

2019 Housing Inventory

Walnut Hills

June 2020

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Introduction

Using the Report

This 2019 Housing Inventory for Walnut Hills is the first iteration of a City housing inventory for the Walnut Hills neighborhood. It expands upon the 2015 OTR/Pendleton Inventory conducted by Community Building Institute and updated in 2018 and 2019 by City staff. As an inventory, this report presents objective, quantitative data. Its methodology can be replicated for future updates or applications to other neighborhoods. This report does not draw conclusions, nor does it attempt to make correlative or causal arguments about the housing stock in Walnut Hills.

The core values of the inventory are accuracy, replicability, relevancy, and consistency. The methodology used in this inventory was selected to fulfill these values. In order to provide as much transparency as possible for the methodology and data sources, text boxes throughout the document outline how and where the data was acquired. There are examples on the right side of this page. Furthermore, the end of this document contains a list of the data sources used. Not only does listing sources and methodology provide transparency, but also allows for those outside the City administration to replicate this inventory.

This report could not have been possible without the help and guidance of several partners, including:

- City of Cincinnati Department of City Planning
- City of Cincinnati Department of Community and Economic Development (DCED)
- Walnut Hills Working Group

Methodology:

Throughout the inventory, readers will be able to find notes on the methodology in these text boxes.

Notes:

In some cases, notes to further explain the methodology or the data can be found here.

Data Sources:

In the bottom-right corner, a text box will display the source for any data on that specific page. A list of overall data sources can be found at the end of the inventory.

Helpful Definitions

Affordable Housing:

Housing with monthly costs (rent, mortgage, utilities, insurances, taxes, condo fees, etc.) that are no more than 30% of a household's gross, or pre-tax, income

Area Median Income (AMI):

An index/tool defined annually by the U.S. Department of Housing and Urban Development to determine income eligibility limits for assisted housing programs

Household:

All individuals that occupy a housing unit together, regardless of relation or wage-earner status

Income Restricted Units:

Units restricted to specific low-income brackets

Occupiable:

Units considered to be either occupied or ready to be occupied without renovation

Owner-Occupancy:

Property address and owner address are identical according to county auditor

Rent Subsidized Units:

Units by which government or non-profit organization provides financial assistance for housing costs

Subsidized and Restricted Units:

Units wherein costs are supported by government or non-profit organization and also limited to certain low-income brackets

Unsubsidized/Unrestricted Units:

Units lacking both subsidization and income restrictions

Vacant:

The City defines "vacant" as any unit that is "unoccupiable," such as where water service has been shut-off or the unit has been ordered vacant. This inventory, however, examines vacancy on the basis of being unoccupied during time of survey

Workforce Housing:

Housing that is affordable to those making roughly 80-120% of AMI, who would otherwise be excluded from rent subsidized or income restricted housing

Helpful Definitions—Subsidized and Income Restricted Housing

HOME:

Provides funds for state and local governments to use on numerous projects aimed at housing affordability. Eligible program expenses include rehabilitation and new construction of affordable housing

Housing Choice Voucher (HCV):

Housing assistance on behalf of the individual or family that can be taken with the individual/family to any housing in private market that is in line with HUD's Qualified Housing Standards. HCV program replaced the Section 8 certificate and vouchers programs in 1998

HUD Insured:

Multifamily properties funded with loans from Federal Housing Administration-approved lenders. HUD guarantees loan against loss to reduce risk

Low-Income Housing Tax Credit (LIHTC):

Tax incentive for development or rehabilitation of affordable rental housing, with some units reserved for low-income individuals or households

Public Housing:

Includes various types of properties, from scattered site single-family housing to high-rise multifamily buildings. All public housing is managed by a public housing agency (PHA). The Cincinnati PHA is the Cincinnati Metropolitan Housing Authority

Section 8:

Refers to Section 8 of United States Housing Act of 1937. Section 8 can be used to indicate Project-Based Rental Assistance (PBRA) or HCV. In this inventory, Section 8 is understood to be PBRA. PBRA properties are privately-owned through contracts with HUD

Section 202:

Supportive Housing for the Elderly program. Section 202 provides capital advances to private non-profits and consumer cooperatives to finance construction, rehabilitation, and/or acquisition of housing. Section 202 also provides rent subsidies for very low-income households with at least one person aged 62 or older

Section 236:

Subsidy from HUD on interest of an owner's mortgage of multifamily properties available to low-income individuals or households. Section 236 projects are also eligible for other forms of subsidy, such as Section 8 PBRA

Section 811:

Supportive Housing for Persons with Disabilities program. Section 811 is similar to Section 202, but is targeted at very or extremely low-income households with adults with physical or developmental disabilities, as well as the chronically mentally ill

Methodology

Study Area:

The Study Area is defined by the Statistical Neighborhood Approximation boundary and then divided into each of its whole census tracts.

Determining AMI Monthly Cost Ranges:

AMI, updated annually and adjusted for family/household size, can be found on the HUD website. Income ranges for each AMI bracket are determined by multiplying the percentage at the high and low end of each bracket by the baseline (100%) AMI. Affordable monthly costs take the income ranges and divide them by 12 (to determine monthly gross income) then multiply by 0.3 (to determine the ceiling “affordable” monthly cost at 30% of monthly gross income).

A Universal Baseline:

Data is primarily derived from the U.S. Census Bureau and subsequently refined and supplemented from outside sources. In order to create a universal baseline, census tracts are used to standardize data collection and create sub-areas. Census tracts are only (potentially) altered after each decennial census, thus providing consistency and replicability over time.

“Refining” the Data:

Data on vacancy, income restrictions, rent subsidies, et cetera, are found from reputable, publicly accessible sources and used to either replace or supplement the “baseline” census data.

Minimizing Assumptions:

Assumptions are important for bridging gaps in the data, but making multiple assumptions can lead to inaccuracies. The inventory excludes assumptions about the number of people per bedroom, thereby excluding assumptions about the number of actual wage-earners per bedroom. The inventory also excludes assumptions regarding the occupancy of condominiums, and instead relies on self-reporting of occupancy type.

Making Conclusions:

As an inventory (rather than a study), this report does not draw conclusions about causes and effects. Rather, this report is tasked with obtaining and categorizing housing data within predetermined constructs to show a “snapshot” of the housing market within Walnut Hills.

Literature:

The methodology for this inventory takes inspiration from Community Building Institute reports, as well as studies conducted by other cities.

Methodology—Changes Since 2015

The AmeriCorps VISTA who wrote this inventory did so to “expand the operational capacity” of Cincinnati’s Department of City Planning (as consistent with the goals of AmeriCorps). In order to do so, CBI’s original methodology from the 2015 OTR/ Pendleton Inventory had to be simplified so that City staff could conduct future inventories with limited time and resources. The AmeriCorps VISTA created a separate document outlining the new methodology, step-by-step, for future use.

Listed below are some of the key differences between the old and new methodologies.

Study Area:

The new methodology keeps all whole census tracts in tact, rather than splitting them into new sub-areas. In order to keep tracts whole, and to maintain consistency with other City data reporting, the Study Area is based on the Statistical Neighborhood Approximation Boundary, rather than the Community Council Boundary.

Using AMI:

The new methodology compares all housing cost data to the AMI for the average household size in the Study Area, rather than making assumptions about number of persons/wage-earners per bedroom. Furthermore, the methodology uses the AMI from the same year as the ACS used in the inventory. The new methodology also categorizes household income into AMI brackets.

Starting Point:

The old methodology started with parcel data, defined information needed for each parcel, and then went after each data point. This line-by-line approach was eliminated by using census data as a universal baseline.

Data Surveying:

The old methodology sometimes relied on property owner surveys and field verification to collect data points for each parcel. In order to simplify the methodology for future City staffers (where time and resources are limited), data surveying was eliminated for the new methodology.

Methodology—A Note on Using ACS Data

The 5-year American Community Survey estimates are used as the primary data source for this inventory. The ACS is one of the most widely used data sources for information on social and economic characteristics in the U.S. The ACS collects data over the course of a year and Census Bureau staff aggregate it into estimates available at small and large geographies. Estimates are reported as an average over the reporting period.

All ACS data is based on a survey that samples 1 in 40 households. As such, everything reported in the ACS is an estimate, and should not be treated as exact counts. The larger the sample, whether that be years included or geographic area covered, the more reliable the estimate. As such, we can be more confident in 5-year ACS estimates than 3- or 1-year estimates. The Census Bureau recommends using ACS data in the form of percentages and rates rather than raw numbers.

The ACS reports estimates as well as a margin of error (MOE) associated with each estimate. The MOE measures variability due to sampling error, which is inherent in any sample of a population. The MOE allows for the calculation of an upper and lower range in which the estimate likely lies, known as a 90% confidence interval. For instance, the ACS may report an estimate of 100 with a MOE of +/-15. This means that we can be 90% confident that the true number of individuals, households, et cetera is between 85 and 115.

To test the reliability of ACS data, a coefficient of variation (CV) may be calculated. The CV examines sampling error relative to the estimate, that is, the size of the margin of error in relation to the estimate itself. According to ESRI, estimates with a CV equal to or less than 12% are considered reliable, while a CV between 12% and 40% indicates medium reliability and should be used with caution. Estimates with a CV greater than 40% are considered unreliable.

Methodology:

The VISTA who compiled this inventory calculated the margin of error and coefficient of variation for household income and housing costs at a tract and SNA level. Error bars reflecting the aggregate MOE are shown in relevant bar charts.

Notes:

Any estimate with a CV greater than 40 is noted in the upper-right hand corner.

