APPENDIX A: DATA NOTES, METHODOLOGIES, AND SOURCES

Appendix A describes the data and methodology of *Out of Reach*. Each subject includes a description and link to the primary data source. In some instances, supplementary material is also cited. Information on how to calculate and interpret the data can be found in the sections "How to Use the Numbers," and "Where the Numbers Come From," which immediately follow the reports' introduction.

FAIR MARKET RENT AREA DEFINITIONS

Each year, HUD determines Fair Market Rents (FMRs) for metropolitan and rural housing markets across the country. In metropolitan areas, HUD tries to use the most current Office of Management and Budget (OMB) metropolitan area definitions to define housing market boundaries for FMRs. Since FMR areas are meant to reflect cohesive housing markets, adopting the OMB definitions is not always preferable. Also, significant changes to area definitions can affect current housing assistance recipients. In keeping with OMB's guidance to federal agencies, HUD modifies the OMB boundaries in some instances for purposes of program administration.

HUD's FY06 FMR areas incorporated OMB's 2003 overhaul of metropolitan area definitions. HUD used OMB's new definitions, but modified them if a county (or town) to be added to an FMR area under those definitions had rents or incomes in 2000 that deviated more than 5% from the newly defined metropolitan area. HUD (and *Out of Reach*) refers to unmodified OMB-defined areas as Metropolitan Statistical Areas (MSAs) and HUD-modified areas as HUD Metro FMR Areas (HMFAs). OMB's subsequent changes to metropolitan area definitions through 2009 were incorporated into HUD's subsequent FMR areas.

OMB released new metropolitan area definitions in February 2013. HUD elected to apply pre-2013 definitions to FY16 FMR areas except where the post-2013 definitions resulted in a smaller FMR area. Counties that had been removed from metropolitan areas were treated by HUD as nonmetropolitan counties. Counties that had been added to metropolitan areas were treated by HUD as metropolitan subareas (HMFAs) and given their own FMR if local rent data were statistically reliable. New multi-county metropolitan areas were treated by HUD as individual county metropolitan subareas (HMFAs) if the data were statistically reliable. This is consistent with HUD's objective to maximize tenant choice by allowing FMRs to vary locally. These changes resulted in more metropolitan areas listed in *Out of Reach 2016*.

In cases in which an FMR area crosses state lines, this report provides an entry for the area under both states. While the Housing Wage, FMR, and Area Median Income (AMI) values apply to the entire FMR area and will be the same in both states, other data such as the number of renter households and the minimum and renter wages apply only to the portion of the FMR area within that state's borders.

FAIR MARKET RENTS

The FY16 FMRs are based on special tabulations of 2009-2013 American Community Survey (ACS) data. Base rents that provide the 40th and 50th percentile of standard quality rents are determined using the standard quality two-bedroom gross rent estimates from the five-year ACS data. The estimate is considered reliable if its margin of error is less than 50% of the estimate. If an FMR area does not have a reliable estimate from the 2009-2013 ACS data, then the most recent reliable estimate from the past five years is updated by the change in the corresponding State metropolitan or non-metropolitan area from the year of the most reliable estimate to 2009. If the FMR area does not have a reliable estimate in the past five years, then the State metropolitan area or non-metropolitan area estimate is the base for FY16 FMRs.

A recent mover adjustment factor is applied to the base rent. This factor is calculated as the percentage change between the five-year 2009-2013 40th percentile standard quality two-bedroom gross rent, and the one-year 2013 40th percentile recent mover two-bedroom gross rent. HUD does not allow recent mover factors to lower the base rent. The data represent the smallest geographic area containing the FMR area where the gross rent is statistically reliable.

Local area rent survey results are used as base rents when the local survey indicates rents statistically different from the ACS-based rents. For FY16 FMRs, the ACS is not used as the base rent or recent mover factors in eight FMR areas. HUD currently does not have funds to conduct local surveys, and so future surveys must be paid for by the public housing agencies.

A CPI update factor is applied to the ACS base rent to adjust for inflation through 2014 using local or regional CPI data.[1] A trend factor is then applied to trend the gross rent forward to 2016. HUD trended the final FY16 FMRs forward with national forecasts of the rent and utility components of the CPI. The trend factor is the weighted average change between the most recent annual Rent of Primary Residence and Utility CPIs and the same indices forcasted to the relevant fiscal year. The trend factor applied to the final FY16 FMRs was 1.0457.[2]

While the *Out of Reach* printed book highlights the two-bedroom FMR, the online version includes a broader data set covering the zero- to four-bedroom FMRs. The focus on the two-bedroom FMRs reflects HUD methodology. HUD finds that two-bedroom rental units are most common and the most reliable to survey, so the two-bedroom units are utilized as the primary FMR estimate.

