability of ACS data.

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[1] By statute, Median Family Income estimates are prepared separately for Westchester and Rockland Counties, which would otherwise be included in the New York City metropolitan area. Despite these separate determinations, the statute also requires that in establishing the MFI for the New York City metropolitan area, the estimate is to be based on data that include Westchester and Rockland Counties. The U.S. Virgin Islands and the Pacific Islands (Guam, American Samoa and the Northern Marianas) lack ACS (or the equivalent Puerto Rico Community Survey in Puerto Rico) coverage. MFI estimates for these areas are based on 2010 Decennial Census data which is the most current information available. The decennial data used for the U.S. Virgin Islands and the Pacific Islands are trended forward using the change in national MFI between 2009 (which is the year of the income in the decennial census) and 2014 for FY 2017. The CPI forecast published by the Congressional Budget Office is used to bring the "as of" 2014 Decennial Census data forward to the mid-point of the fiscal year, April, 2017.

Assessment of the Feasibility of Calculating Small Area Median Family Income Estimates

To assess the feasibility of calculating area median family income estimates at smaller levels of geography than those currently used, HUD must review both the statutes governing the MFI estimates as well as the data available for making these estimates. The statute governing the calculation of HUD's area MFI estimates and Income Limits states: "For purposes of calculating the median income for any area that is not within a metropolitan statistical area (as established by the Office of Management and Budget) for programs under title I of the Housing and Community Development Act of 1974, the United States Housing Act of 1937, the National Housing Act, or title V of the Housing Act of 1949, the Secretary of Housing and Urban Development or the Secretary of Agriculture (as appropriate) shall use whichever of the following is higher: (1) the median income of the county in which the area is located; or, (2) the median income of the entire non-metropolitan area of the State" (Section 567 of the Housing and Community Development Act of 1987 – 42 USC 1437(a) note). Consequently, HUD has determined that this language compels HUD to estimate MFI and income limits for metropolitan statistical areas and nonmetropolitan counties. HUD believes that this statutory language would need to be changed prior to HUD being able to use more granular area definitions for the purposes of calculating area median family income estimates.

The second component to the feasibility analysis is a review of the data available to make these income calculations. HUD has reviewed the latest ACS data available (2015) to determine how many different types of areas have sufficient data to calculate a statistically reliable estimate of area median family income. While there are various more granular geographic area types to choose from, HUD focuses on three: County and County equivalent estimates, ZIP Code Tabulation Area (ZCTAs) estimates, and Census Tract level estimates. These three were selected for the following reasons: Counties (and county-equivalents) are the foundation for current OMB metropolitan area definitions. HUD selected ZCTAs because of their close relationship with ZIP Codes and their use in other HUD program parameter estimates.[2] Census Tracts are included because tracts are generally considered the smallest geographic unit with consistently available data. Table 1, presented in decreasing size of geographic area, provides estimates of the number of geographic areas for which there are enough statistically reliable data to estimate area MFI.

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[2] In the Housing Choice Voucher program, HUD requires a limited number of metropolitan areas to use Small Area Fair Market Rents (FMRs calculated by ZIP Code within metropolitan areas). These areas were designated via criteria established within a Final Rule (81 FR 80567) in conjunction with a Federal Register notice (81 FR 80678). Additionally, HUD designates Metropolitan Difficult Development Areas on a ZIP Code basis.

Table 1: Count of Smaller Geographies With Usable MFI Estimates From the ACS

	Metropolitan Counties	Metropolitan ZCTAs	Metropolitan Tracts
Total Count of Geography	1,236	19,746	61,805
Number with Statistically Reliable MFI Estimates	1,236	18,545	59,770
Percentage of Geography with Reliable Estimates	100%	94%	97%
Percentage of Population within Geographies with Reliable Estimates	100%	94%	97%

Consequently, from a pure margin of error standpoint, there are sufficient data to feasibly calculate area median family income estimates at smaller levels of geography than the current metropolitan area definitions. Recent research focusing on ACS data in small areas of geography,[3] however, indicates that uncertainty in ACS estimates may be correlated with the size and characteristics over which estimates are calculated. The authors point out that they "find higher uncertainty in urban cores relative to suburban areas and in lower income areas, as well as a differential pattern in uncertainty in the northern U.S. relative to the southern U.S." when examining median household income data measured in Census tracts.