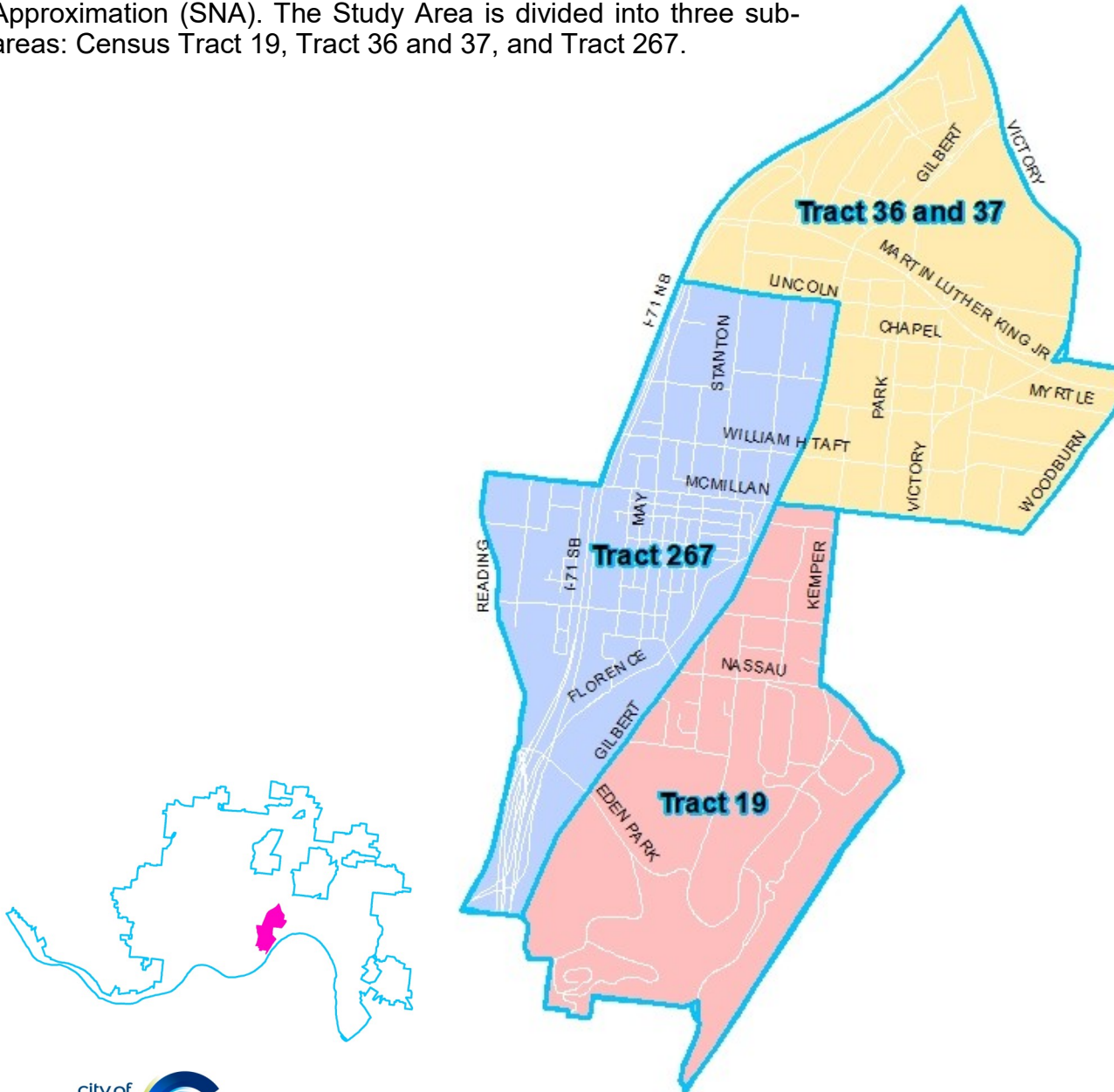
Sources:

“About ACS Estimates and Margins of Error in NEO CANDO 2010+”

“The American Community Survey”

Study Area

The Study Area for this Walnut Hills Housing Inventory follows the boundary for the Walnut Hills Statistical Neighborhood Approximation (SNA). The Study Area is divided into three sub-areas: Census Tract 19, Tract 36 and 37, and Tract 267.



Methodology:

Using ArcMap mapping software—which sources Cincinnati Area Geographical Information System (CAGIS) data—the Study Area was constructed beginning with the Walnut Hills Statistical Neighborhood Approximation (SNA) boundary. The Study Area was then broken into three different areas by adding a layer for the four census tracts that lie within the Walnut Hills SNA boundary.

Notes:

Census data is more reliable at broader geographies because the sample is larger. Tracts 36 and 37 (separated by Lincoln Ave) were merged for the purposes of this inventory. These two tracts were most similar to one another, which allows the creation of a broader geography without losing the nuances of the neighborhood. Tracts 19 and 267 were kept separate because of the distinct characteristics of each tract.

Data Sources:

Cincinnati Area Geographical Information System

Using Area Median Income

This inventory categorizes housing costs by using Area Median Income (AMI) as the metric. The U.S. Department of Housing and Urban Development (HUD) defines AMI on an annual basis, which is then used to set income eligibility limits.

The average household size for the Study Area is 1.83 persons, so the inventory uses the 2018 AMI for a two-person household as the standard: \$62,700 per year.

2018 Cincinnati HUD Area Median Family Income (HAMFI)						
Income Category as % of AMI			Annual Income Range for 2 person household		Monthly Housing Cost ("affordable" at 30% of income)	
101%	or	more	\$63,327	or	more	\$1,583 or more
81%	to	120%	\$50,787	to	\$75,240	\$1,270 to \$1,881
61%	to	100%	\$38,247	to	\$62,700	\$956 to \$1,568
31%	to	60%	\$19,437	to	\$37,620	\$486 to \$941
0%	to	30%	\$0	to	\$18,810	\$0 to \$470

Methodology:

The "Area Median Family Income" Key displays the median family income for the Cincinnati, OH-KY-IN Metro Area based on persons in the family/household.

Affordable monthly housing costs are determined by dividing annual gross income by 12 to determine monthly household income, then multiplying monthly income by 0.3 to determine the "affordable" monthly cost at each income level.

"Household" refers to all the individuals, related or not, that occupy a housing unit together. It does not imply the number of wage-earners.

Average household size is calculated by taking the total population in the Study Area divided by the number of occupied housing units in the Study Area.

Notes:

The addition of "workforce housing" is color-coded in yellow. The AMI "brackets" are consistently color-coded throughout the inventory.

Data Sources:

U.S. Department of Housing and Urban Development Income Limits

Using Area Median Income

This inventory categorizes housing costs by using Area Median Income (AMI) as the metric. The U.S. Department of Housing and Urban Development (HUD) defines AMI on an annual basis, which is then used to set income eligibility limits.

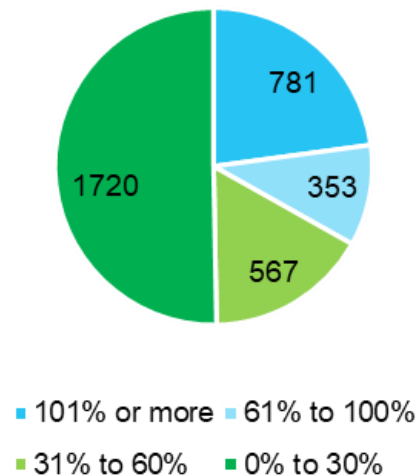
The average household size for the Study Area is 1.83 persons, so the inventory uses the 2018 AMI for a two-person household as the standard: \$62,700 per year.

Incomes vary in smaller geographies, so this inventory includes an estimated count of the households in each AMI bracket, based on reported household income. The median household income averaged across the four tracts is \$26,325, which is equivalent to 42% AMI.

Households per AMI Bracket

	Households	%
101% or more (\$63,327 or more)	781	22.8%
61% to 100% (\$38,247 to \$62,700)	353	10.3%
31% to 60% (\$19,437 to \$37,620)	567	16.6%
0% to 30% (\$0 to \$18,810)	1720	50.3%
Total	3420	100%

Households per AMI Bracket



Methodology:

Affordable monthly housing costs are determined by dividing gross income by 12 to determine monthly household income, then multiplying monthly income by 0.3 to determine the “affordable” monthly cost at each income level.

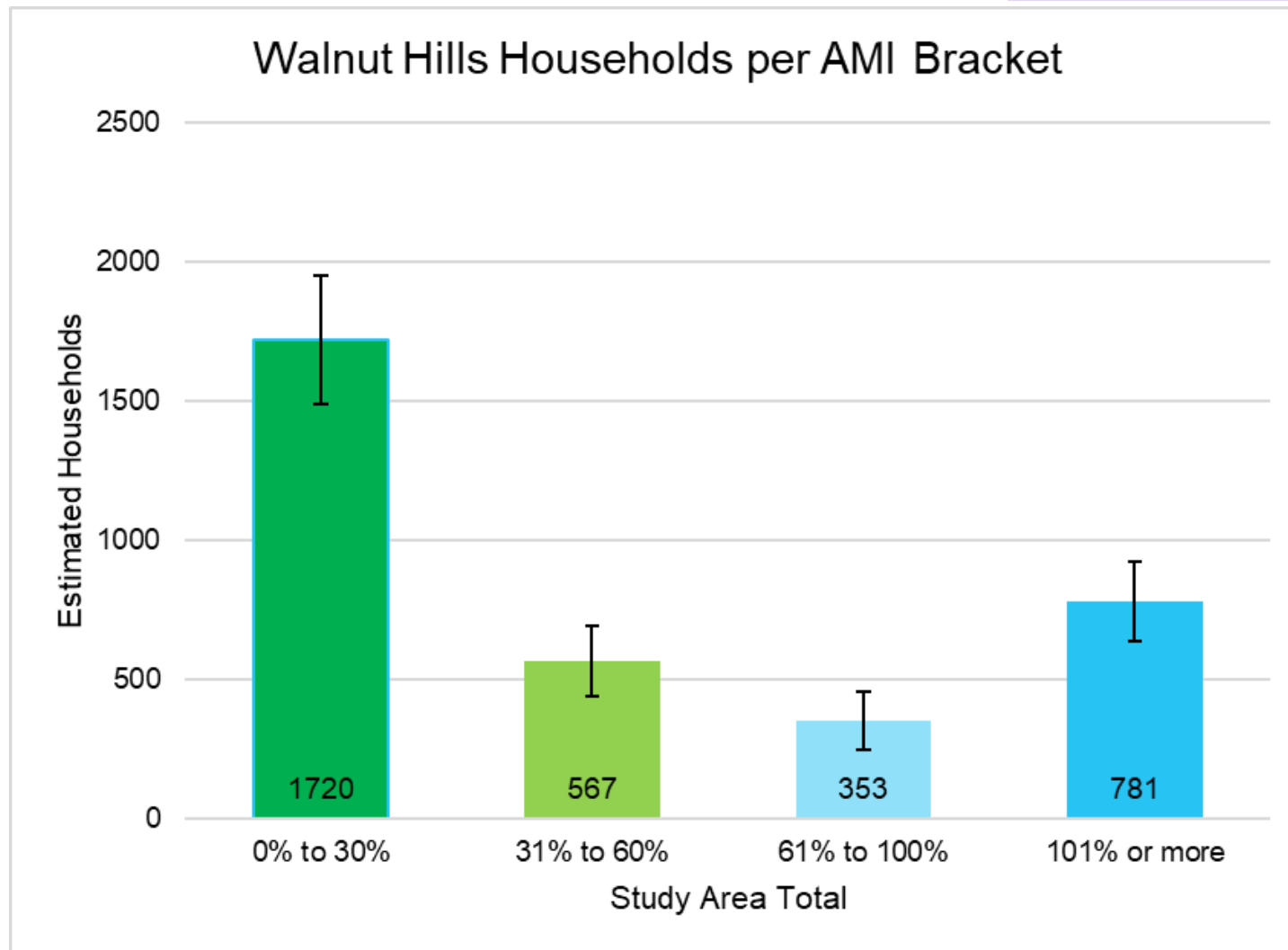
“Household” refers to all the individuals, related or not, that occupy a housing unit together. It does not imply the number of wage-earners.

