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E-mail: info@smshawaii.com
Website: www.smshawaii.com

HAWAI'I HOUSING PLANNING STUDY, 2019

Prepared for the Hawai'i Housing Finance and Development Corporation

Prepared by SMS Research & Marketing Services, Inc.
December. 2019
Rev. 02-10-2020

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Website: www.smshawaii.com

December 30, 2019

Ms. Janice Takahashi, Chief Planner
Hawai'i Housing Finance and Development Corporation
Planning and Evaluation Office
677 Queen Street, Suite 300
Honolulu, Hawai'i 96813

Dear Ms. Takahashi:

It is with pleasure that SMS Research presents this Final Report of the findings of the Hawai'i Housing Planning Study, 2019. We believe the results will be an important tool to be used by those who will plan for and develop new housing opportunities for Hawai'i's people in the remainder of this decade.

It has been a pleasure to serve you during this project, and we look forward to working with you in the future.

Sincerely,

James E. Dannemiller
Executive Vice President

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ACKNOWLEDGMENTS

Hawai‘i Housing Planning Study, 2019

This report is the result of months of work by many people. We wish to acknowledge the participants in this project and their continuing dedication to housing planning based on hard data and the needs of Hawai‘i residents. The people listed below, and the agencies they represent, have demonstrated the wisdom and foresight required to maintain a comprehensive long-range data system for housing planning. In their dedication to the successful resolution of Hawai‘i’s housing problems, they have provided the guidance and direction to put the project in motion, the resources to make it possible, and the tireless dedication to making the system work for the people of Hawai‘i.

- Hawai‘i Housing Finance and Development Corporation: Craig K. Hirai, Former Executive Director; Denise Iseri-Matsubara, Interim Executive Director; Janice Takahashi, Chief Planner; Lisa Wond, Planner

- City and County of Honolulu: Pam Witty-Oakland, Director, Department of Community Services; Kathy Sokugawa, Acting Director, Department of Planning & Permitting; Marc Alexander, Executive Director, Office of Housing

- Maui County: LoriAnn Tsuhako, Director; Linda Munsell, Deputy Director; Buddy Almeida, Housing Administrator

- Hawai‘i County: Neil Gyotoku, Former Housing Administrator; Duane Hosaka, Housing Administrator; Alison Mukai, Grants Management Division Head

- Kaua‘i County: Steven Franco, Former Acting Housing Director; Kanani Fu, CHA Housing Development Manager; Adam Roversi, Housing Director

- Hawai‘i Public Housing Authority: Hakim Ouansafi, Executive Director; Barbara Arashiro, Executive Assistant; Kevin Auger, Housing Development Specialist; Ben Park, Planner

- Office of Hawaiian Affairs: Jocelyn Doane, Public Policy Manager; Jim Patterson, Program Improvement Manager; Carla Hostetter, Special Projects Research Analyst

- U.S. Department of Housing and Urban Development: Jesse Wu, Director, Office of Public Housing (Honolulu); Mark Chandler, CPD Field Office Director (Honolulu)

- Department of Human Services: Harold Brackeen III, Administrator of the Homeless Programs Office

- Hawai‘i Tourism Authority: Chris Tatum, President and Chief Executive Officer; Jennifer Chun, Director of Tourism Research

- Hawai‘i Department of Hawaiian Home Lands: Andrew Choy, Planning Director

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Many housing experts have contributed to HHPS 2019 and to this report. The people listed below have given their time and expertise to provide ideas and direction, data, and review throughout the last several months. Without their time and talent, this project would not have succeeded. We are grateful to each one of them.

- Lori Arakaki, Planner, City and County of Honolulu, Department of Planning and Permitting
- Paul Brewbaker, Principal, TZ Economics
- Cheryl Enriques, Research Analyst, Honolulu Board of Realtors
- Mary Alice Evans, DBEDT Director - Director at Hawai‘i Office of Planning, Department of Business, Economic Development & Tourism
- Kim Hester, Property Technical Officer, Real Property Assessment, Finance Kaua‘i County
- Nelson Higa, Director of Strategic Development & Government Affairs, Honolulu Board of Realtors
- Carla Hostetter, Special Projects Research Analyst, Office of Hawaiian Affairs
- Keita Jo, Acting Assistant Real Property Tax Administrator, Hawai‘i County
- Marie Lihn, Economist, U.S. Department of Housing and Urban Development
- Gary Mackler, Member of the Special Action Team on Affordable Rental Housing, Kaua‘i County
- Marcy Martin, Real Property Tax Administrator, Maui County
- Mike McCartney, Director, Department of Business, Economic Development, & Tourism
- Lea Mukai, Director of Executive Services, Honolulu Board of Realtors
- Ramona Mullahey, Senior Analyst, Field Policy & Management, HUD Honolulu Field Office, Field Policy and Management, U.S. Department of Housing and Urban Development
- Jim Patterson, Program Improvement Manager, Office of Hawaiian Affairs
- Carlos Peraro, HMIS Administrator, C. Peraro Consulting, LLC
- Joe Pontanilla, CDBG Program Manager, Community Development Block Grant, County of Maui
- Joe Roos, Research & Economic Analysis Division, Department of Business, Economic Development & Tourism
- Kathy K. Sokugawa, Acting Director, City and County of Honolulu, Department of Planning and Permitting
- Eugene Tian, Chief State Economist, Research and Economic Analysis Division, Department of Business, Economic Development & Tourism
- Steve Young, Planning Research Branch Chief, City and County of Honolulu, Department of Planning and Permitting
- Suzanne Young, Chief Executive Officer, Honolulu Board of Realtors

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Interviews

- Cassandra Abdul, Executive Director, Na Hale O Maui
- Harold Brackeen III, Administrator of the Homeless Programs Office, Department of Human Services
- Paul Brewbaker, Principal, TZ Economics
- Tom Brower, State Representative, Chair of the State House Housing Committee
- Kevin Carney, (PB), NAHP-E, Vice President, EAH Housing
- Stanford Carr, President, Stanford Carr Development, LLC
- Stanley Chang, State Senator, State Senate Housing Committee Chair
- Andrew Choy, Planning Director, Hawai'i Department of Hawaiian Home Lands
- Grant Chun, Executive Director, Hale Mahaolu
- Cheryl Enriques, Research Analyst, Honolulu Board of Realtors
- Mary Alice Evans, DBEDT Director - Deputy Director at Hawai'i Office of Planning, Department of Business, Economic Development & Tourism
- Karlylnn Fukuda, President, Munekiyo & Hiraga, Inc.
- Gary Furuta, GSF LLC – Project Manager, Hawai'i Housing Development Corp.
- David Goode, P.E. Director, Department of Public Works Department, Maui County
- Jordan Hart, President, Chris Hart & Partners, Inc.
- Nelson Higa, Director of Strategic Development & Government Affairs, Honolulu Board of Realtors
- Charlie Jencks, Developer
- Arryl Kaneshiro, Project Specialist at Grove Farm Company, Inc.
- Robert J. Kroning, P.E., Director of Department of Design and Construction – City and County of Honolulu Public Works
- Kurt Matsumoto, Chief Operating Officer, Pūlama Lāna'i
- Michael P. Matsumoto, P.E., FACEC – President/CEO, R. M. Towill Corporation
- Reina Miyamoto, Executive Director, Hawai'i HomeOwnership Center
- Lea Mukai, Director of Executive Services, Honolulu Board of Realtors
- Dave Nakamura, Executive Director, Mutual Housing Association of Hawai'i
- Clarence K. Nishihara, State Senator, Chair of the Committee on Public Safety, Intergovernmental, and Military Affairs
- Jillian Okamoto, Division Administrator – Housing Assistance and Referral Programs, Catholic Charities Hawai'i
- Richard H.K. Onishi, State Representative, Chair of the State House Tourism & International Affairs Committee Chair
- Carlos Peraro, HMIS Administrator, C. Peraro Consulting, LLC
- Heather Piper, Executive Director, Hawai'i Community Reinvestment Corporation
- Joe Roos, Research & Economic Analysis Division, Department of Business, Economic Development & Tourism
- Joy A. San Buenaventura, State Representative – Puna
- Linda Schatz, Principal, Schatz Collaborative LLC
- Maile S. L. Shimabukuro, State Senator (Dr. Richard Levine on behalf of Senator Shimabukuro)
- Will Spence, former Director of the Department of Housing and Human Concerns
- Lyle Tabata, Deputy County Engineer, Public Works Department, Kaua'i County
- Janice Takahashi, Chief Planner, Hawai'i Housing Finance and Development Corporation
- Gregg Takayama, State Representative, Chair of the House Public Safety, Veterans, & Military Affairs Committee

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- Brian Takeda, Planning Project Manager, R. M. Towill Corporation
- Suzie Thieman, Executive Director at Lōkahi Pacific
- Walter Thoemmes, Managing Director for Commercial Real Estate, Kamehameha Schools
- Gavin Thornton, Executive Director, Hawai‘i Appleseed Center for Law and Economic Justice
- Eugene Tian, Chief State Economist, Research and Economic Analysis Division, Department of Business, Economic Development & Tourism
- Tracy Tonaki, Senior Vice President, D.R. Horton, Inc.
- David Ward, Developer of David Ward
- Craig Watase, President, Mark Development, Inc.
- David Yamamoto, P.E. Director, Department of Public Works, Hawai‘i County
- Suzanne Young, Chief Executive Officer, Honolulu Board of Realtors

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I. INTRODUCTION

A. BACKGROUND

The Hawai'i Housing Planning Study (HHPS) series began in 1992. The studies have been conducted as comprehensive assessments of housing markets in Hawai'i. Results covering all four of Hawai'i's counties have been presented in a set of reports summarizing market conditions. Since 1997, HHPS has included a housing projection to support housing planning. Over the years, HHPS studies have investigated a rotating list of housing issues. Some issues have remained part of the study, and some have been replaced with topics of greater interest. In 2019, HHPS includes the influence of access to public transportation and mass transit on preferred housing location, special finance options for home buyers, a new viewpoint on homelessness, the relationship between tourism and housing, and housing for special needs groups.

B. PURPOSE

The purpose of the 2019 HHPS report is to provide housing planners with contemporary data on the housing situation in Hawai'i to support planning activity. Reported here is research conducted from January through August 2019. Included in this study are housing demand, housing supply, housing prices, affordable housing, and needed housing units. Findings are fully supported by analysis of data from both the Housing Demand Survey and numerous secondary data sources, including the United States Census Bureau and Hawai'i's Department of Business, Economic Development & Tourism, among others. The State report is a summary of data collected from all study methods and across all counties.