1 Documentation on the development of the FMR for each county and metropolitan area is available at http://www.huduser.org/portal/datasets/fmr.html.

2 Detailed documentation on the trend factor for FY16 is available at https://www.huduser.gov/portal/datasets/fmr/fmrs/FY2016_code/alt_trend.odn.

HUD uses the two-bedroom FMR estimates and bedroom-size rent ratios to calculate FMRs for units of other sizes. HUD makes additional adjustments for units with three or more bedrooms to increase the likelihood that the largest families, who have the most difficulty in finding units, will be successful in finding eligible program units.

Due to changes in FMR methodology over the years, we do not recommend comparing *Out of Reach* with previous editions, particularly editions prior to the use of the American Community Survey (ACS).

HUD provides online PDF and Excel files that list the counties (and New England towns, where applicable) included in each FMR area and their FY16 FMRs. These resources are available at www.huduser.org/datasets/fmr.html.

HUD's Notice of FY16 FMRs is available at https://www.huduser.gov/portal/datasets/fmr/fmr2016f/FY2016_Final_FMRs_preamble.pdf.

40TH AND 50TH PERCENTILE FMR DESIGNATION

HUD's regulations at 24 CFR 888.113 require it to set FMRs at the 50th percentile rent, rather than the 40th, for metropolitan areas that contain geographically concentrated voucher recipients. This rule was established to raise the voucher payment standard and expand rental options in higher opportunity locations for housing voucher holders. Once designated, the FMR area retains its 50th percentile rent for three years, at which time HUD reviews it for continuing eligibility. FMR areas are removed from the program if after three years they fail to show gains in deconcentration or graduate from the program.

In FY15, 16 FMR areas were using 50th percentiles. Six were eligible for review. Two of the six did not show deconcentration over the three-year period and are not eligible for 50th percentile status again until 2019. One area graduated from the 50th percentile program. One FMR area was added to the program.

Fourteen FMR areas have 50th percentile designation for FY16. An asterisk (*) is used to denote these FMR areas in *Out of Reach*.

The last page in this appendix lists the FMR areas currently eligible for the 50th percentile FMR.

NATIONAL, STATE, AND NON-METRO FAIR MARKET RENTS

HUD calculates FMRs for metropolitan areas and nonmetropolitan counties, but not for states, combined nonmetropolitan areas, or the nation. The FMRs for these larger geographies provided in *Out of Reach* are calculated by NLIHC and reflect the weighted average FMR for the counties included in the larger geography. The weight for FMRs is the number of renter households within each county from the 2010-2014 ACS.

AREA MEDIAN INCOME (AMI)

This edition of *Out of Reach* uses HUD's FY16 AMIs. HUD calculates the family AMI for metropolitan areas and nonmetropolitan counties. The Census definition of "family" is two or more persons related by blood, marriage or adoption residing together. This family AMI relates to all families and is not intended to apply to a specific family size.

In 2011, HUD updated its methodology to calculate family AMIs due to the availability of five-year ACS data. That year, HUD discontinued use of Census 2000 data in the production of FY11 AMIs.

The 2009-2013 ACS data are used to calculate the FY16 AMIs. In areas with statistically reliable one-year 2013 ACS data, HUD incorporates the more recent data. HUD's standard for statistically reliable data is a margin of error of less than 50% of the estimate.

The Congressional Budget Office (CBO) projection of the Consumer Price Index (CPI), published in January 2016, is used by HUD to inflate the ACS estimate from 2013 to the mid-point of FY16.

Applying the assumption that no more than 30% of income should be spent on housing costs (see below), *Out of Reach* calculates the maximum affordable rent for households earning the median income and 30% of the median (extremely low income). This is a straight percentage and does not include HUD's adjustments for income limits for federal housing programs.

The median incomes for states and combined nonmetropolitan areas reported in *Out of Reach* reflect the weighted average of county AMI data weighted by the total number of households provided by 2010-2014 ACS.

FY16 family AMI for metropolitan areas and nonmetropolitan counties, the methodology, and HUD's adjustments to subsequent income limits are provided in *FY2016 HUD Income Limits Briefing Material*, available at https://www.huduser.gov/portal/datasets/il/il16/IncomeLimitsBriefingMaterial-FY16.pdf.