Data Sources:

U.S. Department of Housing and Urban Development Income Limits

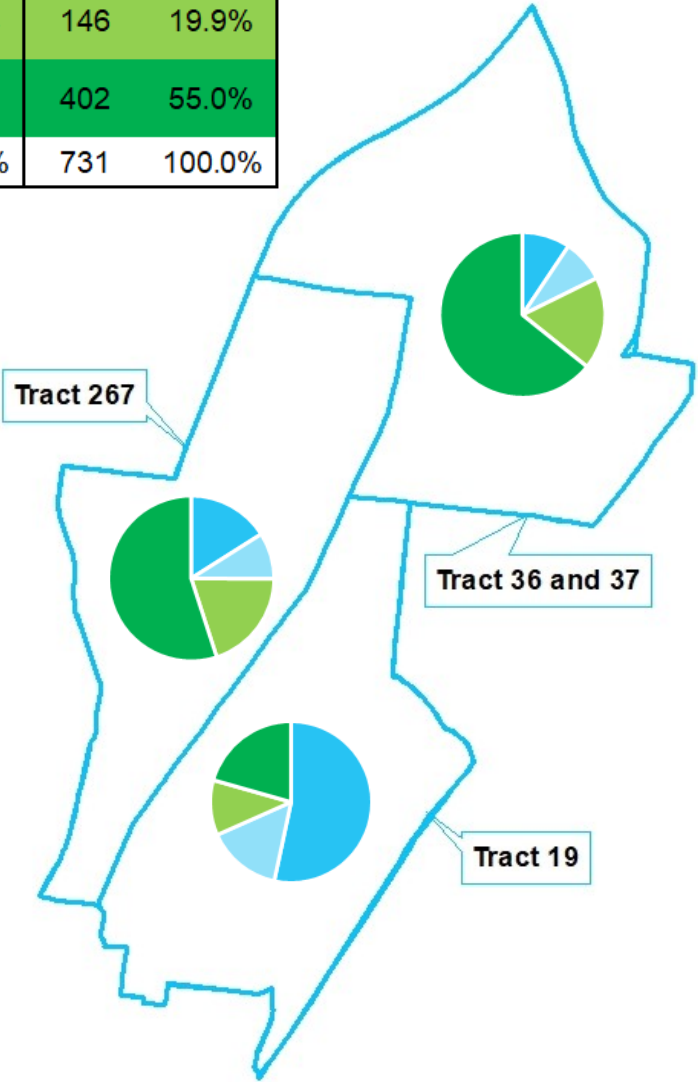
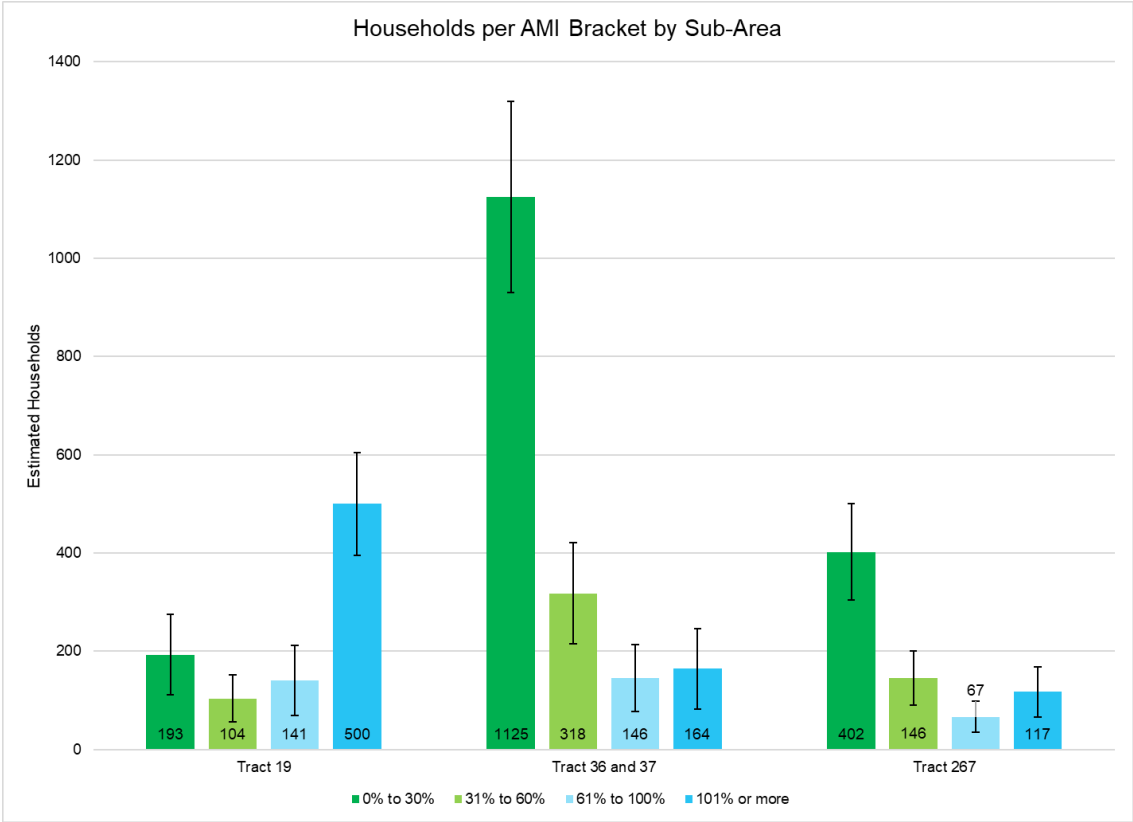
2018 American Community Survey (5-year estimate, 2014-2018): Household Income in the Past 12 Months, refined

The aggregate margin of error is represented by the black bars. The aggregate MOE provides the range for the 90% Confidence Interval.



Using Area Median Income

AMI Categories	Tract 19		Tract 36 and 37		Tract 267	
101% or more (\$63,327 or more)	500	53.4%	164	9.4%	117	16.0%
61% to 100% (\$38,247 to \$62,700)	141	15.0%	146	8.3%	67	9.1%
31% to 60% (\$19,437 to \$37,620)	104	11.0%	318	18.1%	146	19.9%
0% to 30% (\$0 to \$18,810)	193	20.6%	1125	64.2%	402	55.0%
Total	937	100.0%	1752	100.0%	731	100.0%



Findings

Occupied/Vacant Units

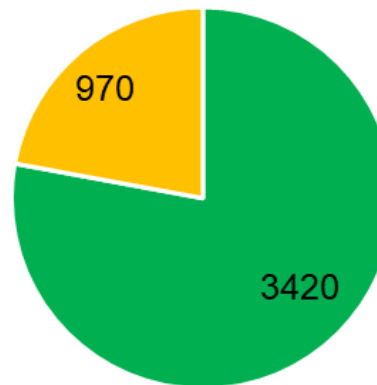
The ACS estimates that there are 4390 units in the Study Area, with 3420 occupied units and 970 vacant units. Of vacant units, 156 are described as “for rent,” 10 units “rented and unoccupied,” 84 units “for sale,” and 720 units are categorized as “other vacant.”

The U.S. Postal Service Vacant Address Database supplements 2018 ACS data by providing the number of units that have been vacant for a period of 90 or more days. There are 625 units in the Study Area considered vacant in the USPS Vacant Address Data.

Occupied/Vacant

	Units	%
Occupied	3420	77.9%
Vacant	970	22.1%
Total	4390	100.0%

Occupied/Vacant



■ Occupied ■ Vacant

Methodology:

The City considers vacant units to be unoccupiable units—units with water shut-offs, vacancy orders, or both. If there are buildings with at least one “occupiable” unit, then all units within the building are considered occupiable rather than vacant.

The ACS considers vacant units to be unoccupied units—though these units are occupiable and are therefore differ from the City’s definition of vacant. This inventory follows the ACS definition of vacancy and provides further context by incorporating USPS Vacant Address Data.

Notes:

In 2005, HUD entered into an agreement with the USPS to receive aggregate data on addresses marked as vacant in the previous quarter. Access is granted for government entities and non-profit organizations.

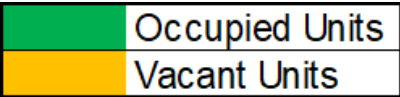
The city-wide vacancy rate, using ACS data, is 15.4%.

Data Sources:

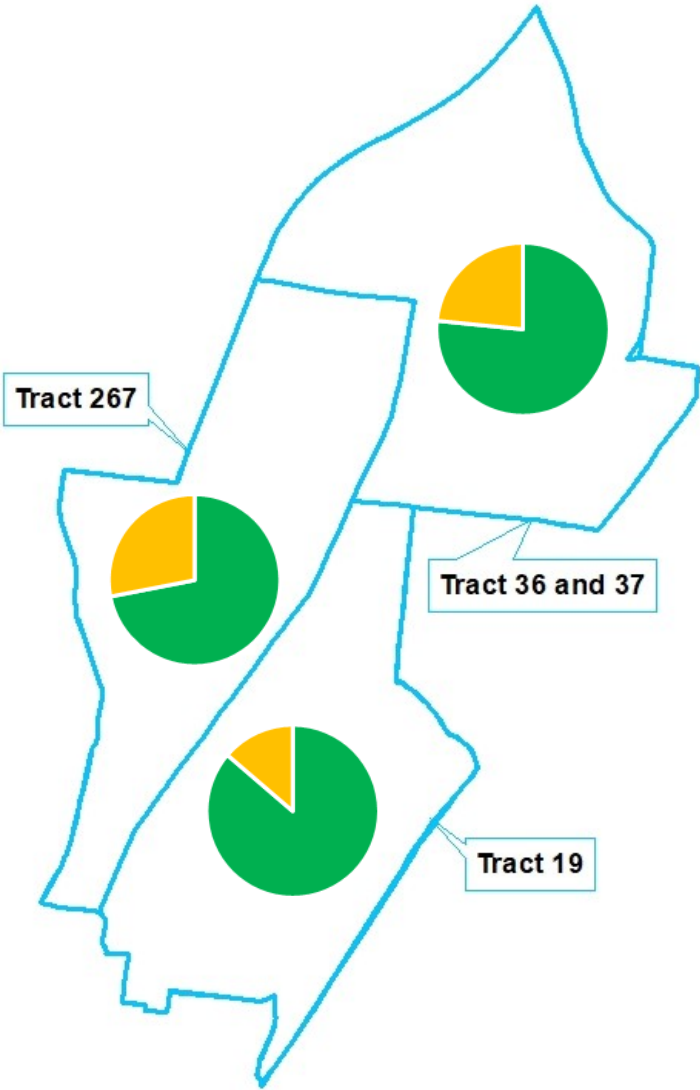
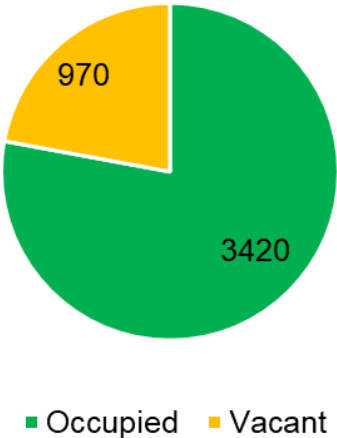
2018 American Community Survey (5-year estimate, 2014-2018): Occupancy Characteristics, Vacancy Status

U.S. Department of Housing and Urban Development USPS Vacant Address Data

Occupied/Vacant Units, within Sub-Areas



Occupied/Vacant



Total Units by Occupancy, within Sub-Areas

	Tract 19		Tract 36 and 37		Tract 267		Total	
Occupied Units	937	86.3%	1752	76.6%	731	71.9%	3420	77.9%
Vacant Units	149	13.7%	536	23.4%	285	28.1%	970	22.1%
Total	1086		2288		1016		4390	

Methodology:

The City considers vacant units to be unoccupiable units—units with water shut-offs, vacancy orders, or both. If there are buildings with at least one “occupiable” unit, then all units within the building are considered occupiable rather than vacant.