C. METHODS

The HHPS 2019 incorporates data from ten data collection and analysis sources:

Housing Inventory: An inventory of all residential housing units in the State was conducted in the first quarter of 2019. The inventory data were taken from real property tax files for each of the four counties. Results are presented in a separate report and have been incorporated in this report as needed.

Housing Demand Survey: A statewide survey of more than 5,000 households was conducted in order to measure resident opinions and evaluations of current housing conditions, their plans to move to a new unit, their preferred characteristics of new units, their financial qualifications for purchase or rent, and household demographic information. Special topics for 2019 included: transportation and rail, transportation and employment, unique financing options, special needs housing, and housing prices.

Housing Projections: In the past, projections were taken from a separate housing model developed in the nineties. In 2019, the projection method was updated to incorporate new and more relevant data. Projected elements included housing units, housing demand, housing production, and housing prices, all to support an estimate of needed units by income group through the year 2025.

Housing Price Study: A study of housing prices (sales prices for ownership units and contract rents for rental units) was conducted. Data were collected from several sources, including rental unit advertisements, a national rent producer, several real estate data providers, the U.S. Department of Housing and Urban Development (HUD), and the American Community Survey (ACS).

Producers Survey: We conducted interviews with housing producers and planning department personnel to enhance understanding of issues related to housing development and to review County data on scheduled housing unit production. Findings were used to develop estimates of short-run housing production.

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Housing for Special Needs Groups Study: This study centered on interviews with service providers and advocates for people with special needs. The focus was on the demand and supply of housing units to serve their needs. Statistical data were gathered to connect the needs data with housing planning and production in the next five years.

Homeless Study: Information was drawn from several HHPS components to generate a more comprehensive understanding of homelessness as a housing issue this year. The intention was to bring homelessness studies into the realm of housing planning and production. In 2019, we expanded the homelessness study to include data taken from a specially prepared extract of data from the Hawai'i Homeless Management Information System.

Tourism Study: A separate study component covered the relationship between the number one industry in Hawai'i - tourism - and the residential housing market. To our literature search and secondary data gathering, we added specific questions to the Demand Survey and conducted a survey specific to out-of-state property owners.

Native Hawaiians: To enable specific stakeholders to conduct more in-depth analysis, the number of surveys completed with residents self-identifying as Hawaiian or Part-Hawaiian was increased in the Housing Demand Survey and questions were added just for this group.

Secondary Data: The study team gathered existing data and available projections to support each of the study elements discussed here. We also reviewed housing plans and production, government spending on housing, and comparisons with housing data in other states and municipalities.

Although not directly part of HHPS 2019, a Fair Market Rent survey for the County of Kaua'i was conducted during the study.

Each of these project elements is described in detail in the *HHPS 2019 Technical Report.*

D. REPORT STRUCTURE

The report begins with Section II, a description of current housing conditions in Hawai'i including demand, supply, and pricing of residential units over time. Section III discusses the projections for demand and supply and presents the most requested output of the study --"Needed Units" -- the number of additional units required to house our people from 2020 through 2025. Section IV covers the current housing issues for the year: transportation, sustainable affordability, military housing, tourism, homelessness, and housing for persons with special needs. Section V discusses public sector housing resources, including recent housing production in the public sector. Section VI provides guidance on developing a data system for tracking housing production and an inventory of affordable housing units.

An appendix presents support materials for significant elements of the report and a glossary of terms.

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II. CURRENT HOUSING SITUATION IN HAWAIʻI

The 2019 study of Hawaiʻi's housing market begins with a review of the fundamental data for housing planning -- housing supply, housing demand, and housing prices.

A. HOUSING SUPPLY IN HAWAIʻI

In this section, we consider (1) housing stock, the current collection of housing units available to Hawaiʻi residents and migrants, and (2) housing production levels and the rate at which new housing units are added to the housing stock.

1. Current Housing Stock

According to the Census, there were 532,880 housing units in Hawaiʻi in 2017, up about 1.5 percent from 524,852 units in 2014.

Total Housing Units (Table1) are units that are available for occupancy as residential owned or long-term rental accommodations. The definition excludes group quarters (prisons, dormitories, nursing homes, shelters, etc.) and commercial residential properties (hotels, condominium hotels, hostels, timeshare units, etc.), which are available only on a short-term rental basis.

Total housing units are further defined as either occupied or vacant. By Census convention, the number of occupied housing units is always equal to the number of households in the State. The total housing stock includes all occupied housing units plus vacant housing units available to the market (Table 1).

Residential housing construction fell after the Great Recession began in Hawaiʻi in 2008. Total housing units grew by about 5,600 units per year (2.2%) between 2009 and 2011. Between 2011 and 2014, growth slowed to 2,800 units per year – half what it was in the previous five years. Between 2014 and 2017, growth slowed further to about 2,675 units per year.

Table 1. Housing Unit Types by County, 2017

Housing Unit Types	Honolulu	Hawaiʻi	Maui	Kauaʻi	State
Total Housing Units	344,713	85,934	71,747	30,486	532,880
Occupied Housing Units	311,488	67,062	54,387	22,565	455,502
Vacant Housing Units	33,225	18,872	17,360	7,921	77,378
Vacant and Available	10,847	5,157	8,192	2,262	26,458
Vacant and Unavailable	22,378	13,715	9,168	5,659	50,920
Vacant for agricultural use	58	37	5	31	131
Vacant for seasonal use	13,551	9,537	6,882	4,178	34,148
Other Vacant	8,769	4,141	2,281	1,450	16,641
Housing Stock	322,335	72,219	62,580	24,827	481,960
Pct. available (occupied & vacant)	93.5%	84.0%	87.2%	81.4%	90.4%
Percent unavailable units	6.5%	16.0%	12.8%	18.6%	9.6%
Percent vacant for seasonal units	3.9%	11.1%	9.6%	13.7%	6.4%
Percent other vacant	2.5%	4.8%	3.2%	4.8%	3.1%

Source: ACS 2017 5-yr Estimates, Table B25004 and DP04.

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a. Housing Stock Size

Among the 532,880 housing units in Hawai'i in 2017, 481,960 housing units were available to the resident housing market (Table 2). We refer to this number as the housing stock. Within the housing stock, 455,502 were occupied units and 26,458 were available vacant units.

About 50,920 housing units (9.6%) were not part of the housing stock in 2017. Of those, over 67 percent were vacant for seasonal, recreational, or occasional use. A small number of units (131) were vacant and held off the market for use by migrant agricultural workers.

Units that were vacant for seasonal, recreational, or occasional use (seasonal) are the most significant component of Hawai'i's unavailable housing units. There were 34,148 of them in 2017, up 3.3 percent from 2014. That was 44.1 percent of vacant housing units and 6.4 percent of all housing units in the State.

There were 16,641 housing units classified as "other vacant." The definition includes housing units that are held off the market while a decision is made regarding their status. Types of decisions include litigation, settling estates, involvement in other legal proceedings, units held while they are being refurbished or rebuilt, or while owners are deciding what to do with their vacant property. In 2017, Hawai'i's other vacant units made up one-third of vacant and unavailable units (32.7%) and 3.1 percent of total housing units.

Hawai'i has typically been in the top 15 percent of states losing housing units to vacancies. We ranked 12th for percent of total housing units held for seasonal, recreational, and occasional use in 2017. Only two states ranked higher than the counties of Hawai'i, Kaua'i, and Maui with respect to the percent of total units held off the market for seasonal use.

Across the State, there were differences in the percent of total housing units counted as housing stock. In Honolulu, 6.5 percent of all units were unavailable. In the other counties, that figure was significantly higher, as in 18.6 percent for Kaua'i County, 16 percent in the County of Hawai'i, and 12.8 percent for Maui County.

b. Trends in Housing Stock, 2014-2017

A brief overview of housing trends from 2014 and 2017 Census data will highlight changes to the housing stock in recent years (Table 2).

Table 2. State of Hawai'i, Changes in Housing Stock, 2014-2017

	2014		2017		Change 2014-2017	
	Number	Percent	Number	Percent	Number	Percent
Total Housing Units	**524,852**	100.0%	**532,880**	100.0%	**8,028**	1.5%
Single Family	282,060	53.7%	286,873	53.8%	4,813	1.7%
Multi-Family	242,792	46.3%	246,007	46.2%	3,215	1.3%
Total Available Housing Stock	**477,520**	91.0%	**481,960**	90.4%	**4,440**	0.9%
Occupied Housing Units	**450,299**	85.8%	**455,502**	85.5%	**5,203**	1.2%
Owner-Occupied Units	257,121	49.0%	264,651	49.7%	7,530	2.9%
Renter-Occupied Units	193,178	36.8%	190,851	35.8%	-2,327	-1.2%
Vacant Housing Units	**74,553**	14.2%	**77,378**	14.5%	**2,825**	3.8%
Vacant and Available	27,221	5.2%	26,458	5.0%	-763	-2.8%
For Rent	18,704	3.6%	19,370	3.6%	666	3.6%
Rented, Not Occupied	2,418	0.5%	2,065	0.4%	-353	-14.6%
For Sale Only	4,085	0.8%	3,088	0.6%	-997	-24.4%
Sold, Not Occupied	2,014	0.4%	1,935	0.4%	-79	-3.9%
Vacant and Unavailable	47,332	9.0%	50,920	9.6%	3,588	7.6%
Seasonal Use	33,054	6.3%	34,148	6.4%	1,094	3.3%
Vacant for Agricultural Use	93	0.0%	131	0.0%	38	40.9%
Other Vacant	14,185	2.7%	16,641	3.1%	2,456	17.3%

Source: ACS 2014 and 2017 5-yr. Estimates, Tables B25004, S2504, and S1101.

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The total housing unit growth rate is slowing. Between 2003 and 2007, Hawai'i added 31,639 housing units to its total. Between 2007 and 2011, 14,895 were added. Between 2011 and 2014, 7,468 units were added to total housing units and 8,028 units were added between 2014 and 2017.[1]

In recent years, Hawai'i has been building more units that aren't being used for Hawai'i families. In Table 2 we see that total housing units grew by 1.5 percent between 2014 and 2017. Housing stock, on the other hand, grew by only 0.9 percent. Vacant and unavailable housing units grew by 7.6 percent.