Beginning with the FY 2007 MFI calculations, HUD has incorporated ACS estimates into the process. When the 2005–2009 5-year ACS tabulations were released in 2010, HUD incorporated these 5-year aggregations into the MFI calculations for the FY 2011 reporting period. HUD's knowledge of and experience with using ACS estimates has expanded greatly with each iteration of program parameter calculations. One challenge that HUD has faced is that program parameters, particularly in smaller geographies, display greater year-to-year volatility with annually updated ACS data. Consequently, for the FY 2018 calculation of Fair Market Rents and MFIs, HUD instituted a stricter test for statistical reliability for ACS estimates: in addition to the margin of error test, HUD requires that ACS estimates must be based on at least 100 survey observations to be included in the calculations. In areas where there are not 100 sample cases supporting an estimate, HUD uses an average of the minimally qualified ACS estimates (margin of error test only) from the last 3 years. By incorporating this change, HUD expects to reduce the volatility in the program parameters, particularly in smaller geographic regions.[4] This new test for statistical reliability of ACS estimates would have an impact on the number of smaller geographies with usable MFI estimates from the ACS. Table 2 replicates the information in table 1 using the new statistical reliability standards.

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[3] David Folch, Daniel Arribas-Bel, Julia Koschinsky, Seth Spielman. "Spatial Variation in the Quality of American Community Survey Estimates" Demography, January 2014

[4] For more information on this change in the use of ACS data please see "Proposed Changes to the Methodology Used for Estimating Fair Market Rents," 82 FR 24377 (https://www.huduser.gov/portal/datasets/fmr/fmr2017hypo/FY2017-FMRs-Material-changes.pdf)

Table 2: Count of Smaller Geographies With Usable MFI Estimates From the ACS

	Metropolitan Counties	Metropolitan ZCTAs	Metropolitan Tracts
Total Count of Geography	1,236	19,746	61,805
Number with Statistically Reliable MFI Estimates[5]	1,233	13,156	18,173
Percentage of Geography with Reliable Estimates	100%	67%	29%
Percentage of Population within Geographies with Reliable Estimates	100%	96%	38%

The estimates in Table 2 show that although county-level MFI estimates remain viable after the margin of error test, there is a significant decline in the number of ZCTAs and Tracts with usable MFI estimates from the ACS.

[5] Statistical Reliable estimates are those estimates from the ACS with a margin of error less than half the size of the estimate and are based on at least 100 survey observations.

Discussion of the Effects on Tenants and Administrative Complexity of Using Small Area Median Family Income Estimates

Calculating estimates of median family income and corresponding income limits at smaller geographic areas would introduce additional administrative complexities to the operation of HUD's programs. Public Housing Agencies (PHAs) operate at a variety of geographic levels, including counties, designated portions of metropolitan areas, entire metropolitan areas, and states.[6] In setting median family income at any smaller geographic area, such as counties, tracts, or ZIP codes, it is certain that the number of PHAs required to use multiple sets of income limits would increase.[7] For example, setting the income limits at the zip code level would mean that county PHAs would face different income limits throughout their jurisdictions. Similarly, setting income limits at the county level would mean that city-based PHAs in cities that cross county boundaries would face different income limits. HUD's current guidance in the housing choice voucher program allows for PHAs that operate in jurisdictions with multiple sets of income limits to use the highest value in determining initial eligibility, but proscribes households from living in any area where they would not be eligible.[8] Being required to track and enforce a higher number of income limits would increase the administrative burden for PHAs and corresponding program costs for HUD. The Department's housing choice voucher program administrative fee study found that high performing PHAs already devote 16% of their staff time on intake, eligibility, and lease-up work, or an average of 2 hours and 18 minutes per voucher, per year.[9] Such a change would also affect PHAs through their income targeting requirements. Specifically, 75% of a PHA's newly admitted housing choice voucher households must be eligible at the "extremely low income"[10] level in each fiscal year. Should the PHA's income limits change because of geographic changes, it is possible that it would no longer meet this requirement, even if it continued to admit families with similar incomes as it had in the past.