The ACS considers vacant units to be unoccupied units—though these units are occupiable and are therefore differ from the City’s definition of vacant. This inventory follows the ACS definition of vacancy and provides further context by incorporating USPS Vacant Address Data.

Notes:

In 2005, HUD entered into an agreement with the USPS to receive aggregate data on addresses marked as vacant in the previous quarter. Access is granted for government entities and non-profit organizations.

The city-wide vacancy rate, using ACS data, is 15.4%.

Data Sources:

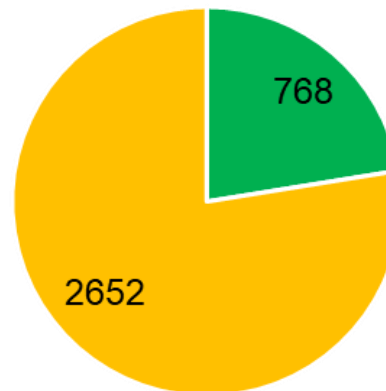
- 2018 American Community Survey (5-year estimate, 2014-2018): Occupancy Characteristics, Vacancy Status
- U.S. Department of Housing and Urban Development USPS Vacant Address Data

Occupied Residential Units

Occupied Residential Units

	Units	%
Owner-Occupied	768	22.5%
Renter-Occupied	2652	77.5%
Total	3420	100.0%

Occupied Residential Units



■ Owner-Occupied ■ Renter-Occupied

Methodology:

After determining the amount of occupied units, the number of owner-occupied and renter-occupied units were derived from the percentages of owner-occupied and renter-occupied units within each census tract.

Notes:

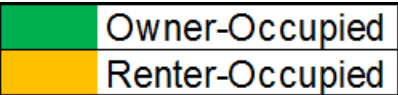
Census data categorizes condo units as "owner-occupied."

The city-wide rates of owner- and renter-occupancy are 37.8% and 62.2%, respectively.

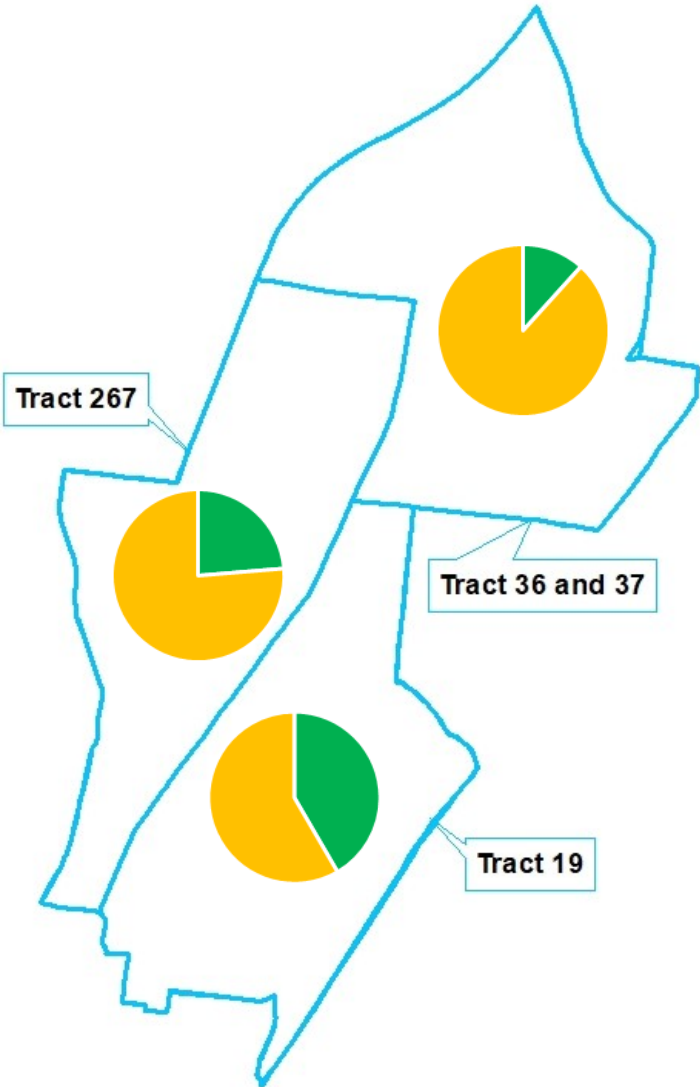
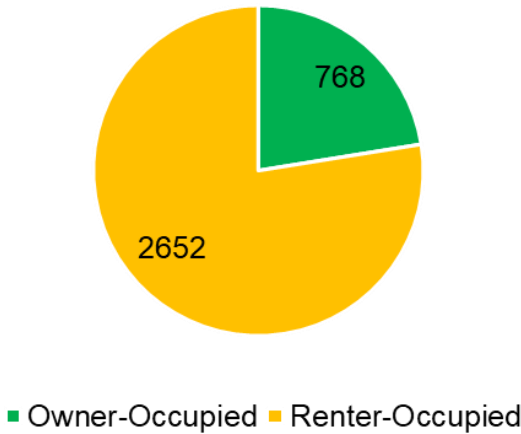
Data Sources:

2018 American Community Survey (5-year estimate, 2014-2018): Occupancy Characteristics

Occupied Residential Units, within Sub-Areas



Occupied Residential Units



Methodology:

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Notes:

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The city-wide rates of owner- and renter-occupancy are 37.8% and 62.2%, respectively.

Occupied Units, within Sub-Areas

	Tract 19		Tract 36 and 37		Tract 267		Total	
Owner-Occupied	390	41.6%	205	11.7%	173	23.7%	768	22.5%
Renter-Occupied	547	58.4%	1547	88.3%	558	76.3%	2652	77.5%
Total	937		1752		731		3420	

Data Sources:

2018 American Community Survey (5-year estimate, 2014-2018): Occupancy Characteristics

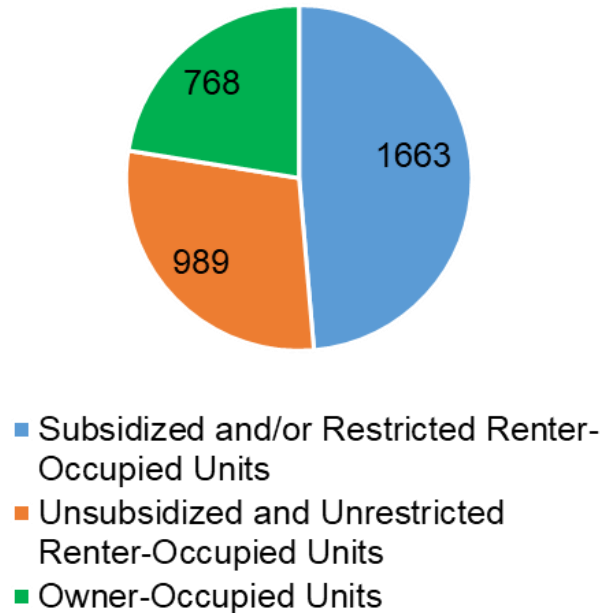
Units with Rent Subsidies and Income Restrictions

This page reflects data for active subsidized and income restricted rental housing beginning 2018 or earlier. Some owner-occupied units may be subsidized. This inventory does not have information on owner subsidies, and therefore considers owner-occupied units as unsubsidized units. Additionally, this page does not include data on “naturally affordable” housing.

Subsidies and Restrictions

	Units	%
Subsidized and/or Restricted Renter-Occupied Units	1663	48.6%
Unsubsidized and Unrestricted Renter-Occupied Units	989	28.9%
Owner-Occupied Units	768	22.5%
Total	3420	100.0%

Subsidies and Restrictions



Methodology:

The National Housing Preservation Database (NHPD) is updated tri-annually with data from ten federally subsidized programs. These programs include Section 8, Section 202, Section 236, Section 811, LIHTC, HOME, HUD Insured, and Public Housing. Section 515 and Section 538 refer to rural housing programs, and do not pertain to this inventory.

Notes:

Access to NHPD is free for any non-profit, university, government entity, or individual. Any for-profit or commercial organizations must pay a subscription fee to access the data.

Not all units with rent subsidies and income restrictions are fully occupied. Of the 1663 units reported, approximately 92% are occupied.

Housing Choice Vouchers (HCV) were excluded to avoid data overlap. Within the three subareas, households with HCVs have increased from 234 in 2014 to 278 in 2018. The number of HCV households averaged 2014-2018 is 257.

Data Sources:

National Housing Preservation Database

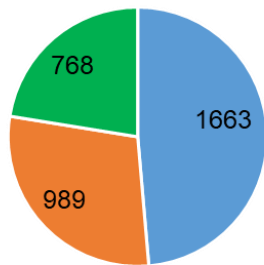
HUD Picture of Subsidized Households

Occupied Units by Subsidy/Restriction, within Sub-Areas

Occupied Units by Subsidy/Restriction, within Sub-Areas

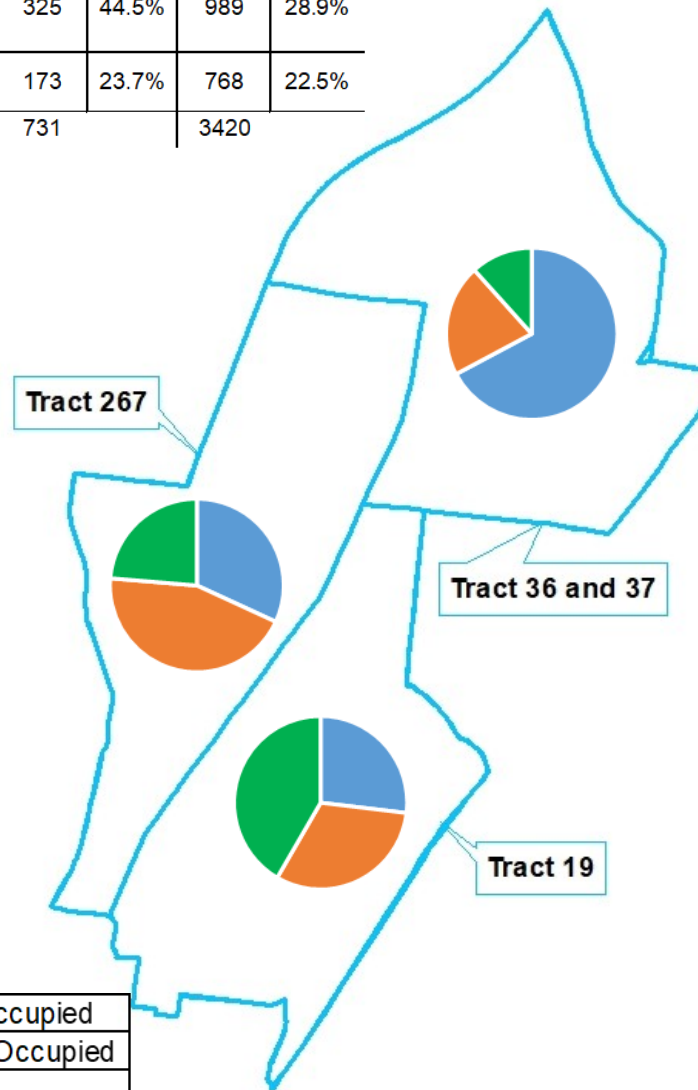
	Tract 19		Tract 36 and 37		Tract 267		Total	
Subsidized and/or Restricted Renter-Occupied Units	252	26.9%	1178	67.2%	233	31.9%	1663	48.6%
Unsubsidized and Unrestricted Renter-Occupied Units	295	31.5%	369	21.1%	325	44.5%	989	28.9%
Owner-Occupied Units	390	41.6%	205	11.7%	173	23.7%	768	22.5%
Total	937		1752		731		3420	