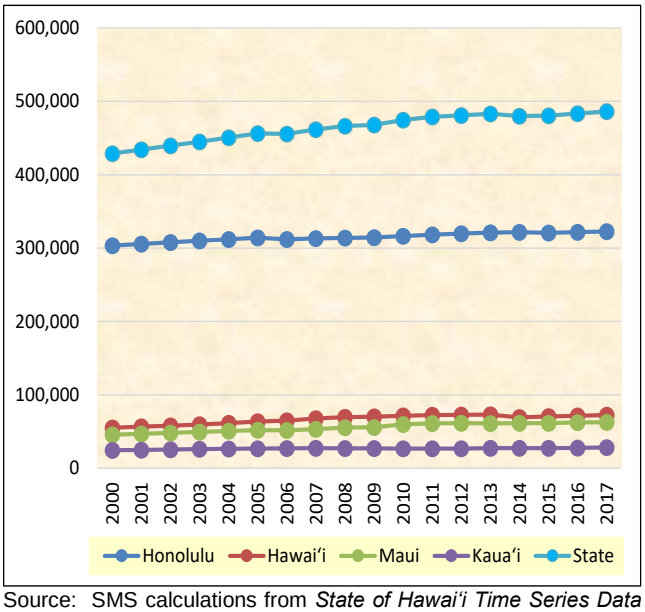
Within the housing stock, the number of occupied housing units grew by 1.2 percent, essentially the same rate as housing stock. But the number of vacant units went up by 3.8 percent, due almost entirely to increasing numbers of rental vacancies.

Still, the major concern is over vacant unavailable units. The increase in seasonal units was 3.3 percent between 2014 and 2017, down somewhat over the earlier part of the decade but still rising faster than the usable housing stock. The growth in "other vacant" units was 17.3 percent in the last four years as more of our usable stock is remaining unoccupied when families vacate.

The County of Hawai'i had the largest average annual increase, adding 1.7 percent to its housing stock each year. The City and County of Honolulu had the smallest average annual increase at 0.3 percent per year. The counties of Maui and Kaua'i added 2.1 and 0.8 percent to their total housing stock each year.

Overall, the number of vacant and available units was down slightly. There were 27,221 vacant and available units in 2014 and 26,458 units in 2017. The overall numbers, however, hide a large increase in rental vacancies and a significant decrease in vacant-for-sale units. The market gets tighter as we build in more unavailable units.

Figure 1. Housing Stock by County, 2000–2017



Source: SMS calculations from *State of Hawai'i Time Series Data Book* and ACS Tables in Series B25000.

c. Homeownership

Homeownership rates fell across the nation as a result of the Great Recession and Hawai'i was no exception. Some experts feel the low homeownership rate is a sign that the housing market recovery is not yet complete. High prices, low inventories, and a lack of confidence in the market slowed sales, especially in high-priced markets like Hawai'i. More important, the impact of the slow recovery falls heaviest on first-time buyers. It is their entry to the market that boosts the homeownership rate.

Between 1990 and 2010, while the housing stock was growing, homeownership rates also grew. Homeownership rose during the market run-up in the early nineties and fell during the late nineties.

[1] DBEDT Data Book 2014, Table 21.20, Housing Units by County: 2000 to 2014.

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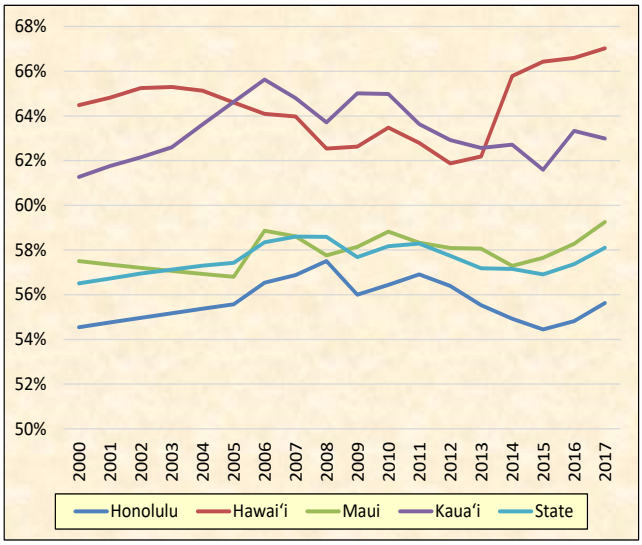
Figure 2. Homeownership Rates, 2000-2017



Source: U.S. Census 2000; 2001-2006 calculated; ACS 2007-2008 3-year estimates; ACS 2009-2017 5-year estimates. An atypical one-year drop in 2007 has been smoothed here.

Homeownership rose again during the last housing market boom to a high of 60 percent in 2006. Homeownership in Hawai'i then fell steadily to its low of 56.9 percent in 2015. Since then, however, homeownership for the state and its counties appears to be trending upward. Figure 2 shows state and county homeownership rates as they drifted downward from the peak of the bubble through 2015, then began to climb between 2015 and 2017. The 2017 statewide homeownership rate was 58.1 percent.

d. Shelter Cost & Shelter-to-Income Ratios

High-priced housing markets like Hawai'i's often have high ratios of shelter cost to household income. Households with shelter-to-income (STI) ratios greater than 30 percent are said to be cost-burdened, and those with ratios higher than 50 percent are said to be severely cost-burdened.

In 2011, about 51 percent of Hawai'i residents were paying less than 30 percent of their monthly income for shelter.

In 2016, the proportion of Hawai'i households paying less than 30 percent of household income for shelter (rent or mortgage plus utilities) was up to 58.2 percent.[2] Roughly eleven percent of households (11.3%) devoted 30 to 39 percent of their income to shelter payments, leaving the remaining one-quarter of households spending 40 percent or more of their income on housing.

In 2019, 17.3 percent of households had no shelter payment and 43.2 percent had a shelter-to-income ratio of less than 30 percent. The rest were spending more than 30 percent of their income on shelter and were, therefore, shelter burdened. One in ten households statewide devotes 30 to 40 percent of their income to shelter costs. For nearly one-quarter of households statewide (23.1%), shelter payments take up more than 40 percent of their income each month.

Table 3. Shelter-to-Income Ratio by County, 2019

	Monthly Shelter Payment as a Percent of Monthly Household Income				
	No Shelter Payment	Under 30 percent	30 to 40 percent	Over 40 percent	Not enough information
Honolulu	17.0%	44.1%	9.7%	23.1%	6.1%
Maui	14.5%	43.3%	10.5%	23.8%	7.8%
Hawai`i	21.1%	41.0%	8.8%	21.8%	7.3%
Kaua`i	17.2%	38.3%	10.5%	24.5%	9.4%
State	17.3%	43.2%	9.7%	23.1%	6.7%

Source: Housing Demand Survey, 2019. Base is owners and renters in Hawai'i.

The shelter-to-income data show different levels of housing affordability across counties (Table 3). The City & County of Honolulu and Maui County had the largest percentage of households with STI ratios of less than 30 percent (44.1% and 43.3%, respectively). That was an approximately 20 percent increase over 2016 for these two counties. Kaua'i County had the largest percentage of households paying more than 40 percent of their income for shelter (24.5%), followed by Maui County with 23.8 percent.

The percent of households with an STI ratio of more than 30 percent is often used as an indication of housing affordability. There is evidence that Hawai'i's STI ratios are higher than most of the nation. In 2019, the percentage of mortgage holders whose monthly housing cost was greater than 30 percent of monthly income was 40.3 percent, the highest in the nation.[3] The percentage of renters paying more than 30 percent was 55.6 percent, ranking Hawai'i third in

[2] HHPS 2016.

[3] ACS, Table DP04 2017 5-year estimates.

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the nation after Florida (59.0%) and California (57.2%).

STI ratios usually rise slowly over time and have changed very little in Hawai'i in recent years.[4] STI ratios for rented households are higher than are those for homeowners and rise a bit faster over time. The depressed housing market of the nineties held prices and rents in check while the burgeoning economy raised household incomes. Housing prices soared between 2003 and 2006 and pushed the number of renter households paying more than 30 percent of their income for shelter to 48 percent in 2006, climbing to 60 percent in 2011 and 2016. The current STI ratio for renters has improved somewhat, with just over half of all renter households spending more than 30 percent of their income on housing.[5]

e. Crowding and Doubling-up

Crowding and doubling-up are frequently used measures of housing condition. Both are accepted as indicators of housing issues. They are thought of as measures of pent-up demand for housing and as a sign that household formation may be constricted.

We sometimes hear that Hawai'i's doubling-up rate is the result of our propensity for extended family living. Our relatively large household size supports that idea. However, survey questions measured doubling up for financial reasons only and show substantial doubling rates.

In past studies, crowding was measured using the Census method (the ratio of persons in the household to rooms in the unit they occupy). In 2016, we switched to the persons per bedroom definition, which we believe is the more appropriate measure for housing planning.[6]

Table 4. Crowding, State and Counties of Hawai'i, HHPS 1992 through 2019

County	Year	Total Households	Crowding Indicators: Crowded[a]	Doubled Up[b]	Crowded and/or Doubled Up[c]
Honolulu	1992	247,349	23.2%	N/A	32.0%
	1997	272,234	10.6%	N/A	27.2%
	2003	292,003	10.1%	10.0%	17.6%
	2006	303,149	8.1%	9.7%	15.2%
	2011	310,882	13.3%	13.8%	22.9%
	2016	317,459	11.4%	11.9%	21.0%
	2019	311,451	14.1%	13.3%	23.1%
Maui	1992	34,266	26.8%	N/A	25.9%
	1997	39,252	10.4%	N/A	24.8%
	2003	43,687	11.0%	8.7%	17.3%
	2006	49,484	7.7%	9.6%	15.3%
	2011	54,132	10.7%	13.0%	19.2%
	2016	55,059	9.8%	14.1%	21.4%
	2019	54,434	13.8%	14.1%	22.5%
Hawai`i	1992	39,789	18.7%	N/A	26.0%
	1997	46,271	7.9%	N/A	24.3%
	2003	54,644	7.0%	9.3%	14.4%
	2006	61,213	6.9%	11.2%	15.9%
	2011	67,096	8.4%	11.3%	17.2%
	2016	66,989	7.4%	11.1%	16.0%
	2019	67,054	11.5%	10.3%	18.0%
Kaua`i	1992	16,981	17.4%	N/A	26.3%
	1997	18,817	9.1%	N/A	25.4%
	2003	20,460	6.0%	12.5%	16.1%
	2006	21,971	6.6%	11.9%	15.5%
	2011	23,201	10.5%	11.7%	18.1%
	2016	23,369	8.9%	11.5%	19.2%
	2019	22,563	12.2%	14.5%	21.4%
State	1992	338,385	22.2%	N/A	30.3%
	1997	376,574	10.2%	N/A	26.5%
	2003	410,794	9.6%	10.0%	17.1%
	2006	435,818	7.8%	10.0%	15.3%
	2011	455,311	12.1%	13.2%	21.4%
	2016	462,876	10.5%	12.0%	20.2%
	2019	455,502	13.6%	13.0%	22.2%

Source: Housing Demand Survey, 1992 through 2019.
[a.] Based on more than one person per room for 1992-2011, then 2 persons per bedroom for 2016 and 2019.
[b.] More than one family per housing unit (See Glossary).
[c.] 1990-2003, asked if HH was crowded or doubled up. Later asked crowded/doubled up separately and combined them.

