NYSERDA LOW- TO MODERATE-INCOME MARKET CHARACTERIZATION STUDY METHODOLOGY REPORT – AMERICAN HOUSING SURVEY

1.0 Introduction to American Housing Survey

The American Housing Survey (AHS) is a biennial survey of housing units conducted by the U.S. Census Bureau and sponsored by the Department of Housing and Urban Development (HUD). Information is gathered from May to September of odd-numbered years on both occupied and vacant housing units. AHS data is used to monitor changes in housing conditions and costs, and to assess housing needs. The survey asks questions relating to the size and vacancies of the nation's housing inventory, fuel usage, condition of housing units, characteristics of occupants, home improvements, mortgages and other housing costs, beneficiaries and those eligible for assisted housing, home values, and characteristics of recent movers.

Starting in 2011, the AHS implemented a supplemental questionnaire in addition to the core survey. These topical modules will rotate in and out of the questionnaire on a yet-to-be-determined basis. The modules include topics such as health & safety hazards in the home, food insecurity, use of housing counseling services, emergency & disaster preparedness, community involvement, and public transportation.¹

2.0 American Housing Survey - Metropolitan Supplement

The American Housing survey has interviewed the same housing units each survey year since 1985 for the national sample. Each round of the survey includes an additional sample from a group of metropolitan areas. These supplemental samples are combined with the core national file responses from those geographic regions to produce more robust samples for the selected metropolitan areas.² Rochester was included in the 2011 AHS Metropolitan Supplement, while Buffalo and the New York metropolitan area were a part of the 2013 survey design.

Geographic Region	AHS Data File	Sample Size
Mid-Atlantic Census Division (NY, NJ, PA)	2013 National File	13,016
Buffalo Metropolitan Area	2011 Combined Metropolitan & National File	2,940
NYC Metropolitan Area	2013 National File	3,484
Rochester Metropolitan Area	2013 Metropolitan File	3,262

Table 2.1 - Sam	ple Size of Regiona	New York State	AHS Data Files
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¹ https://www.census.gov/programs-surveys/ahs/about.html

² https://www2.census.gov/programs-surveys/ahs/2011/2011%20AHS%20National%20Sample%20Design%20and%20Weighting.pdf

3.0 Demographic, Income, and Housing Data

The LMI Market Characterization Study used variables that were taken directly from the AHS data files as well as some computed variables. The following are a list of the main computed variables.

- Poverty Group Used data on annual income and household size to compute the ratio of household income to the HHS poverty guideline for each household size.
- Household Type Used data on the household size, age of head of household, and presence of children under 18 to develop household composition categories.
- Program Eligibility Groups Used data on annual income and household size to compute the income-eligibility of households for several national-level assistance programs (SNAP, LIHEAP, and HUD).
- Housing Unit Type Used data on type of building and number of units in the structure to develop more detailed housing unit categories.

The following table shows the complete set of variables used in the analysis, including a brief description of the variable and information on whether the variable was developed by the project team or was used directly from the AHS data file.

Variable Name	Variable Description	AHS or Computed	
CMSA	1980 design Consolidated Metropolitan Statistical Area code	AHS	
SMSA	1980 design Primary Metropolitan Statistical Area code	AHS	
DIVISION	Census division	AHS	
ISTATUS	Interview status	AHS	
ZINC2	Annual household income	AHS	
PER	Number of persons in the household	AHS	
pov2013	100% of 2013 HHS poverty guidelines	Computed	
pov2011	100% of 2011 HHS poverty guidelines	Computed	
smi_hh4	FY2013 or FY2011 New York State median income for a 4-person household, as applicable	Computed	
smi100	100% SMI for NYS based on household size, for 2013 or 2011 as applicable	Computed	
pov_200pct	200% of 2013 or 2011 HHS poverty guidelines, as applicable	Computed	
pov_150pct	150% of 2013 or 2011 HHS poverty guidelines, as applicable	Computed	

Table 3.1 - LMI Market Characterization Study AHS Data - Demographic, Income, Housing