Subsidies and Restrictions



- Subsidized and/or Restricted Renter-Occupied Units
- Unsubsidized and Unrestricted Renter-Occupied Units
- Owner-Occupied Units

Subsidized and/or Restricted Renter-Occupied
Unsubsidized and Unrestricted Renter-Occupied
Owner-Occupied



Methodology:

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Data Sources:

National Housing Preservation Database

HUD Picture of Subsidized Households

Housing Costs

Using the AMI categories for a two-person household (earning \$62,700 per year), renter and owner cost data is separated into four AMI categories. Unknown units are then extrapolated based on the percentage of known units.

Methodology:

After determining the number of occupied units, ACS data for gross rent and selected monthly owner costs was collected. Cost data was not available for every unit, creating an “unknown” category. Unknown units were extrapolated based on the percentages of known units for each AMI category.

For this study, the AMI brackets are based on a two-person household, which is the average household size for the Study Area. According to HUD, the AMI for a two-person household is \$62,700 per year.

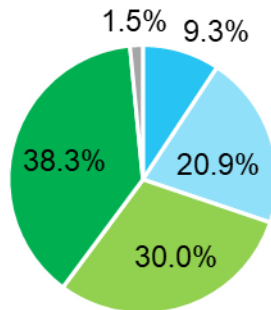
Notes:

This inventory does not make assumptions about number of persons per bedroom, nor the subsequent assumption about a reasonable number of wage-earners in a household. Instead, this inventory compares unit data to the AMI for the average household size.

Data Sources:

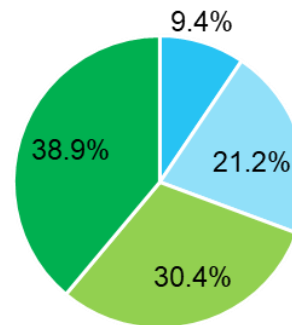
2018 American Community Survey (5-year estimate, 2014-2018): Gross Rent, Selected Monthly Owner Costs; refined

Total Units



■ 101% or more ■ 61% to 100% ■ 31% to 60%
■ 0% to 30% ■ Unknown

Known & Extrapolated Units

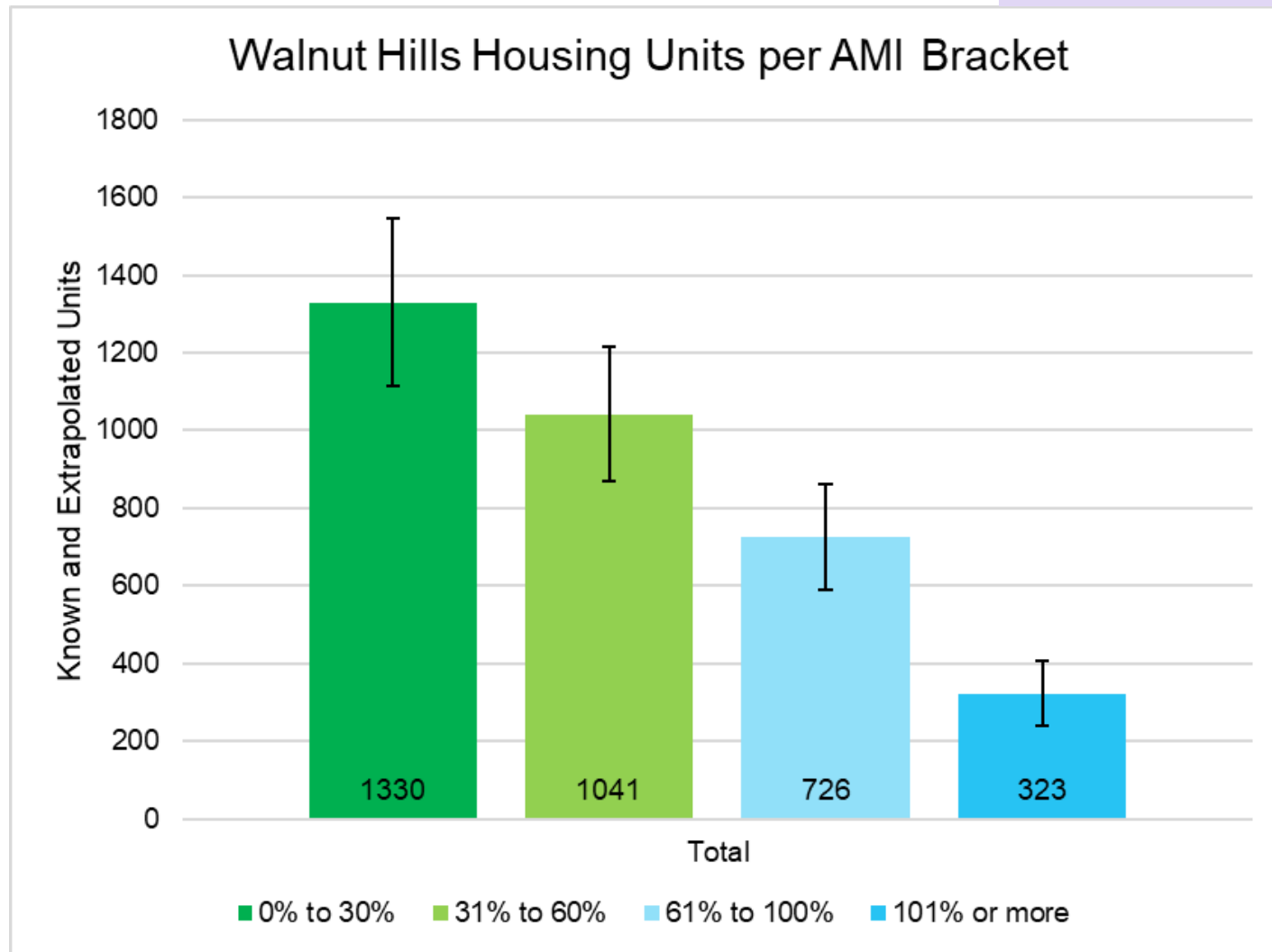


■ 101% or more ■ 61% to 100%
■ 31% to 60% ■ 0% to 30%

AMI Categories	Known Units		Unknown Units Extrapolated		Known & Extrapolated Units	
101% or more (\$1,583 or more)	318	9.4%	5	9.4%	323	9.4%
61% to 100% (\$956 to \$1,568)	715	21.2%	11	21.2%	726	21.2%
31% to 60% (\$486 to \$941)	1025	30.4%	16	30.4%	1041	30.4%
0% to 30% (\$0 to \$470)	1310	38.9%	21	38.9%	1330	38.9%
Total	3367	100.0%	53	100.0%	3420	100.0%

Methodology:

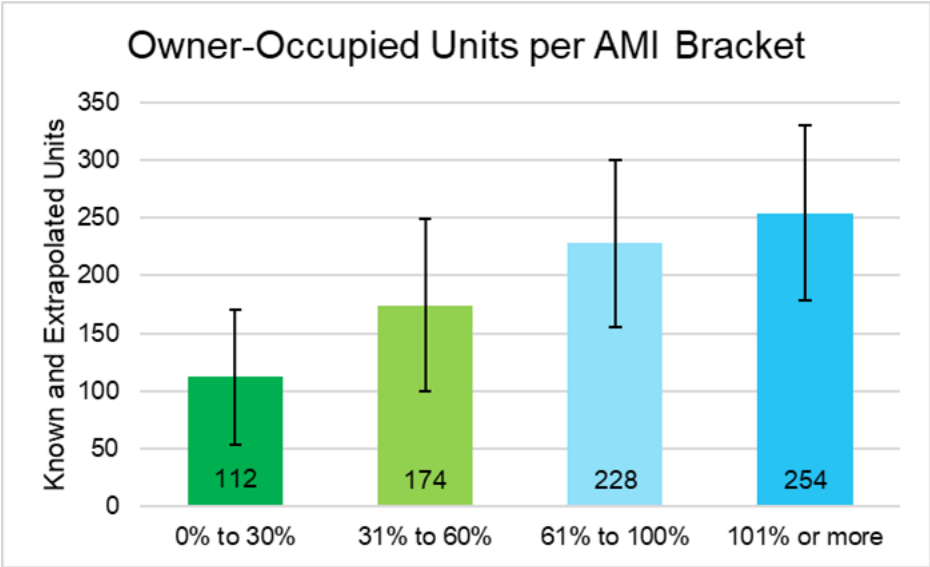
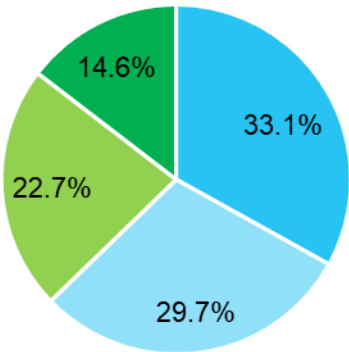
This inventory uses the total known and extrapolated units. However, the MOE only applies to known units reported in ACS data.