[4] See Table A-10 and A-11 in the Appendix for trend data.
[5] ACS, Table B25070, 2006-2017.
[6] Crowding based on persons per bedroom is consistently only 4-8% higher than crowding levels based on persons per room.

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Doubling-up includes having more than two generations in the household, having unrelated individuals in the household, or having same-generation relatives in the household. In all cases, the Housing Demand Survey shows that doubled-up persons are in the household because they cannot afford to live elsewhere.

Table 4 shows HHPS crowding and doubling-up data for the State and each of the counties. The 1992 study followed a major price run-up during which high prices kept many would-be buyers from entering the market. The study conducted in 1997 was nearing the end of a very long market recovery during which incomes were catching up with prices and crowding was notably lower than in 1992. The 2003 measure was taken at the beginning of the next price run-up.

By 2006, Hawai'i was at the peak of the largest price run-up in its history. During that period, housing production increased and crowding and doubling remained low. In 2008, the Great Recession began in the housing market and the effects were dramatic. Crowding began to increase. In 2011, crowding seemed to have peaked. After a slight decline in 2016, levels of crowding appear to be on the rise again, with a 3.1 percent increase from 2016 to 2019.

Crowding and doubling-up behave differently in each of the counties. In general, the rates are more volatile in the City and County of Honolulu. Maui and Kaua'i have similar profiles and are typically less crowded than O'ahu. Hawai'i County has been the least crowded and least volatile market. The pattern of change in crowding and doubling-up is nearly the same as for other counties, but the rate of change is lower.

Hawai'i's crowding rate has long been among the highest in the nation. In 2017, Hawai'i was ranked first in crowding for owner-occupied units (6.3%) and second for renter-occupied conditions (12.8%).[7]

f. Age and Condition of Units

Compared to other U.S. housing markets, Hawai'i's housing stock is newer, nicer, and smaller. Except at the level of individual neighborhoods, these issues have not been big problems in our State.

Statewide, the median year built for residential units was 1978, which is slightly younger than the national median (1977). Among the Counties, Honolulu's homes are the oldest with a median build year of 1975, followed by Maui and Kaua'i Counties (1984) and Hawai'i County (1987).

According to the U.S. Census Bureau, very few of Hawai'i's housing units are in poor or substandard condition (lacking complete plumbing or kitchen facilities). The 2017 5-year estimate from ACS, says that less than one percent of occupied housing units Statewide had incomplete plumbing facilities (0.6%), and 1.6 percent had incomplete kitchen facilities. Across the counties, the rate of incomplete plumbing facilities ranged from a high of 1.5 percent in Hawai'i County to a low of 0.4 percent in Honolulu County. The counties' rates of incomplete kitchen facilities ranged from a high of 2.3 percent in Hawai'i County and a low of 1.1 percent in Kaua'i County.

Our housing units are smaller than those in other American housing markets. For the State, the median number of rooms per occupied housing unit was 4.6. Nationally, the average housing unit had 5.8 rooms in 2014. At the level of municipalities, Honolulu, Hilo, Wailuku, and Līhu'e average room counts were lower than all but a handful of other major housing markets in the country (e.g., New York, 4.2; San Francisco, 4.4; Boston, 4.5).

2. Housing Production

Hawai'i's total housing units count was 520,088 units in 2010 and 546,213 units in 2018[8]. During those years, we produced 26,125 units, an average of 2,902 units per year, for an average annual growth rate of about 0.6 percent. This was a bit lower than the national average annual growth rate of 1.3 percent for those years (0.9%).

[7] ACS 2017 5-yr. est., Table B25014, tenure by occupants per room.

[8] DBEDT Data Book Time Series, Table 21.20.

a. Housing Stock Growth, 1990-2017

Housing stock, adjusted for vacant and unavailable units, had a slightly different pattern (Table 5). The State's growth rate was the same as the average of all 50 states (4.5%).

Table 5. Housing Stock Growth 2010 - 2017

	Housing Units 2010	Housing Units 2017	Housing Units Added	Percent Change
State	461,437	482,864	21,427	4.6%
Hawai'i	65,872	72,384	6,512	9.9%
Honolulu	315,489	322,665	7,176	2.3%
Kaua'i	23,839	24,901	1,062	4.5%
Maui	57,470	62,912	5,442	9.5%

Source: SMS based these on ACS Tables B25001 – B25004.

When the population increases and household formation proceeds normally, additional housing units are needed to shelter the resulting new households.

Housing production can be measured by counting completion certificates, or by subtracting this year's stock from last year's stock.

As in all the previous HHPS reports, we find again that the housing supply continues to lag behind demand in Hawai'i. We will revisit this subject in the projections section of this report and in the closing remarks.

In the interim, we ought to note that the growth is not homogeneous across different types of housing stock. Production is slower at the lower end of the housing market. As found elsewhere in the nation, housing prices rise faster for the lower-income quintiles than for the upper ones.[9] In addition, production lags demand in the rental housing segment and produces higher numbers of single-family units.

b. Impediments to Production

In this section, we discuss some major barriers to housing supply in Hawai'i. They all affect the State and its four counties in like manner, and a significant amount of research has been reported in peer-reviewed journals to estimate the statistically significant correlation between the barrier and supply inelasticity and/or high housing prices. There is, however, no research that defines the net contribution of individual impediments to a change in housing production. Nor is there research that identifies the mechanism by which those elements affect housing prices or housing supply inelasticity. Finally, no definitive research has been conducted in Hawai'i concerning these production barriers. To address these issues effectively would require research that is outside the scope of this study.

Hawai'i's housing market is supply inelastic[10]. A change in demand does not lead to a change in supply in a timely or efficient manner. That leads to low production and high prices. Previous versions of the HHPS and other studies have identified major impediments to the development of housing in Hawai'i, including the lack of "reasonably priced," developable land, lack of major off-site infrastructure, high development costs, government regulations; community opposition; and growing environmental requirements.[11] We briefly recap the primary sources of the supply problem below.

Geographic Limitation: Hawai'i lacks sufficient land near its major population centers. If we subtract open water or wetlands and all areas with slopes in excess of five percent (Rose, 1989), the remaining land might be called suitable for development. As an island state, comprised of mountains rising from the ocean floor, Hawai'i percentage land suitable for development is the lowest among the 50 states (Saiz, 2010). Furthermore, our geography becomes more constrained over time. As more area is developed, fewer acres of undeveloped land

[9] Popov, Igor. 2019. Housing markets and income inequality, *Rent Economics*, April 24, 2019.

[10] A market situation in which any increase or decrease in the price of a good or service does not result in a corresponding increase or decrease in its supply.

[11] State of Hawai'i, HHFDC, Consolidated Plan for Program Years 2015 through 2019, May 15, 2015.

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remain. The value of undeveloped land increases and the political power of owners of developed land grows. Supply is attenuated, which causes prices to rise[12] and geographic constraints reduce housing supply by limiting housing investment[13].

The purely geographic limitation may not be the most critical element in limiting housing supply, but it is the most resistant to political attempts to mitigate its impact. Short of sweeping technological advancement in construction techniques, the geographic impediment will remain constant.

Lack of Major Off-Site Infrastructure: Lack of off-site infrastructure to support new housing development is the issue of concern here[14]. It has appeared in public policy documents[15] and was mentioned by developers, affordable housing advocates, and government housing officials in our stakeholder interviews this year.

Public infrastructure like roads, sewers, water, drainage, and schools has historically been developed by local government. In Hawai'i, as the cost of infrastructure increased and development requirements grew[16], the responsibility for off-site infrastructure was passed to developers. Housing developers and those who support affordable housing production agree that this increases the cost of housing. Some stakeholders noted that it places the burden of developing on the first developer in line and spares any who follow and make use of the new infrastructure.

Government policymakers respond that the costs are passed to the owners and renters of the new development, who are the primary beneficiaries of the housing units developed. The alternative – the county provides the infrastructure -- is equivalent to asking all taxpayers to fund the new development.

By 2006, a Joint Legislative Housing and Homeless Task Force encouraged creative, innovative, and cost-effective ways such as tax increment financing or the establishment of improvement districts to finance the construction of offsite infrastructure, as well as appropriating capital improvement project funds.[17] Similar provisions have been incorporated in the most recent update of the Hawai'i State Functional Housing Plan[18].

Construction Costs: There are substantial differences in construction costs across the U.S. and Hawai'i's construction costs are high.

Rose and La Croix (1989), however, showed that the difference in construction costs was not nearly enough to explain the difference in housing costs across markets. Gyourko and Saiz (2006) also reported construction costs were not significantly related to prices. The more significant contributors to building costs were unionization, local wages, local topography, and the regulatory environment. Combined with Hawai'i's highly volatile housing market, however, construction costs can affect individual projects. Construction costs can rise sharply in construction boom periods and make tight-margin projects like workforce housing units challenging to complete.[19]

The cost of construction has been impacted by the high cost of litigation and insurance. The Affordable Housing Advisory Committee notes that "everyone involved from accountant to mason contractors have insurance costs that go into the price of their goods and services. They include property, general liability, professional liability, excess liability, unemployment, health, auto,

12 Hilbert and Robert-Nicoud identified a highly significant independent variable in their analyses of housing prices was the ratio of acres of developed land to acres of developable land.