Variable Name	Variable Description	AHS or Computed	
pov_130pct	130% of 2013 or 2011 HHS poverty guidelines, as applicable	Computed	
smi80	80% SMI for NYS based on household size, for 2013 or 2011 as applicable	Computed	
smi60	60% SMI for NYS based on household size, for 2013 or 2011 as applicable	Computed	
liheaph60	Indicates federal maximum LIHEAP eligibility based on household size (greater of 60% SMI and 150% HHSPG)	Computed	
pov_seg	Program income-eligibility group	Computed	
NUNITS	Number of units in building	AHS	
NUNIT2	Housing unit type; consolidated	AHS	
ТҮРЕ	Housing unit type and occupancy; permanent vs. transient	AHS	
bldg_type	Housing unit type; detailed	Computed	
bldg_type_con	Housing unit type; consolidated	Computed	
TENURE	Owner/Renter status; detailed	AHS	
own_rent	Owner/Renter status; consolidated	AHS	
poverty_level	Percent of poverty level	Computed	
poverty_group	Percent of poverty level groups	Computed	
income_group	Annual household income groups	Computed	
HHAGE	Age of the head of household	AHS	
KIDU18	Indicates whether at least one child under the age of 18 resides in the household	AHS	
hh_type	Household composition type	Computed	
WGTMETRO	Household weight used to develop metropolitan AH: statistics		
WGT90GEO	Household weight used to develop regional statistics	AHS	

4.0 Home Equity Data

The project team developed a summary variable for home equity using the self-reported data elements from AHS respondents. The summary variable was developed using the following steps.

- Housing Value Estimated current market value of home, as self-reported by AHS respondents.
- Total Loan Amounts Combined all self-reported quantities currently owed on mortgages for homeowners.
- Home Equity: Computed as Housing Value minus Total Loan Amounts.

The following table shows the complete set of variables used to create the home equity variable, including a brief description of each variable and information on whether the variable was developed by the project team or was used directly from the AHS data file.

Variable Name	Variable Description	AHS or Computed	
UNPBAL	Amount currently owed on 1 st mortgage	AHS	
UNPBAL2	Amount currently owed on 2 nd mortgage	AHS	
UNPBAL3	Amount currently owed on 3 rd mortgage	AHS	
UNPBAL4	Amount currently owed on 4 th mortgage	AHS	
MORTG1	Amount currently owed on 1^{st} mortgage; non-response coded to 0	Computed	
MORTG2	Amount currently owed on 2 nd mortgage; non-response coded to 0	Computed	
MORTG3	Amount currently owned on 3 rd mortgage; non-response coded to 0	Computed	
MORTG4	Amount currently owned on 4 th mortgage; non-response coded to 0	Computed	
has_mortage	Indicates whether the homeowner has a mortgage balance on their home	Computed	
mortgage_amt	Total amount currently owed on mortgages for home; coded 0 for non-owners	Computed	
VALUE	Estimated current market value of home	AHS	
own_rent	Owner/Renter status; consolidated	Computed	
home_equity	iome_equity Estimated value of home minus any remaining mortgage amount; coded missing for non-owners		
owner_with_equity	Indicates if a homeowner has a positive home equity	Computed	
owner_10K_equity	Indicates if a homeowner has greater than \$10,000 in home equity	Computed	
WGTMETRO	Household weight used to develop metropolitan statistics	AHS	
WGT90GEO	Household weight used to develop regional statistics	AHS	

Table 4.1 - LMI Market Characterization Study AHS Data – Home Equity Analysis

5.0 Program Participation Data

The project team provided statistics on program participation for renters in several governmental housing programs using the self-reported data elements from AHS respondents.

The following table shows the complete set of variables used for the program participation analysis, including a brief description of each variable and information on whether the variable was developed by the project team or was used directly from the AHS data file.

Table 5.1 - LMI Market Characterization S	udy AHS Data – Progra	m Participation Analysis
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Variable Name	Variable Description	AHS or Computed
HUDADMIN	Received government rental assistance (based on HUD administrative data)	AHS

Variable Name	Variable Description	AHS or Computed
own_rent	Owner/Renter status; consolidated	Computed
WGTMETRO	TRO Household weight used to develop metropolitan statistics	
WGT90GEO	Household weight used to develop regional statistics	AHS

Table 5.2 shows the distribution of HUDADMIN for LMI Households for each of the NYS jurisdictions for which the data were available.

Table 5.2 – Distribution of HUDADMIN for LMI Households by Metropolitan Region

Passived governemet rental assistance?	Buffalo		Rochester		NYC	
	Count	Percent	Count	Percent	Count	Percent
Yes, public housing	6,361	3%	817	<1%	67,799	3%
Yes, someone in unit received a voucher	18,501	7%	12,207	6%	224,225	10%
Yes, privately owned subsidized housing	6,779	3%	6,886	3%	105,084	5%
Unit did not receive any type of governmental assistance	94,237	38%	74,242	37%	1,199,401	53%
Not applicable	125,281	50%	107,779	53%	668,447	30%
TOTAL	251,160	100%	201,930	100%	2,264,955	100%