Housing Costs by Type of Occupancy

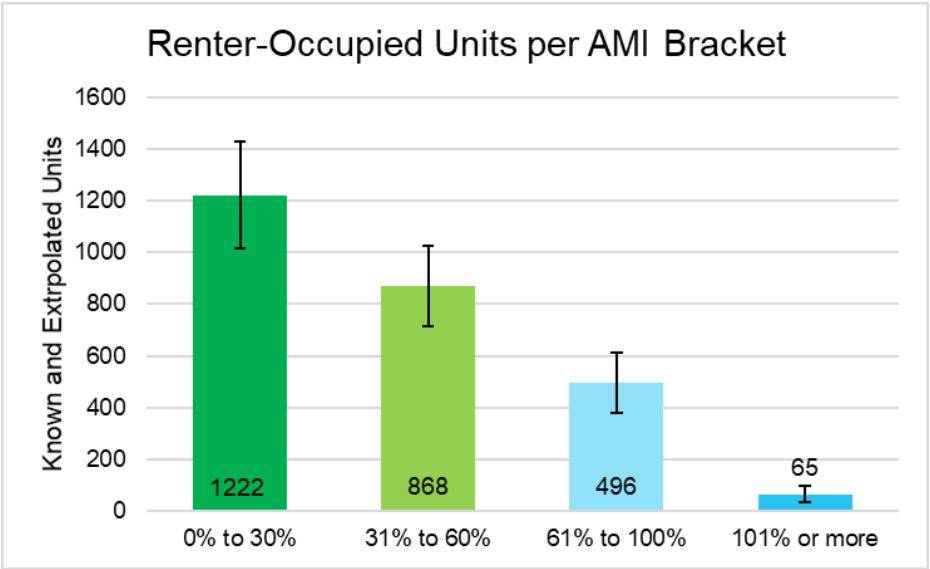
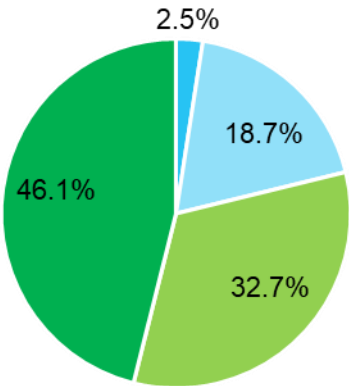
Owner-Occupied Known & Extrapolated Units	
254	33.1%
228	29.7%
174	22.7%
112	14.6%
768	100.0%

Owner-Occupied Known & Extrapolated Units



Renter-Occupied Known & Extrapolated Units	
65	2.5%
496	18.7%
868	32.7%
1222	46.1%
2652	100.0%

Renter-Occupied Known & Extrapolated Units



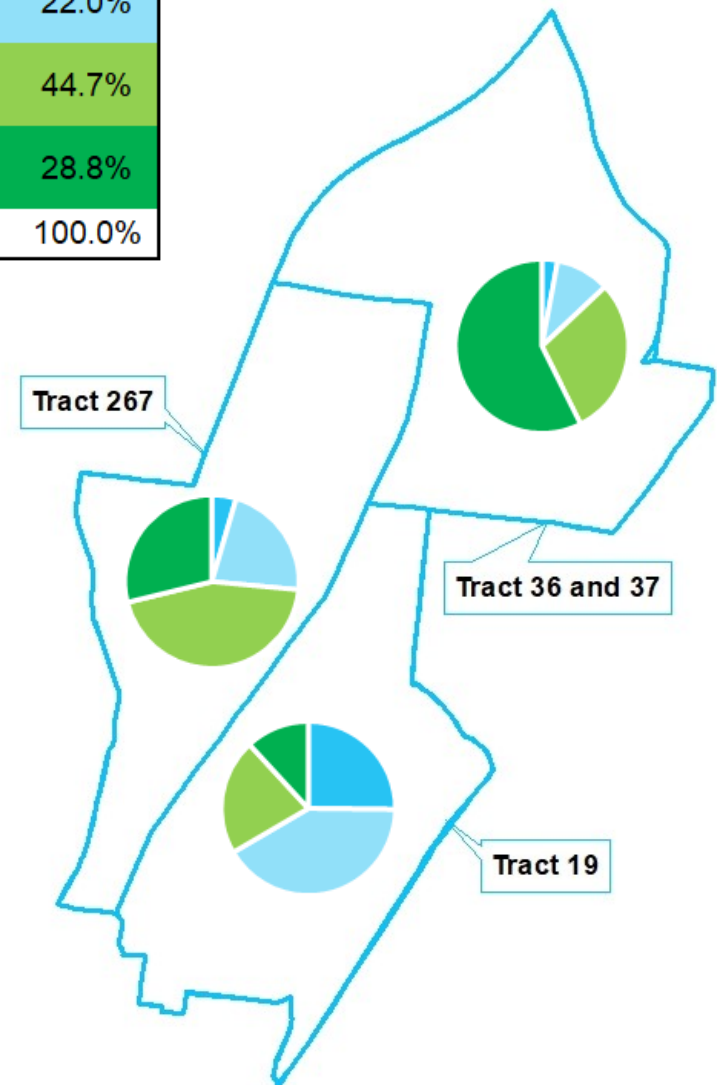
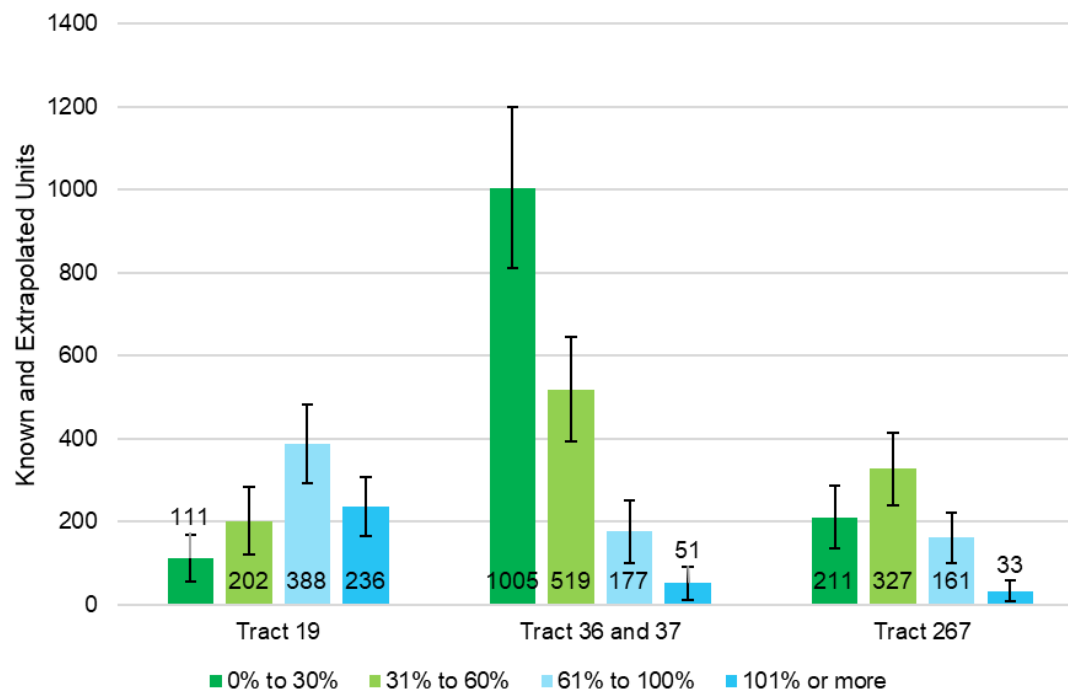
Housing Costs, within Sub-Areas (Known & Extrapolated Units)

AMI Categories	Tract 19		Tract 36 and 37		Tract 267	
101% or more (\$1,583 or more)	236	25.2%	51	2.9%	33	4.5%
61% to 100% (\$956 to \$1,568)	388	41.4%	177	10.1%	161	22.0%
31% to 60% (\$486 to \$941)	202	21.6%	519	29.6%	327	44.7%
0% to 30% (\$0 to \$470)	111	11.8%	1005	57.4%	211	28.8%
Total	937	100.0%	1752	100.0%	731	100.0%

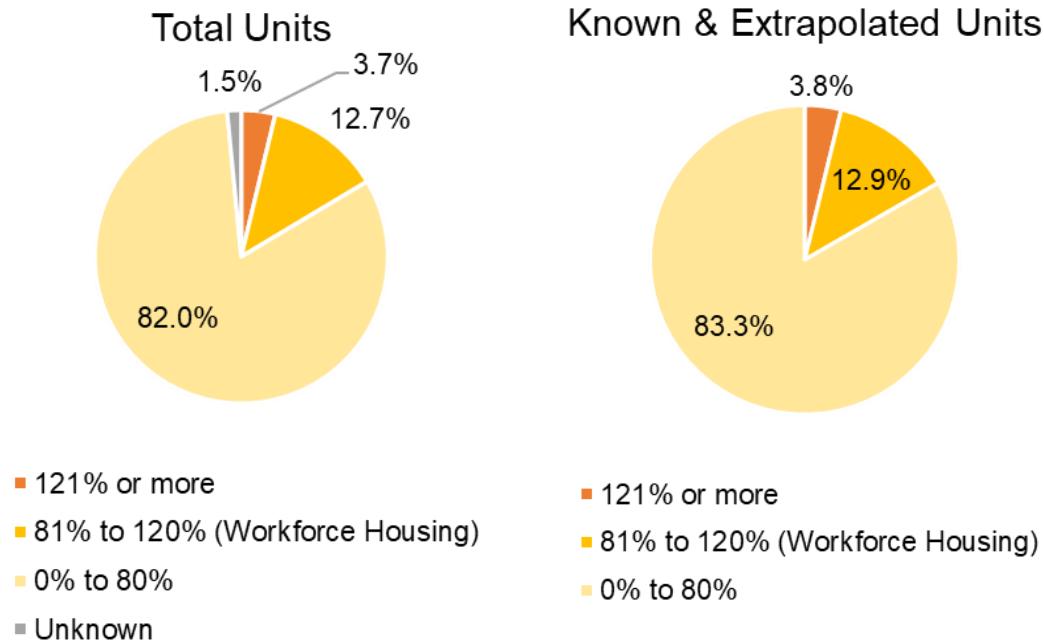
Notes:

The coefficients of variation for Tract 36 and 37 and Tract 267 at “101% or more” AMI are 48% and 51%, respectively. These should be considered unreliable estimates.

Housing Units per AMI Bracket by Sub-Area



Workforce Housing Costs (81-120% of AMI)



AMI Categories	Known Units		Unknown Units Extrapolated		Known & Extrapolated Units	
121% or more (\$1,897 or more)	128	3.8%	2	3.8%	130	3.8%
81% to 120% (\$1,270 to \$1,881)	434	12.9%	7	12.9%	441	12.9%
0% to 80% (\$0 to \$1,254)	2805	83.3%	44	83.3%	2849	83.3%
Total	3367	100.0%	53	100.0%	3420	100.0%

Methodology:

After determining the number of occupied units, ACS data for gross rent and selected monthly owner costs was collected. Cost data was not available for every unit, creating an “unknown” category. Unknown units were extrapolated based on the percentages of known units for each AMI category.

For this study, the AMI brackets are based on a two-person household, which is the average household size for the Study Area. According to HUD, the AMI for a two-person household is \$62,700 per year.

Notes:

This inventory does not make assumptions about number of persons per bedroom, nor the subsequent assumption about a reasonable number of wage-earners in a household. Instead, this inventory compares unit data to the AMI for the average household size.

The estimated number of households with incomes in the 81-120% AMI bracket in Walnut Hills is 347 (10.1% of total households).