13 Paciorek, Andrew D. 2013. Supply constraints and housing market dynamics. *Journal of Urban Economics*, Vol. *77*, p. 11-26.

14 As distinguished from the issue of inadequate or antiquated infrastructure in developed areas.

15 Mayor's Advisory Housing Advisory Committee, City and County of Honolulu, Final Report & Recommendations, April 2006.

16 Adding requirements for water prospecting, bike paths, jogging paths, etc.

17 Joint Legislative Housing and Homeless Task Force, prepared by staff of the Senate Majority Office, with contributions from the House Majority Staff Office, "Report of the Joint Legislative Housing and Homeless Task Force Pursuant to Act 196, Session Laws of Hawai'i 2005," January 2006.

18 Hawai'i Housing Finance and Development Corporation. 2017. The Hawai'i State Plan: Housing, State of Hawai'i, February 21, 2017, p. 19.

19 Massive 'Aiea workforce housing condo project on hold. (2016), Hawai'i News Now, June 2016. Download at http://www.k5thehomteam.com/story/32389776/massive-aiea-workforce-housing-condo-project-on-hold.

workers comp, business interruption, and even terrorism, to name a few."[20]

Government Regulations: The purpose of housing planning and regulation is to bring order to the development of cities and towns, protect people against arbitrary development practices, and, more recently, to protect the character of neighborhoods as they exist. Evidence suggests these are still the objectives of planners and regulators. But, as the proliferation of housing regulations continues, some observers have come to see housing regulations as a barrier to production, a cause of housing supply inelasticity, and a pathway to higher housing costs.

Hawai'i's housing markets are more regulated than most others in the nation. Honolulu's score on the Wharton Residential Land Use Regulatory Index (Wharton Index[21]) is the highest in the country (See Appendix Exhibit C-1), and David Callies (2010) has painstakingly described the individual housing regulations in the Aloha State.

Government regulations and review processes are frequently identified as major impediments to housing production, and the 2019 stakeholder survey shows many people still see regulations as a significant obstacle to housing production.

A statewide Affordable Housing Regulatory Barriers Task Force was convened in 2007 to address regulatory barriers to affordable housing. The task force noted that *"in the context of building homes that are affordable, government regulations often work against the goal of delivering more affordable housing. Although government policies and regulations are often intended to control or direct growth, target resources, and prioritize areas of importance, the unintended consequence is often that these regulations add to the cost of building affordable homes.*[22] They identified 14 regulatory barriers, including the land use entitlement process, inconsistent state and county reviews, impact fees or exactions, fiscal policy, and administrative processes.

Some observers feel there are deficiencies and system-wide weaknesses in the way land use is managed. In 2014, the State Office of Planning (OP), initiated a review of the State Land Use District Boundary Amendment process. OP's effort was summed up in the State Land Use System Review Draft Report, which explored ways to increase the effectiveness of the land use system without compromising the original intent of the Land Use Law."[23] The process involved wide-ranging debate and ended with an agreement to consider the issue further.

Many stakeholders interviewed for this project commented on review processes rather than on regulations themselves. Reviews are required at several steps along the way to project approval. In 2018, it took eight pages to describe the process for using 201H-38 for workforce housing projects in Maui County.[24] Across the State and Counties, respondents told us that reviews were duplicative, requiring the same basic reporting to more than one agency. Some felt certain review procedures were carried out with less attention and diligence than expected. This sentiment was particularly true for SHPDA and DCAB reviews.[25] Some procedures require refiling if the initial submission is not approved. In the worst cases, a developer can go through the entire set of review processes, pass all requirements, and then be summarily disapproved at a County Council meeting attended by the public. All review procedures were said to be lengthy, and we lost count of the number of times we were reminded that "time is money."

Impact of Housing Regulation

It is widely accepted in 2018 that stringent regulation of housing production will result in high housing prices, decreasing elasticity of supply, and low supply, especially in high-priced, volatile

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20 Mayor's Housing Advisory Committee, City & County of Honolulu, Final Report & Recommendations, April 2006.

21 Gyourko, Saiz, and Summers, 2007. Index scores were not calculated for other counties in Hawai'i.

22 State of Hawai'i , Office of Governor Linda Lingle, "Report of the Governor's Affordable Housing Regulatory Barriers Task Force," December 2008.

23 Office of Planning, State land use system review, http://planning.hawaii.gov/state-land-use-system-review, paragraph 1.

24 See the process schematic in Appendix, Figure C-1.

25 Housing Action Plan, p. 60.

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markets[26]. However, the adverse effects of stringent regulations and onerous review processes on affordable housing development extend beyond supply shortages and high prices.

Some have said that regulations lead to an inefficient housing market. Markets are expected to sort supply and demand such that specific household needs are matched with appropriate unit characteristics. In highly regulated situations like Hawai'i's, the market seems unable to cope with that task. Some lower-income households were placed in units beyond their means and some higher-income families are placed in units that would better serve poorer households.

Another effect of regulation comes to us from Somerville and Mayer (2001, 2003). They found that stringent regulation causes the filtering[27] process to be reversed. In markets with heavy regulation and low supply elasticity, affordable units tend to filter up and become unaffordable[28]. Thus, regulation reduces the affordable housing stock, making regulation counterproductive.

Some researchers find that highly regulated housing markets hinder the movement of labor from one market to another, a process that decreases local GDP[29].

In 2018, the study of negative impacts of regulation on housing production reached a high point, with the publication of Kevin Erdmann's book, *Shut Out*. Erdmann provides strong evidence that the housing bubble of 2002–2007 and the resulting worldwide recession of 2008-2009 were caused by a housing supply shortage stemming from over-regulation in America's key housing markets.

B. HOUSING DEMAND IN HAWAI'I

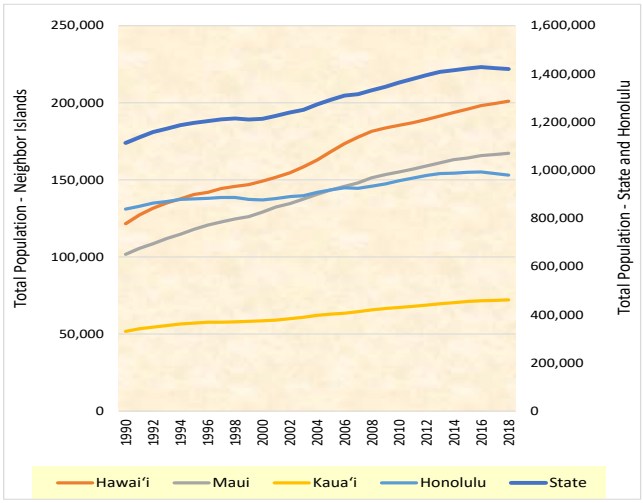
1. Historic Demand

a. Population and Growth Rates

Any discussion of housing demand must begin from population growth. It has been central to this study since 1992. In 2019, population change may be the most important topic we cover here.

Table 6 shows the annual population by County since 1990. In the nineties, Hawai'i's annual population growth rate (1.9%) was lower than in the previous decade. Between 2000 and 2010, population growth dropped to 1.2 percent per year. From 2010 to 2018, the rate fell to 0.5 percent annually. That rapid decline culminated when, in 2017 and 2018, the State's population went down by -0.3 percent each year.

Figure 3. Total Population, State and Counties of Hawai'i, 1990-2018



Source. DBEDT Data Book Time Series, 1990-2018.

[26] The literature search conducted for the HHPS 2016 captured the first 15 years of the research. Glaeser and Gyourko (2018, pp. 14-16) summarizes the technical research since 2015. Gyourko and Molloy (2017) is the most recent and most comprehensive review of the work on regulation.

[27] Bradford, Chris. 2008. "When property values rise, low-quality housing "filters up" to the high-quality housing sub-market. The reason is that rising rents encourage landlords to invest more in the property. When property values fall, high-quality housing "filters down" to the low-quality housing sub-market. The reason is that falling rents encourage landlords to invest less in property. The key in either case is that old housing costs more to maintain than new housing." We have several more citations on this. Filtering is a simple idea that ends up being very complicated. One of the issues that adds to that complexity is that regulations change the relationship. See Also, Rosenthal 2018, Hertz 2015.

[28] Specifically, "regulation increases the probability that a rental unit currently deemed affordable will become unaffordable, owner-occupied, or demolished, relative to staying affordable", p. 53.

[29] Hsieh and Moretti, 2017) calculated that GDP would be 9 percent higher if there were higher production of new housing units in Type 2 housing markets.

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Table 6. Total Population, 1990-2018

	County				
	Honolulu	Hawai'i	Maui	Kaua'i	State
1990	838,534	121,572	101,709	51,676	1,113,491
1991	850,510	127,266	105,599	53,379	1,136,754
1992	863,959	131,630	108,585	54,439	1,158,613
1993	870,348	135,085	111,944	55,461	1,172,838
1994	878,591	137,713	114,754	56,478	1,187,536
1995	881,399	140,492	117,895	57,068	1,196,854
1996	883,443	141,935	120,689	57,688	1,203,755
1997	886,711	144,445	122,772	57,712	1,211,640
1998	886,909	145,833	124,648	57,843	1,215,233
1999	878,906	146,970	126,160	58,264	1,210,300
2000	876,629	149,244	129,078	58,568	1,213,519
2001	882,755	151,690	132,428	59,075	1,225,948
2002	890,473	154,576	134,583	59,981	1,239,613
2003	894,311	158,442	137,596	60,805	1,251,154
2004	907,997	162,852	140,625	62,095	1,273,569
2005	918,181	168,237	143,448	62,863	1,292,729
2006	926,954	173,536	145,776	63,465	1,309,731
2007	925,335	177,733	148,117	64,490	1,315,675
2008	933,680	181,506	151,424	65,603	1,332,213
2009	943,177	183,629	153,393	66,518	1,346,717
2010	956,296	185,358	155,096	67,213	1,363,963
2011	967,287	187,066	157,001	67,898	1,379,252
2012	978,073	189,164	158,977	68,691	1,394,905
2013	986,222	191,466	161,105	69,660	1,408,453
2014	987,649	193,736	163,153	70,324	1,414,862
2015	991,339	195,941	164,130	71,074	1,422,484
2016	992,692	198,126	165,712	71,575	1,428,105
2017	986,429	199,503	166,491	71,780	1,424,203
2018	980,080	200,983	167,295	72,133	1,420,491
AAPC 1990-2000	0.5%	2.3%	2.7%	1.3%	0.9%
AAPC 2000-2010	0.9%	2.4%	2.0%	1.5%	1.2%
AAPC 2010-2018	0.3%	1.1%	1.0%	0.9%	0.5%
AAPC 2016-2018	-0.6%	0.7%	0.5%	0.4%	-0.3%

Source: DBEDT Data Book, Table 1.06. Note: AAPC is Average Annual Percent Change.