The potential administrative complexities arising in the housing choice voucher program would also occur in other HUD programs. Income limits determine eligibility for assistance in the public housing and project-based section 8 programs. Again, for any reasonable level of geography smaller than that currently used by the Department, there would arise cases where a PHA faced multiple sets of income limits for multiple public housing projects, or a multifamily property owner faced different sets of income limits for multiple projects, despite those projects operating in the same jurisdiction or substantially similar areas. PHAs operating public housing programs also face income targeting requirements like those in the voucher program, and the use of multiple sets of income limits could make it more challenging for agencies to track and meet those requirements. Public housing sites within low-income areas would also face financial challenges if they were required to admit households at lower incomes than they currently serve, potentially requiring additional Federal assistance.

[6] PHAs may also enter into agreements to operate the voucher program outside their "immediate" jurisdiction.
[7] Analysis of 2017 PIH Information Center (PIC) Data show that 373 PHAs have at least 10% of their voucher households in at least two different counties.
[8] "Housing Choice Voucher Program Guidebook," p. 5-3.
[9] "Housing Choice Voucher Program Administrative Fee Study." p. 3-4.
[10] Extremely Low-Income Families are defined as very low-income families whose incomes do not exceed the greater of 30% of area median income or the Federal Poverty Guidelines (42 USC 1437(b)(2)(C)).

Additionally, defining income limits at a smaller level of geography could harm tenants and undermine longstanding HUD policy goals. For example, multiple sets of income limits within one PHA's jurisdiction would introduce a level of inequity into the program if a family who lived in some portion of the jurisdiction was deemed ineligible and another family with the same income who lived in a different portion was eligible. This would be a difficult situation to justify to tenants and other stakeholders. Similarly, a situation in which an eligible voucher recipient was unable to use a voucher in all neighborhoods because of differing income limits would be contrary to HUD's mission of promoting housing choice and the general purposes of the voucher program.

HUD has addressed the effects on tenants and the administrative complexity of operating its programs using MFI estimates and income limits over more granular geographies than currently in place. The table in the following section lists all other known Federal uses of HUD's MFI estimates or income limits which would also need to be assessed for administrative complexity should Small Area MFI estimates and income limits be mandated.

Enumeration of the Known Federal Programs Using HUD's Median Family Income Estimates and Associated Income Limits

There are many HUD programs and other Federal programs that are dependent on HUD's area MFI estimates and their associated income limits. The following table lists the known uses of HUD's MFI estimates and Income Limits by agency.

Program	Income Limits Standard
Department of Housing and Urban Development	
All Section 8 Programs, Public Housing	Income eligibility based on very low-income limits (50%), low-income limits (80%), or extremely low-income limits (includes poverty guidelines)
Indian Housing (1996 Act)	Income eligibility based on "Low-Income" is defined as the greater of 80 percent of the median family income for the Indian area or of the U.S. national median family income
Section 202 Elderly, Section 811 Handicapped programs	Income eligibility based on very low-income limit (50%) or low-income limit (80%)
Section 235 (Homeownership), Section 221(d)(3) (BMIR)(Rental)	Income eligibility based on 95 percent, or higher cost-based income limits
Section 236 (Rental program)	Income eligibility based on low-income limits (80%)
Community Planning and Development programs	Income eligibility based on very low-income limits (50%), low-income limits (80%). Uncapped 80% income limits for selected metropolitan areas and New Jersey.
HOME Investment Partnerships Act of 1990	Income eligibility based on 60 percent income limits and 65 percent income limits. HOME Rents based on very low-income limits (50%) and 65-percent income limits.
National Homeownership Trust Act of 1990	Income eligibility based on 95 percent income limits, 115 percent income limits for high cost areas
Housing Trust Fund	Income eligibility and rent based on 30 percent income limit with poverty guideline comparison
Low-Income Housing Preservation and Resident Homeownership Act of 1990	Income eligibility based on "moderate income," defined as 80–95 percent of median
Uniform Relocation Act	Income eligibility based on low-income limits (80%)
Neighborhood Stabilization Act	Income eligibility based on very low-income limits (50%), 120 percent income limits
Federal Reserve	
Community Reinvestment Act and Home Mortgage Disclosure Act	Median Family Income estimates.