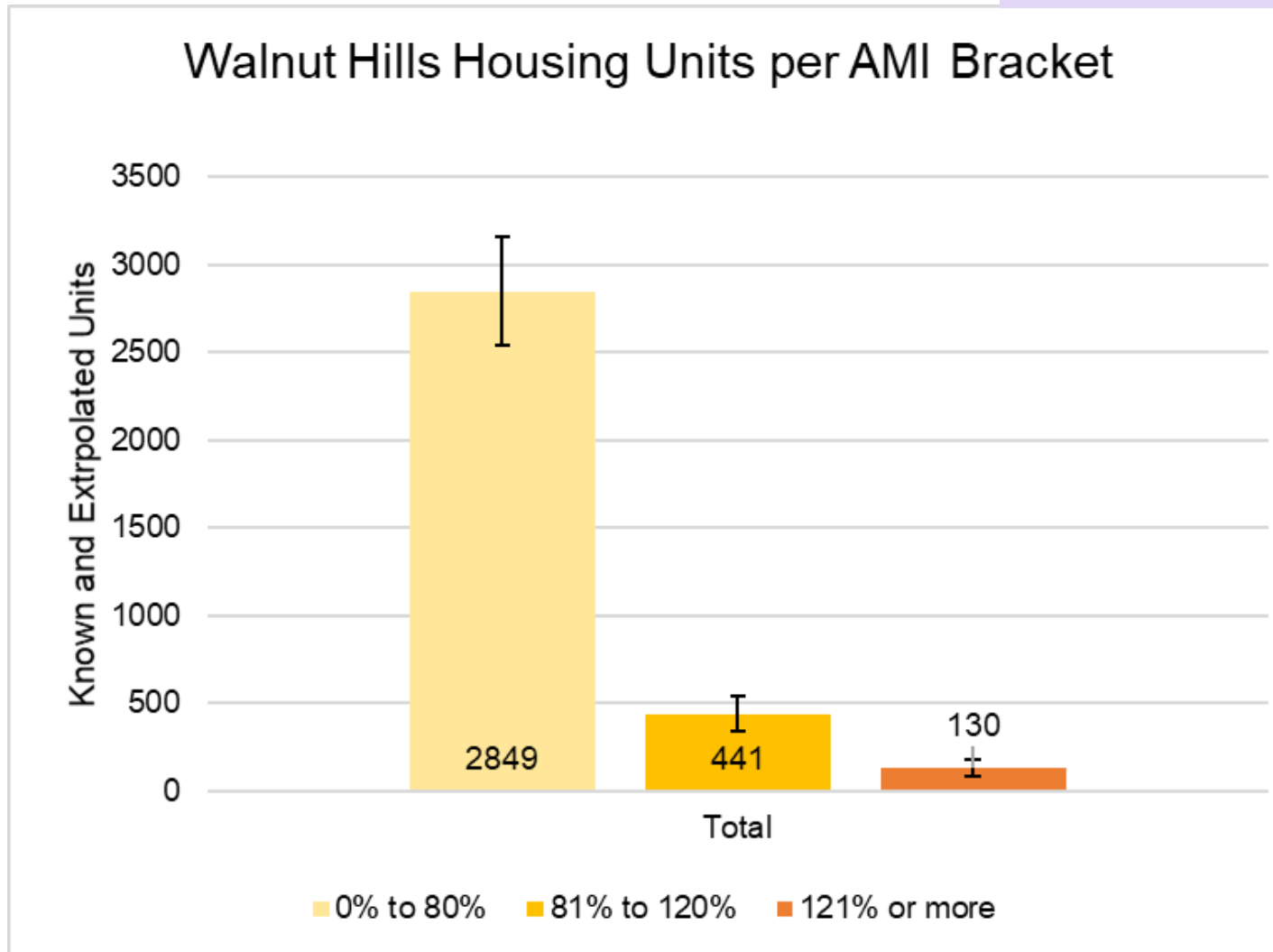
Data Sources:

2018 American Community Survey (5-year estimate, 2014-2018): Gross Rent, Selected Monthly Owner Costs; refined

Workforce Housing Costs (81-120% of AMI)

Methodology:

This inventory uses the total known and extrapolated units. However, the MOE only applies to known units reported in ACS data.



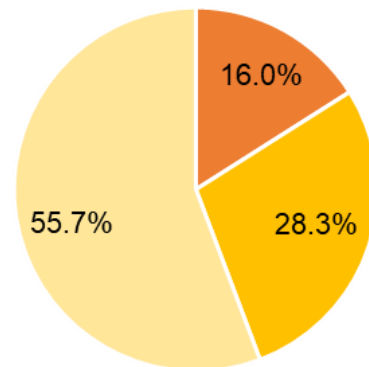
Workforce Housing Costs by Type of Occupancy

Notes:

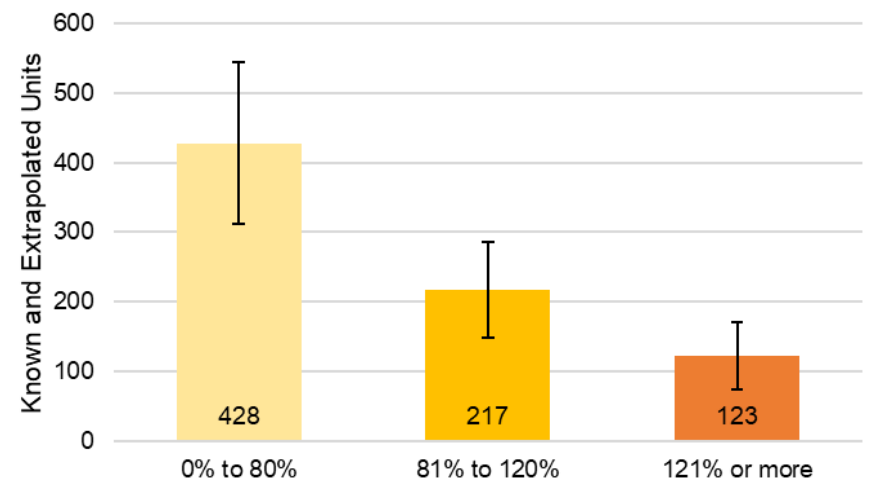
The coefficient of variation for renter-occupied units at "121% or more" AMI is 159% and should be considered an unreliable estimate.

Owner-Occupied Known & Extrapolated Units	
123	16.0%
217	28.3%
428	55.7%
768	100.0%

Owner-Occupied Known & Extrapolated Units

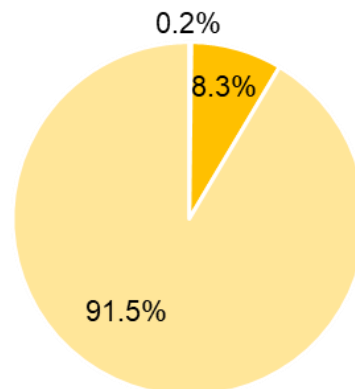


Owner-Occupied Units per AMI Bracket

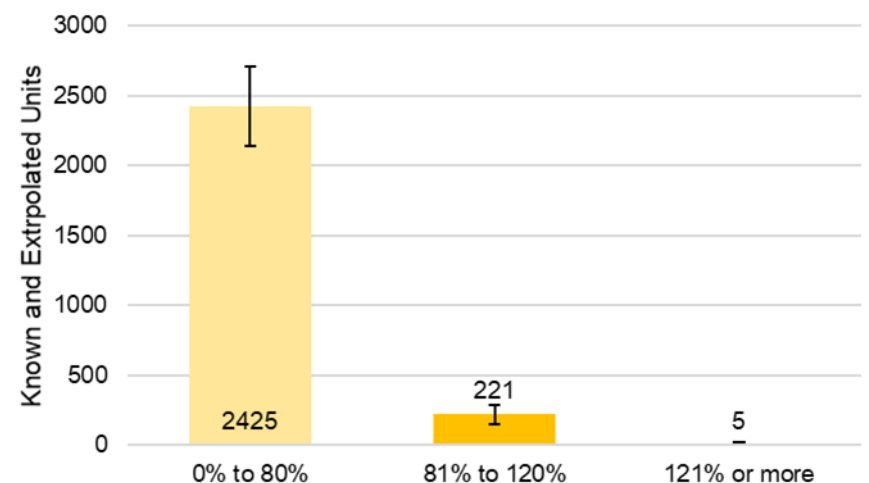


Renter-Occupied Known & Extrapolated Units	
5	0.2%
221	8.3%
2425	91.5%
2652	100.0%

Renter-Occupied Known & Extrapolated Units



Renter-Occupied Units per AMI Bracket

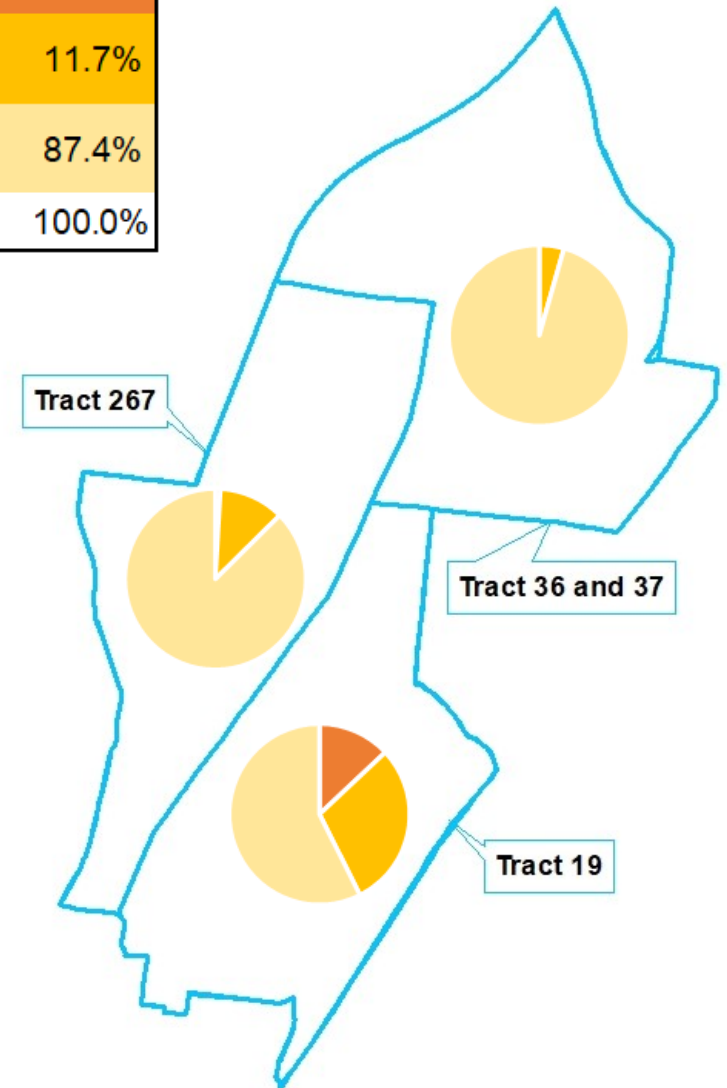
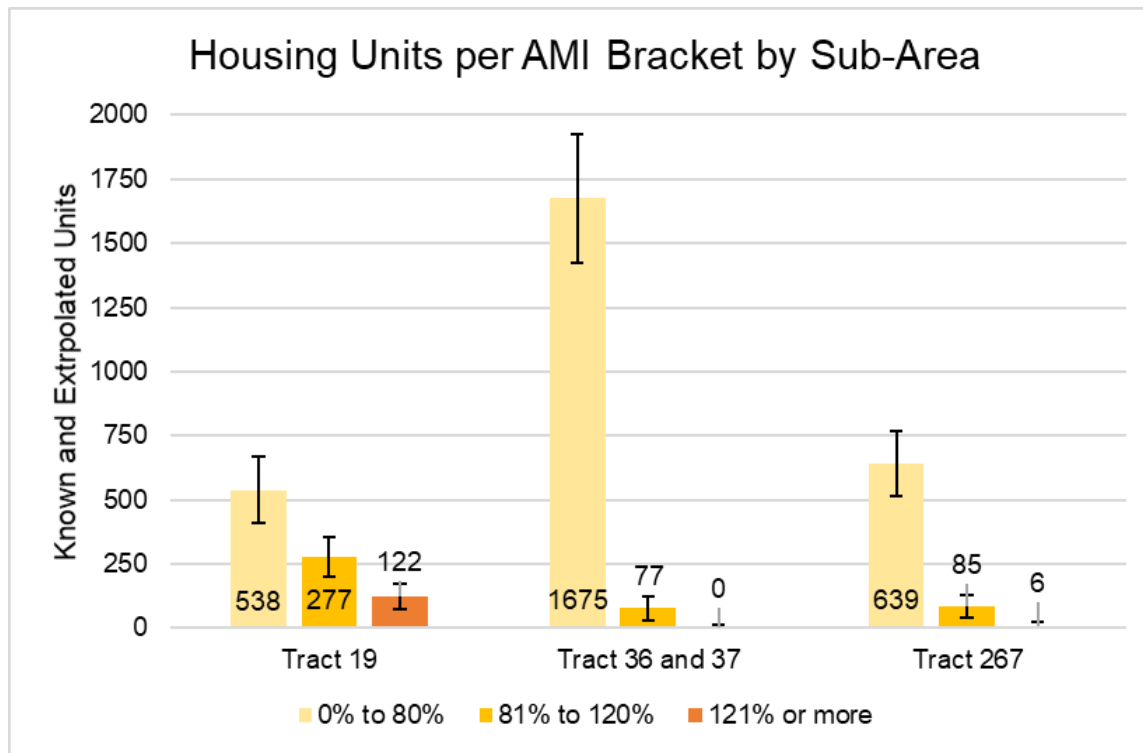