Overall, the State's population decline since 2016 has been due primarily to losses in the City and County of Honolulu. While the population change has taken different paths for each county over the past 40 years, all three of the other Counties experienced a significant decline in population growth rate since 2016.

The situation has prompted a revision of Hawai'i's housing demand projections. It has also affected several sections of this report, most importantly, our estimates of needed units for the next five years.

b. Components of Population Growth

Hawai'i's population grew slower in the last decade than it did in the nineties. The State added an average of about 10,000 persons per year in the nineties, 15,000 per year in the previous decade, and about 7,500 per year since 2010 (Table 6).

Table 7 shows that, in the nineties, out-migration exceeded in-migration and reduced the population by almost 10,000 persons. In the next decade, in-migration was higher than out-migration causing population growth of 55,646 persons for the decade. So far this decade, the excess of out-migrants has reduced the population by 549 persons.

Table 7. Components of Population Change, Hawai'i, 1990-2018

	Net Change	Natural Increase	Net Migration
1990 to 2000			
Honolulu	39,925	86,733	-46,808
Hawai'i	28,360	10,477	17,883
Maui	27,737	11,301	16,436
Kaua'i	7,286	4,601	2,685
State	103,308	113,112	-9,804
2000 to 2010			
Honolulu	77,051	68,958	8,093
Hawai'i	36,402	9,914	26,488
Maui	26,683	10,729	15,954
Kaua'i	8,628	3,517	5,111
State	148,764	93,118	55,646
2010 to 2018			
Honolulu	26,874	46,553	-19,679
Hawai'i	15,907	5,993	9,914
Maui	12,365	6,604	5,761
Kaua'i	5,038	2,379	2,659
State	60,184	61,529	-1,345

Source: DBEDT Data Book, 2009-Table 1.59, 2010-Table 1.56, and Census, Estimates of the Components of Resident Population Change, 2010 to 2018.

The degree of natural increase in population change has diminished steadily over the last three decades. The excess of births over deaths contributed to 113,112 new residents in the nineties, 93,118 new people in the last decade, and 61,529 in the first eight years of the present decade.

The stronger impact of net migration in recent years was felt across all four counties but had the greatest impact on O'ahu. Honolulu lost almost

47,000 people to net out-migration in the nineties. Between 2000 and 2010, Honolulu's net migration accounted for 11 percent of total population growth. So far in this decade, Honolulu has lost more than 19,000 people due to a significant increase in domestic out-migration.

In just two years, 2017 and 2018, Honolulu lost more than 13,000 people due to domestic out-migration, far exceeding the number of people migrating to Honolulu. That resulted in a net loss of more than 13,000 O'ahu residents. Although there were substantial gains in natural increase for all four counties, that was not enough to offset Honolulu's notable loss in net migration.

c. Households and Household Size

Assuming a constant household size, the number of households should increase at the same rate as the population. Slower household formation can be caused by social change, economic recession, or a shortage of new housing units. If new households can't move out, there will be an increase in household size (crowding), suggesting pent up demand. Table 8 shows the number of households for the State and counties since 1990.

Table 8. Number of Households, 1990-2017

	County				
	Honolulu	Hawai'i	Maui	Kaua'i	State
1990	265,304	41,461	33,145	16,253	356,163
1995	275,877	49,282	38,326	18,967	382,452
2000	286,450	52,985	43,507	20,370	403,312
2005	300,557	60,396	48,393	21,997	431,343
2010	309,154	62,584	51,893	22,147	445,778
2015	307,703	64,201	52,080	21,862	445,846
2017	312,625	68,857	53,560	22,980	458,022

Source: Decennial Census 1990, 2000; ACS 1-year estimates 2005, 2010, 2015, 2017.

In Table 9, we see all three population growth factors related to housing demand: total population, households, and household size. Ideally, if there were a five percent change in the population, we would expect a five percent change in households and a zero percent change in average household size. If supply were running ahead of demand, we would get a five percent (or perhaps even greater) increase in households as pent-up demand is relieved. That would result in a zero or even a negative change in average household size.

If demand runs ahead of supply, then a five percent growth in population will produce less than five percent growth in households and larger average household size. This is a primary indicator of pent-up demand.

Table 9. Population Increase: Counties, 2007-2017

		% Change 2007 to 2017		
		Total Population	Number of HH	Average HH Size
County	Honolulu	6.8%	3.8%	2.8%
	Hawai'i	12.7%	10.9%	7.9%
	Maui	12.3%	10.2%	4.7%
	Kaua'i	11.9%	5.7%	10.7%
State		8.5%	5.6%	6.4%

Source: Calculated from Table 6 and Table 8.

At the State level, the total number of households grew by 5.6 percent between 2007 and 2017 (Table 9) – slower than the population (8.5%) and indicating a constrained household formation rate. The average household size grew by more than 6 percent, indicating a corresponding increase in persons per household. This is evidence of pent-up demand.

Data for three counties were consistent with a housing market where demand exceeds supply.

Hawai'i's rise in pent-up demand was not unique in the United States. National data show more pent-up demand from 2010 to 2018. Observers[30] note that lower housing sales were related to decreasing supply as well as a reticence among young people to enter the real estate market. That caused pent-up demand in housing markets across the country.

The State's population growth was relatively slow during the nineties. The average household size

[30] Rappaport, Jordan. 23018. Pent-up demand and continuing price increases: The outlook for housing in 2018, *The Macro Bulletin*, Federal Reserve Bank of Kansas City, January 10, 2018.

(Table 10) fell off a bit by 2005 and even more by 2006. It then resumed faster growth but did not quite reach the level seen in the years before 2000. In 2017, the average household size for the State was 3.02 persons.

Census numbers reported for 2017 were equal to 2015 for Honolulu and the State. Average household size was slightly lower for the County of Hawai'i and slightly higher for Maui and Kaua'i Counties.

Table 10. Average Household Size, 1990-2017

	County				
	Honolulu	Hawai'i	Maui	Kaua'i	State
1990	3.02	2.86	2.99	3.09	3.01
2000	2.95	2.75	2.91	2.87	2.92
2005	2.91	2.77	2.86	2.85	2.88
2010	2.96	2.73	2.89	2.98	2.92
2015	3.06	2.90	2.96	3.07	3.02
2017	3.06	2.88	2.97	3.12	3.02

Sources: U.S. Decennial Census, 1990, 2000, 2010, ACS 2005 (1-yr. Estimate), 2010, 2015, 2017 (5-yr. Estimate).

d. Building Permits

The number of building permits awarded in a single year is often referenced as an indicator of the demand for new housing units. Since builders are unlikely to build new units they cannot sell, the number and nature of building permits is certainly related to the demand for housing units. Similarly, the number of building permits is related to housing supply in that new units cannot be constructed if permits are not approved. For both demand and supply, however, the number and nature of building permits approved each year is not an effective indicator of the number of housing units needed to satisfy demand or the number of units that will be built.

Table 11 shows the number of building permits approved by county planning departments over the last 27 years.

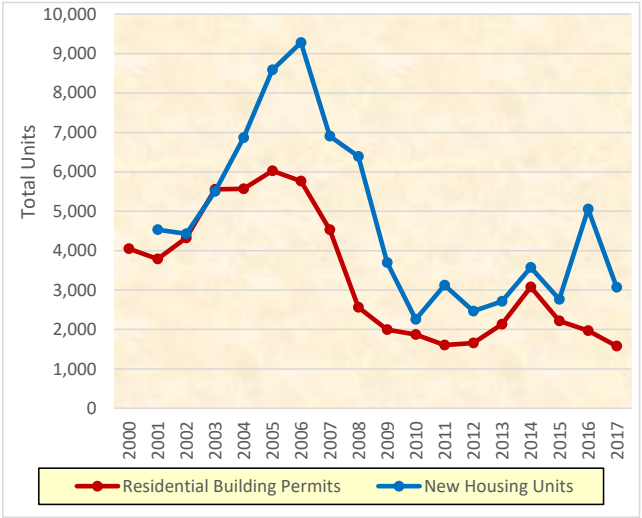
Table 11. Total Building Permits Issued, Counties and State of Hawai'i, 1990 – 2017

	County				
	Honolulu	Hawai'i	Maui	Kaua'i	State
1990	17,123	4,720	3,534	2,312	27,689
1995	11,956	2,707	1,514	1,054	17,231
2000	12,443	3,254	2,294	1,083	19,074
2005	15,174	5,436	2,348	882	23,840
2010	14,254	2,756	1,016	171	18,197
2015	20,146	5,426	1,280	199	27,051
2017	14,759	2,943	1,348	236	19,286

Source: *State of Hawai'i Time Series Data Book Table 21.01.*

Figure 4 presents data for the number of approved residential building permits and the number of added housing units in Hawai'i between 2000 and 2017. While the number of building permits issued and the number of housing units constructed tend to follow similar trends, there is not a clear, predictive relationship between the two.

Figure 4. Residential Building Permits & Added Units, State of Hawai'i, 2000-2017



Source: Permits from Census Table 2au: New Privately Owned Housing Units Authorized. Added units from ACS housing unit data.

2. Demand for Residential Property from Outside the State

Most of the demand for residential real estate in Hawai'i originates from our residents, but the

housing market is also affected by demand from outside the State.