AFFORDABILITY

Out of Reach is consistent with federal housing policy in the assumption that no more than 30% of a household's gross income should be consumed by gross housing costs. Spending more than 30% of income on housing is considered "unaffordable."[3]

Although *Out of Reach* addresses affordability in the rental housing market, housing problems are not unique to renters. *The State of the Nation's Housing: 2015*, published by Harvard University's Joint Center for Housing Studies (http://www.jchs.harvard.

3 The Housing and Urban-Rural Recovery Act of 1983 made the 30% "rule of thumb" applicable to rental housing assistance programs. See Pelletiere, D. (2008). *Getting to the heart of housing's fundamental question: How much can a family afford?* Washington, D.C.: National Low Income Housing Coalition.

edu/sites/jchs.harvard.edu/files/jchs-sonhr-2015-full.pdf), includes analysis of the homeownership and rental housing markets.

PREVAILING MINIMUM WAGE

The federal minimum wage on January 1, 2016 was $7.25 per hour. According to data from the U.S. Department of Labor, the District of Columbia and 29 states had a state minimum wage higher than the federal level on January 1, 2016. In place of the lower federal rate, *Out of Reach* incorporates the prevailing minimum wage in these states. *Out of Reach* incorporates the minimum wage in effect *at the time of publication*. Some local municipalities have a minimum wage that is higher than the prevailing federal or state rate, but this local rate is not fully incorporated into *Out of Reach* data.

Among the statistics included in *Out of Reach* are the number of hours and subsequent full-time jobs a minimum wage earner must work to afford the FMR. If the reader would like to calculate the same statistics using a different wage such as a higher local minimum wage, a simple formula can be used for the conversion:

[hours or jobs at the published wage] ×
[published wage] / [alternative wage]

For example, one would have to work 176 hours per week to afford the two-bedroom FMR in San Francisco if the minimum wage in that location was equivalent to California's rate of $10.00. However, the same FMR would be affordable in 144 hours under the higher local minimum wage of $12.25[4] (176 × $10.00 / $12.25). For further guidance, see "Where the Numbers Come From" or contact NLIHC research staff.

The Department of Labor (www.dol.gov/whd/minwage/america.htm) provides further information on state minimum wage laws.

AVERAGE RENTER WAGE

Recognizing that the minimum wage reflects the earnings of only the lowest income workers, *Out of Reach* also calculates an estimated mean renter hourly wage. This measure reflects the compensation that a typical renter is likely to receive for an hour of work by dividing average weekly earnings by 40 hours, thus assuming a full-time workweek. Earnings include several non-wage forms of compensation like paid leave, bonuses, tips, and stock options.[5]

4 U.C. Berkeley Labor Center (2016). http://laborcenter.berkeley.edu/minimum-wage-living-wage-resources/inventory-of-us-city-and-county-minimum-wage-ordinances/.

5 Please note this measure is different from renter median household income, which reflects an estimate of what renter households are earning today and includes income not earned in relation to employment.

The estimated mean renter hourly wage is based on the average weekly earnings of private (non-governmental) employees working in each county.[6] Renter wage information is based on 2014 data reported by the BLS in the Quarterly Census of Employment and Wages. For each county, mean hourly earnings are multiplied by the ratio of median renter household income to median income of all households in the American Community Survey (2010-2014) to arrive at an estimated average renter wage. In eighteen counties nationwide, the median renter household income exceeds the median household income. Nationally, the median renter household earned an average of 62% of the overall median household income.

An inflation factor was applied to inflate the estimated mean renter hourly wage based on 2014 data to 2016. The inflation factor (239.1 ÷ 236.712) was based on the CBO forecast of the national CPI for FY2016. HUD used this methodology for the 2016 AMI estimates.

In approximately 7.7% of counties, the renter wage is below the federal minimum wage. One likely explanation is that workers in these counties average fewer than 40 hours per week, but the mean renter wage calculation assumes weekly compensation is the product of a full-time work week. For example, mistakenly assuming earnings from 20 hours of work were the product of a full-time workweek would underestimate the actual hourly wage by half, but it would still accurately reflect the true earnings under the assumption of a full-time schedule (see next section).

Wage data from the Quarterly Census of Employment and Wages are available through the Bureau of Labor Statistics at www.bls.gov/cew/home.htm.