*Workforce Housing Costs, within Sub-Areas
(Known & Extrapolated Units)*

AMI Categories	Tract 19		Tract 36 and 37		Tract 267	
121% or more (\$1,897 or more)	122	13.0%	0	0.0%	6	0.9%
81% to 120% (\$1,270 to \$1,881)	277	29.6%	77	4.4%	85	11.7%
0% to 80% (\$0 to \$1,254)	538	57.4%	1675	95.6%	639	87.4%
Total	937	100.0%	1752	100.0%	731	100.0%

Notes:

The coefficient of variation in the “121% or more” AMI category for Tract 267 is 177% and should be considered an unreliable estimate.



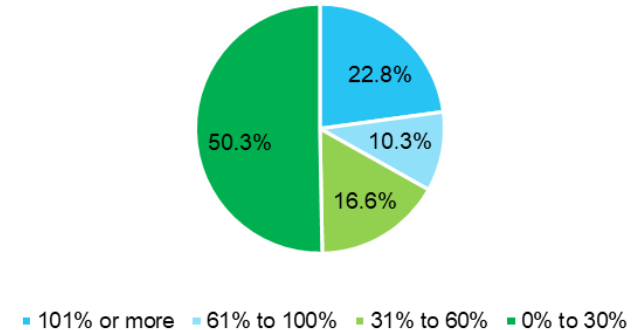
Income and Housing

This page and the following page summarize information found on pages 11-13 and 20-23 on households per AMI bracket and housing units considered affordable per AMI bracket.

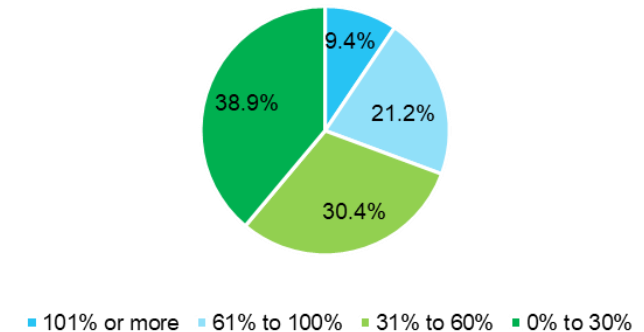
AMI Categories	Tract 19		Tract 36 and 37		Tract 267	
101% or more (\$63,327 or more)	500	53.4%	164	9.4%	117	16.0%
61% to 100% (\$38,247 to \$62,700)	141	15.0%	146	8.3%	67	9.1%
31% to 60% (\$19,437 to \$37,620)	104	11.0%	318	18.1%	146	19.9%
0% to 30% (\$0 to \$18,810)	193	20.6%	1125	64.2%	402	55.0%
Total	937	100.0%	1752	100.0%	731	100.0%

AMI Categories	Tract 19		Tract 36 and 37		Tract 267	
101% or more (\$1,583 or more)	236	25.2%	51	2.9%	33	4.5%
61% to 100% (\$956 to \$1,568)	388	41.4%	177	10.1%	161	22.0%
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0% to 30% (\$0 to \$470)	111	11.8%	1005	57.4%	211	28.8%
Total	937	100.0%	1752	100.0%	731	100.0%

Walnut Hills Households per AMI Bracket



Walnut Hills Housing Units per AMI Bracket



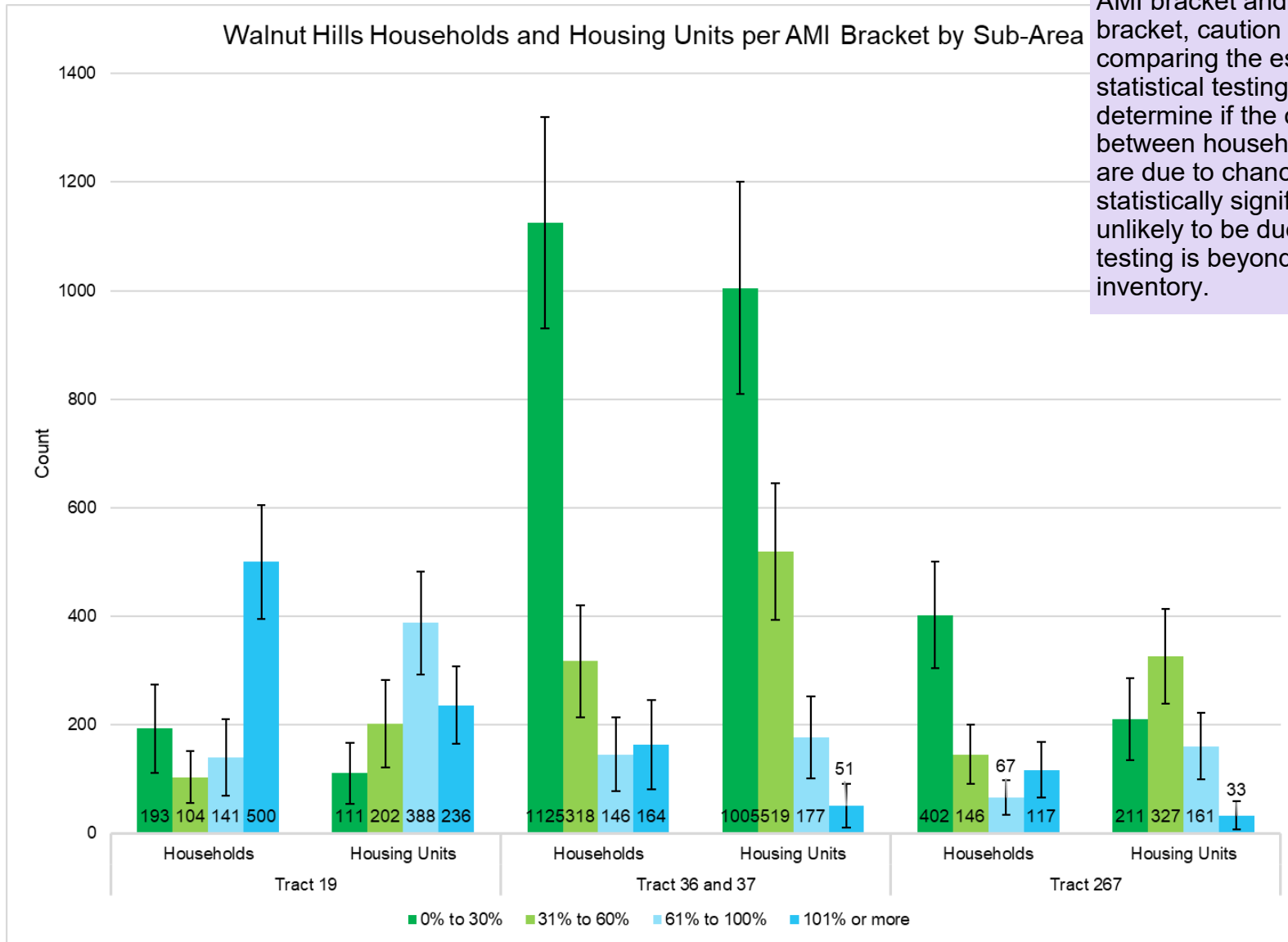
Data Sources:

2018 American Community Survey (5-year estimate, 2014-2018): Household Income in the Past 12 Months, Gross Rent, Selected Monthly Owner Costs; refined

Income and Housing

Notes:

While this bar graph provides a side-by-side examination of households per AMI bracket and housing units per AMI bracket, caution must be used in comparing the estimates. Further statistical testing is necessary to determine if the observed differences between households and housing units are due to chance or if they are statistically significant, and therefore unlikely to be due to chance. Such testing is beyond the scope of this inventory.



Data Sources

In order to maintain accuracy, consistency, and replicability, this inventory used a variety of publicly accessible data.

Primary

Area Median Income: U.S. Department of Housing and Urban Development Income Limits (HUD)

Census Data: American Community Survey (U.S. Census Bureau)

Geographic Data: Cincinnati Area Geographical Information System (CAGIS)

Secondary

2015 Housing Inventory Over-the-Rhine and Pendleton (Community Building Institute)

2018 Draft Housing Inventory Over-the-Rhine and Pendleton (City of Cincinnati Department of City Planning)

“About ACS Estimates and Margins of Error in NEO CANDO 2010+” (NEO CANDO)

American Community Survey and Puerto Rico Community Survey 2018 Subject Definitions (U.S. Census Bureau)

Housing Choice Vouchers: U.S. Department of Housing and Urban Development Picture of Subsidized Households (HUD)

Subsidies and Restrictions: National Housing Preservation Database (NHPD)

“The American Community Survey” (ESRI)

Vacancy: U.S. Department of Housing and Urban Development USPS Vacant Address Data (HUD)