Perhaps more than any other state, Hawai'i has qualities that drive external demand for our housing units. We have a temperate climate, beautiful beaches, and abundant opportunities for outdoor activities and entertainment. Chronic health conditions are less prevalent than the national average, wages are above average, household incomes are higher than in other states, and our social welfare programs are at least perceived to be more easily available. Hawai'i's unique and welcoming culture is attractive to many people who wish to have a second home in the islands. All of these make Hawai'i attractive to buyers from outside the state. Hawai'i real estate is also considered to be a good investment to out-of-state buyers. Prices are high, but appreciation tends to be high, as well. Average annual prices rise steadily and appreciation has averaged 4.56 percent every year since 2000, earning Honolulu one of the highest appreciation rankings in the country[31]. Rents are usually high enough to provide positive cash flow for most properties, and the possibility of making even higher margins by renting to visitors is available.[32]

Table 12. Out-of-State Sales, 2008 - 2018

	Sales	Percent In-State	Percent Out-of-State
2008	13,616	72.4%	27.6%
2009	11,426	70.6%	29.4%
2010	14,069	66.5%	33.5%
2011	11,889	69.6%	30.4%
2012	12.017	74.1%	25.9%
2013	13,378	75.0%	25.0%
2014	13,455	76.0%	24.0%
2015	15,077	77.9%	22.1%
2016	15,311	77.2%	22.8%
2017	15,835	77.3%	22.7%
2018	15,525	76.1%	23.9%

Source: DBEDT Data Book 2018, Table 21.38.

Most (85%) out-of-state buyers were Mainland residents. About 15 percent were international buyers.

a. External Demand and Vacancy Rates

Until recently, the impact of external demand on the housing market was largely a matter of speculation. Since DBEDT's 2016 study of home sales trends[33], however, we have good data on the extent of out-of-state demand in Hawai'i.

For the last ten years, nearly a quarter of all residential home sales in Hawai'i were to persons who live outside the state. That rose as high as 33.5 percent in 2010 and has been drifting downwards to about 24 percent in 2018.

The counties were disproportionally impacted by out-of-state sales in the last nine years. In 2018, 15 percent of Honolulu sales were made to non-residents and 37.5 percent of Maui County's housing unit sales were made to persons living outside the State. Hawai'i and Kaua'i Counties also saw approximately 40 percent of their home sales go to outside buyers.

Table 13. Out-of-State Sales by County, 2018

	Buyers	Percent Out-of-State	Sales Price Differential[34]
State	20,409	23.9%	44.6%
Honolulu	12,993	14.9%	46.6%
Hawai'i	3,412	41.3%	87.8%
Kaua'i	1,176	40.2%	62.8%
Maui	2,828	37.5%	65.8%

Source: DBEDT Data Book 2018, Table 21.39.

[31] Honolulu Appreciation Trends, Neighborhood Scout, at https://www.neighborhoodscout.com/hi/honolulu/real-estate downloaded June 10, 2019.

[32] See Section IV-B, Tourism and Housing, p. 70.

[33] Hawai'i Department of Business, Economic Development and Tourism. 2016. Residential home sales in Hawai'i: Trends and characteristics, 2008-2015, May 2016.

[34] The differential between in-state and out-of-state average sales prices. For example, the average sales price for out-of-state units was 49.2 percent higher than the average sale price for sales to in-state residents.

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In the same year, purchase prices for units bought by out-of-state buyers were, on average, 44.6 percent higher than prices paid by local buyers. On O'ahu, out-of-state buyers bought units that were 46.6 percent higher than the average units sold to a resident. The price differential peaked in Hawai'i County, where non-Hawai'i buyers paid 88 percent more for their units than did County residents.

Overall, the impact of external demand for Hawai'i housing units will have a notable impact on the efforts of housing planners. We will return to this topic in later sections of the report.

b. Use of Hawai'i Property

In a 2019 survey, we contacted Hawai'i property owners who had tax billing addresses outside the State. Among those property owners, 38 percent saw their property largely as an investment and 62 percent saw the property to be a vacation home for the use of their family and friends.[35]

About 48 percent of out-of-state owners rented their units while they were not using them. Another 52 percent left their units vacant or loaned them to family or friends. There was a strong correlation between the way owners perceived their properties and the way they used them (Table 14). For instance, 61 percent of the investors rented their property while they were not using it themselves. Among those who see their property as a vacation or second home, and 39 percent of vacation homeowners rented their units at least part of the time.

Table 14. Type and Use of Out-of-State Units 2019

	Percent of property owners				
	State	O'ahu	Maui	Hawai'i	Kaua'i
Vacation home	62	43	77	74	67
Rent unit	39	27	47	53	59
Investment property	38	57	23	26	33
Rent unit	61	73	53	47	41

Source, HHPS Out-of-State Owner Survey, 2019.

The pattern of owners and renters differs across counties. O'ahu out-of-state properties are about 57 percent investments and 73 percent of those are rented when not occupied by the owner. Forty three percent (43%) are vacation homes and only 27 percent of those are ever rented.

In the other three counties, about a quarter of the units are investment properties and 50 to 60 percent are rented when not in use. Three-quarters of the units are vacation or second homes, but about 50 percent of those are rented at least part of the time. This certainly suggests some additional research. The dates of sale also differ across counties. The major growth in out-of-state owned units on O'ahu began as early as 1990. Maui's median year built was 2000, followed by Kaua'i and Hawai'i County in 2010. The first units reported in the survey were dated before 1920, so the demand for out-of-state housing units has always been significant.

c. External Demand and Vacant Units

Many units sold to out-of-state buyers were either second homes or timeshare units. Together they made up the bulk of units the Census calls *vacant, held for seasonal, recreational, or occasional use* (seasonal). These units are reported separately from the residential housing stock and are not available to residents in need of a housing unit.

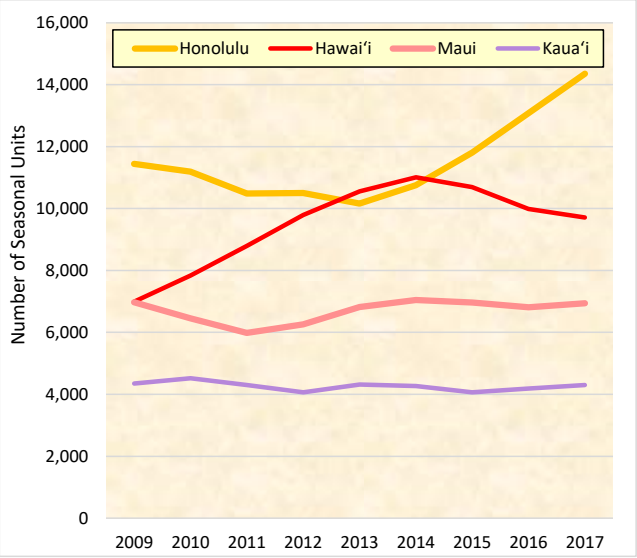
In Honolulu County (Figure 5), the 14,358 seasonal units enumerated in the 2017 ACS were 4.1 percent of O'ahu's housing units. Maui County's 6,937 seasonal units were 9.7 percent of total housing units. Hawai'i County's 9,708 units were 11.5 percent of the county's total housing units. On Kaua'i, 4,301 seasonal units accounted for 14.2 percent of all housing units. Seasonal unit trend lines for Kaua'i and Maui Counties have been flat for nine years. The impact of seasonal units in Hawai'i county has been decreasing since 2014, and Honolulu County's trend has risen sharply since 2013.

In all, 6.6 percent of Hawai'i's housing units were seasonal units in 2017. By comparison, the national average is about 2 percent. The figures indicate that external demand for housing units by

[35] About 75 percent were from other U.S. states and 25 percent were from foreign countries. For methodology and content see SMS, Hawai'i Housing Planning Study, 2019: Technical Report, p. 6.

non-residents substantially reduces the number of housing units that are part of the housing stock. The loss of those units decreases the housing stock needed to accommodate rising demand.

Figure 5. Vacant Units Held for Seasonal or Occasional Use, by County, 2009-2017



Source: ACS 5-yr. estimates 2009-2017.

Identifying exactly how many housing units were converted from residential owned or rented units were converted to seasonal units (vacation rental units [VRUs]) has been a challenge. In 2019, the emphasis on this research problem has changed to focus on the outcome of new regulations on short-term rentals on O'ahu (see pp. 74-75).

3. Survey Demand Estimates

One objective of the HHPS is to estimate the demand for housing units for the next five years and use those projections to identify the number and types of units needed for the State. The Housing Demand Survey is conducted to facilitate demand estimates and provide details on prospective buyers and renters, their financial situations, and unit preferences. Data from the 2019 Housing Demand Survey were used to produce estimates of raw, effective, and qualified demand.

a. Raw Demand

Survey householders were first asked when they would next move to a new housing unit. Some said they would never move from their current units. They had found the place they wanted to live in and would stay there for the rest of their lives. Another group said they might move but had no plans to go anywhere very soon. Others said they would move sometime in the next ten years. Households with plans to move soon were classified as "movers" and the survey estimate for raw demand.

Table 15. HHPS Demand Survey Demand Estimates, by County, 2019

	County								State	
	Honolulu		Maui		Hawai'i		Kaua'i			
	Count	Pct.	Count	Pct.	Count	Pct.	Count	Pct.	Count	Pct.
Total Households	311,451	100.0%	54,434	100.0%	67,054	100.0%	22,563	100.0%	455,502	100.0%
Will Not Move	108,025	34.7%	26,694	49.0%	34,175	51.0%	12,975	57.5%	181,870	39.9%
Raw Demand	203,426	65.3%	27,740	51.0%	32,879	49.0%	9,588	42.5%	273,632	60.1%
Will move, but no plans	67,934	21.8%	7,010	12.9%	8,400	12.5%	3,310	14.7%	86,654	19.0%
Move out of state	35,289	11.3%	4,105	7.5%	4,487	6.7%	1,332	5.9%	45,214	9.9%
Effective Demand	**100,203**	**32.2%**	**16,624**	**30.5%**	**19,992**	**29.8%**	**4,946**	**21.9%**	**141,764**	**31.1%**

Source: Housing Demand Survey, 2019. Raw demand is households except those who said they would never move. "Will move, but no plans" is the number of households who were unsure or refused to report when they expected to move. "Will move out of state" is the number of households whose first location choice was out-of-state. Out-of-state and no plan households are excluded from effective demand. Note: Rows and columns may not sum exactly due to rounding error resulting from data weighting.

In 2019, raw demand affected 60.1 percent of households statewide, up from 56.8 percent in 2016 and 51 percent in 2011. At 65.3 percent of all households, the City and County of Honolulu had the highest raw demand. Other counties had similar levels of raw demand (Maui: 51%, Hawai'i: 49%, Kaua'i: 42.5%). For all movers to realize their expectations and move to a new housing unit would result in 273,632 real estate transactions --

the number of units that would change hands during the period.