Program	Income Limits Standard
Rural Housing and Community Development Service	
Rental and ownership assistance programs	Income eligibility based on very low-income limit (50%), low-income limit (80%), Moderate Income limit (the Rural Housing Service (RHS) low-income limit plus $5,500), the 38-Year Term income limit (median or state nonmetro median up to 80% RHS income limit), 115% income limit, and the Adjusted Median Income Limit (twice the RHS 50% income limit). Pilot programs with banding of per person income limits and 5 percent increase for Puerto Rico income limits
Treasury Programs	
Multifamily Tax Subsidy Projects - Low Income Housing Tax Credit (LIHTC) Program as defined within section 42 of the Internal Revenue Code and projects funded under section 142 (Tax Exempt Mortgage Revenue Bonds)	Income eligibility and rents based on very low-income limits (50%) and 60 percent income limits. Under HERA, special income limits are prepared for projects that were subject to HUD's Hold Harmless policy in 2007 or 2008 and were placed in service no later than December 31, 2008.
Tax-exempt Mortgage Revenue Bonds for homeownership financing	Income eligibility based on 115 percent income limits
Difficult Development Area	Income eligibility based on 60 percent income limit
LIHTC Qualified Census Tract (QCTs)	Income eligibility based on 60 percent income limits and poverty rate
Single-Family Mortgage Revenue Bond QCTs	Income eligibility based on 70 percent of the State median family income
Federal Deposit Insurance Corporation	
Disposition of Multifamily Housing to Non-profit and Public Agencies, Disposition of Single Family Housing	Income eligibility based on very low-income limit (50%), 65 % income limit, low-income limit (80%). Multi-family transition income limit (112%), and 115 percent income limit. Rents based on very low-income limit (50%) and 65% income limit.
Federal Housing Finance Agency	
Federal Home Loan Bank Rental program, Home-ownership funding program	Income eligibility based on very low-income limit (50%), 60 percent income limit, low-income limit (80%), 115 percent income limit, and 140 percent income limits
Income-based Housing Goals of Freddie Mac and Fannie Mae	Goals for percentages of loans are established for households with incomes at or below specified percentages of the HUD-published median family income for metropolitan and nonmetropolitan areas

Recommendations for Addressing the Issues Identified by Congress in Requesting This Report

HUD strongly believes that calculating MFI estimates and income limits should remain at the metropolitan area level to limit administrative complexity and burden on PHAs and other interested parties and to ensure the use of the most current, robust data possible. Furthermore, HUD asserts that much of the ongoing debate concerning the need for MFI estimates and Income Limits developed for smaller units of geography stems from the way that maximum rents are set for units developed using Low Income Housing Tax Credits or tax-exempt mortgage revenue bonds as authorized by Section 42 and 142 of the Internal Revenue Code, respectively, labeled as Multifamily Tax Subsidy Programs (MTSP) by HUD.

Maximum rental rates for MTSP financed units are calculated directly from versions of HUD's Income Limits. Therefore, there is a perception that calculating MFI and Income Limits to smaller units of geography will force the maximum rents charged for these units to be lower. While this may be true for any units constructed following the change in area definitions, all existing units would be protected from rental rate decreases due to hold harmless provisions provided in the Housing and Economic Recovery Act of 2008 (Section 3009 of PUBLIC LAW 110–289). Furthermore, HUD contends that using Income Limits to define maximum rental rates is not in the best interest of tenants. Maximum rental rates are calculated at 30% of the maximum monthly income limit for the unit in question.[11] Unless a family is fortunate enough to have income levels just at the level of the controlling income limit, they will pay more than 30 percent of their income to afford the housing unit when the maximum rent is charged.

HUD believes that a better solution to this affordable housing issue is to decouple the maximum rent calculation from the applicable income limit and use a measure more in line with prevailing market rates. For example, HUD's Small Area Fair Market Rents (Small Area FMRs) are calculated at the 40th percentile of gross rents paid for each ZIP code within a metropolitan area. Using the Small Area FMR, or a function thereof, to determine maximum rents for these affordable housing units would be a radical departure from current practice but would tie the rents charged to gross rents paid for dwelling units in the market at a small area of geography.

[11] In the tax credit programs, the applicable Income Limits, or percentages of AMI are 50 percent and 60 percent.