WORKING HOURS

Calculations of the Housing Wage and of the number of jobs required at the minimum wage or mean renter wage to afford the FMR assume that an individual works 40 hours per week, 52 weeks each year, for a total of 2,080 hours per year. Seasonal employment, unpaid sick leave, temporary lay-offs, job changes, and other leave prevent many individuals from maximizing their earnings throughout the year. According to Current Employment Statistics for March 2016, the average wage earner in the U.S. worked 34.4 hours per week.[7]

Not all employees have the opportunity to translate an hourly wage into full-time, year-round employment. For these workers, the Housing Wage underestimates the actual hourly compensation needed to afford the FMR. Conversely, some households include multiple wage earners or single individuals that average more than 40 hours per week at work. For these households, a home renting at the FMR would be affordable even if each worker earned less than the area's stated Housing Wage, as long as their combined wages exceed the Housing Wage.

6 Renter wage data for 9 counties are not provided in Out of Reach either because the BLS could not disclose the data for confidentiality reasons or because the number of employees working in the county was insufficient to estimate a reliable wage.

7 Bureau of Labor Statistics. (2016). *The employment situation: March 2016*. Washington, D.C.: U.S. Department of Labor.

For an expanded report on hours and earnings by the Bureau of Labor Statistics, see *The Employment Situation: March 2016*, available at http://www.bls.gov/news.release/empsit.nr0.htm.

SUPPLEMENTAL SECURITY INCOME (SSI)

Out of Reach compares rental housing costs with the rent affordable to individuals receiving Supplemental Security Income (SSI) payments. The numbers are based on the maximum federal SSI payment for individuals in 2016, which is $733 per month. *Out of Reach* calculations also include supplemental payments that benefit all individual SSI recipients in 19 states where the Social Security Administration (SSA) reports the supplemental payment amount. These amounts are available at https://secure.ssa.gov/apps10/poms.nsf/lnx/0502302200.

Supplemental payments provided by an additional 27 states and the District of Columbia are excluded from *Out of Reach* calculations. For some, these payments are administered by the SSA but are available only to populations with specific disabilities, in specific facilities, or in specific household settings. For the majority, however, the supplements are administered directly by the states, so the data are not readily available if they haven't been reported to the SSA. The only four states that do not supplement federal SSI payments are Arizona, North Dakota, Mississippi, and West Virginia. Residents of Puerto Rico cannot receive federal SSI payments.

Since SSI payments are set at the state level, the published version of Out of Reach illustrates the difference between each state's average two-bedroom FMR and the rent that is affordable for SSI recipients. Readers can calculate this gap for any geography by subtracting the rent affordable to an SSI recipient from the area's FMR.

Information on SSI payments is available through the Social Security Administration at https://www.ssa.gov/OACT/COLA/SSI.html and https://www.ssa.gov/pubs/.

The Technical Assistance Collaborative, Inc., publishes a biennial report comparing Fair Market Rents with the incomes of SSI recipients. Recent editions of *Priced Out* can be found at http://www.tacinc.org/knowledge-resources/publications/.

ADDITIONAL DATA AVAILABLE ONLINE

The print version of *Out of Reach* contains limited data in an effort to present the most important information clearly. Additional data can be found online at http://www.nlihc.org.

The *Out of Reach* methodology was developed by Cushing N. Dolbeare, founder of the National Low Income Housing Coalition.

ELIGIBILITY FOR 50TH PERCENTILE FAIR MARKET RENT

In FY16, Fair Market Rents (FMRs) were set at the 50th percentile rent in 14 FMR areas where voucher tenants were concentrated in low opportunity areas. Compared with the typical 40th percentile rent, this higher voucher payment standard can provide tenants with a broader range of housing opportunities.

AREAS ELIGIBLE FOR FY16 50TH PERCENTILE FMR

Albuquerque, NM MSA

Baltimore-Columbia-Towson, MD MSA

Chicago-Joliet-Naperville, IL HUD Metro FMR Area

Denver-Aurora-Broomfield, CO MSA

Hartford-West Hartford-East Hartford, CT HUD Metro FMR Area

Honolulu, HI MSA

Kansas City, MO-KS HUD Metro FMR Area

Milwaukee-Waukesha-West Allis, WI MSA

Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA

Riverside-San Bernardino-Ontario, CA MSA

Tacoma, WA HUD Metro FMR Area

Virginia Beach-Norfolk-Newport News, VA-NC MSA

Washington, DC-VA-MD HUD Metro FMR Area

West Palm Beach-Boca Raton, FL HUD Metro FMR Area

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