Reasons for Not Buying

We asked the 2019 Housing Demand Survey respondents who were interested in moving to a new home, but not interested in buying, why they would not buy. Fifty-seven percent (57%) of them told us that home prices were too high, or that it was too expensive to buy right now (Table 16). This was slightly lower than the 64 percent who cited expense as a reason in 2016. Roughly three in ten (31%) said they could not afford the down payment, while 17 percent could not afford the monthly payment and 19 percent would be unable to qualify for a loan.

Table 16. Top Six Reasons for Not Buying a Home, 2019

	County				State
	Honolulu	Maui	Hawai'i	Kaua'i	
Too Expensive	57.3%	61.8%	51.9%	61.1%	57.2%
Cannot Afford Down Payment	33.9%	23.5%	25.9%	17.2%	31.0%
Won't Stay Long Enough	17.6%	39.5%	32.1%	45.2%	23.1%
Do Not Want To Buy; Prefer To Rent	15.8%	41.6%	32.8%	47.9%	22.2%
Can't Qualify for a Loan	20.5%	13.8%	15.9%	7.6%	18.6%
Can't Afford the Monthly Payment	18.1%	15.2%	13.6%	11.0%	16.9%

Source: Housing Demand Survey, 2019.

Over 22 percent of those who do not plan to buy a home said they preferred to rent (22.2%). Some were not going to be in Hawai'i for a long time and they did not want to be tied to any one place. Others were not ready for the commitment and maintenance that they would require.

b. Effective Demand

In 2019, more households wanted to move away from Hawai'i (Table A-13). Over 24 percent of all movers (24.2%) wanted to leave the State on their next move -- the highest rate since 1997. That's much higher than in other states, too. At a time when Americans are moving away from their home state at unprecedented rates, Hawai'i leads the nation in intentions to leave.[36]

Reasons for Leaving the State

Once again, there were many families moving out of Hawai'i because they could not afford to buy a home, which is consistent with Hawai'i's high-priced market and low homeownership rates.

Statewide, about 22 percent of respondents who planned to leave Hawai'i said the high cost and limited availability of housing was one of the problems causing them to move. That was lower than the 31 percent in 2016 and 30 percent in 2011 who reported planning to leave the state for housing-related reasons.

Households that leave Hawai'i will not increase demand for Hawai'i housing units. For this reason, we computed effective demand to include only respondents who will move within the State.

Table 17. Effective Demand by County, 1992, 1997, 2003, 2006, 2011, 2016, and 2019

		Effective Demand *Percent of total households intending to move to a housing unit in Hawai'i*						
		1992	1997	2003	2006	2011	2016	2019
County	Honolulu	51.7	47.3	38.9	33.2	31.3	32.4	32.0
	Maui	38.8	41.4	35.7	39.6	31.3	31.9	30.5
	Hawai'i	40.2	34.3	33.8	36.3	26.0	30.2	29.8
	Kaua'i	38.5	34.2	31.4	30.6	27.3	27.6	21.9
State		48.4	44.4	37.5	34.2	30.3	31.8	31.1

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016, and 2019.

[36] U.S. data show Hawai'i is No. 2 among States (22.3%) for people wanting to leave. Kapfidze, Tendayi. 2019. LendingTree study reveals the top states where residents are staying put, moving from and moving to, LendingTree, November 19, 2019. See also New York Times. 2019. Frozen in place: Americans are moving at the highest rate on record, Nov. 20, 2019.

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Across the State, effective demand fell in each Housing Demand Study year between 1992 (48.4%) and 2011 (30.3%). Statewide effective demand climbed slightly to 31.8 percent in 2016 but dropped back to 31.1 percent of all households in 2019.

Some observers believe there is more interest in home buying now because sales are stable and prices will be higher. Others see few reasons to buy and point to our decreasing population as a caution to prospective buyers. Regardless of buyer motivations, HHPS data show that the level of effective demand inside Hawai'i has remained unchanged since 2011.

Historically, the pattern of effective demand across counties has been stable. Honolulu's effective demand is highest among the counties. Among the Neighbor Island counties, effective demand has been highest in Maui County and lowest for Kaua'i County.

c. Qualified Demand

Qualified demand narrows the demand estimate further by considering only households that are financially prepared to pursue their preferred tenancy and unit type. This step eliminates households that do not have the financial qualifications to purchase or rent housing units in the current economy.

Table 18. Qualified Demand by Unit Type & County, 1992, 1997, 2003, 2006, 2011, 2016, and 2019

	County				
	Honolulu	Maui	Hawai'i	Kaua'i	State
1992	51.7%	38.8%	40.2%	38.5%	48.4%
1997	47.3%	41.4%	34.3%	34.2%	44.4%
2003	38.9%	35.7%	33.8%	31.4%	37.5%
2006	33.2%	39.6%	36.3%	30.6%	34.2%
2011	31.3%	31.3%	26.0%	27.3%	30.3%
2016	44.0%	39.7%	36.9%	35.1%	42.1%
2019	27.5%	40.2%	25.4%	39.7%	29.2%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016, and 2019.

Based on this analysis, we estimate that 29 percent of effective demand households are financially prepared to acquire a different residence (Table 18). This is the lowest level of financial preparedness among mover households since the HHPS was begun in 1992.

4. Purchase Preferences

Buyer and renter preferences and qualifications for housing unit types were measured in the Demand Survey. The objective was to provide information on consumer preferences to support housing issue analyses over the next few years.

Forty-nine percent (49%) of those who planned to move said they wanted to buy their next unit. Plans for homeownership were on the upswing, following an all-time low of 42 percent in 2011 and 47 percent in 2016. But plans to buy do not always translate into marketplace reality. About 17 percent of those who planned to purchase their next home conceded that they were not sure they would be able to afford it and may have to continue renting.

a. Buyer Qualifications

To evaluate the financial readiness of households wishing to buy a housing unit in Hawai'i in the next five years, we examined their income, affordable monthly housing payment, and total amount available for a down payment. These elements were evaluated against a median-priced home assuming a fixed-rate, 30-year loan, a four percent interest rate, and a 20 percent down payment. Results are shown in Tables 19 and 20.

Statewide, 41 percent of prospective single-family home buyers said they could afford to make the monthly mortgage payments, but not necessarily the 20 percent down payment. Twenty-seven percent (27%) said they had the funds to make a 20 percent down payment but could not afford the monthly payment. About 20 percent of households statewide were qualified to meet both requirements.

The same set of financial qualification measures was applied to potential homebuyers who sought to purchase a multi-family unit rather than a single-family home. We used the current median

sales price for condominiums in each county rather than the single-family median. As shown in Table 20, residents planning to purchase a multi-family rather than a single-family unit were more likely to be financially able to do so.

The median price, monthly mortgage, and down payment required are lower for multi-family units. Therefore, more Hawai'i households were able to meet the requirements to purchase a townhouse or condominium unit. Study results confirmed that 29 percent of Hawai'i households in the market for a multi-family ownership unit in the next five years could afford to make the monthly payments. Twenty percent (20%) reported having enough to make the down payment. Just under 16 percent of multi-family buyer households were fully qualified to purchase their next home

This analysis does not include the impact of maintenance fees attached to many multi-family units. Across the State, maintenance and other fees are often calculated at $0.60 to $1.50 per square foot. While the national average for maintenance fees is $331, the average for Hawai'i has been quoted as $539. If the $539 for maintenance fees was added to the monthly mortgage payment of $1,827 (Table 20), this would almost certainly reduce the number of households who would qualify for purchase.

Table 19. Financial Qualification to Purchase a Single-Family Home, Counties & State, 2019

	County				
	Honolulu	Maui	Hawai'i	Kaua'i	State
Median Sales Price	$770,000	$819,500	$362,000	$630,000	$695,000
Down Payment Required*	$154,000	$163,900	$72,400	$126,000	$139,000
Monthly Mortgage Payment**	$2,940	$3,129	$1,382	$2,406	$2,654
Total Effective Demand SFD Buyers	26,649	7,119	8,332	1,761	43,861
Can Afford Monthly Payment	40.3%	28.4%	43.3%	34.2%	40.8%
Have Adequate Down Payment	19.1%	26.8%	25.7%	27.4%	27.1%
Fully Qualified	17.2%	11.7%	19.8%	20.3%	19.7%

Source. Locations Market Reports, Q1 2019; Housing Demand Survey, 2019.
https://www.locationshawaii.com/learn/market-reports/hawaii-statewide-real-estate-report/
* Assumes a 20 percent down payment.
**Based on a 30-year fixed loan with a 4% interest rate.
Base is effective demand households that plan to move within the next 5 years and purchase an SFD unit.
Can Afford Monthly Payment if the monthly payment is less than or equal to 30% of household income.

Table 20. Financial Qualification to Purchase a Multi-Family Unit, Counties & State of Hawai'i, 2019

	County				
	Honolulu	Maui	Hawai'i	Kaua'i	State
Median Sales Price	$418,000	$444,444	$418,500	$459,000	$430,000
Down Payment Required*	$83,600	$88,889	$83,700	$91,800	$86,000
Monthly Mortgage Payment**	$1,596	$1,697	$1,598	$1,753	$1,642
Total Effective Demand MFD Buyers	20,994	1,298	1,655	493	24,439
Can Afford Monthly Payment	29.2%	27.6%	34.9%	19.1%	28.6%
Have Adequate Down Payment	20.3%	19.6%	26.5%	8.1%	20.1%
Fully Qualified	16.7%	23.4%	13.2%	8.7%	15.7%

Source. Locations Market Reports, Q1 2019; Housing Demand Survey, 2019.
https://www.locationshawaii.com/learn/market-reports/hawaii-statewide-real-estate-report/
* Assumes a 20 percent down payment.
**Based on a 30-year fixed loan with a 4% interest rate.
Base is effective demand households that plan to move within the next 5 years and purchase an MFD unit.
Can Afford Monthly Payment if the monthly payment is less than or equal to 30% of household income.

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b. Renter Qualifications

Seven in ten households planning to rent their next home cited financial reasons for their decision. Reasons for not buying included the inability to afford a down payment or monthly payment and the belief that homes in Hawai'i are just "too expensive." These households were also asked if they would opt to purchase a home if there was a unit available they could afford. Close to 70 percent responded affirmatively.

Financial qualification for households planning to rent their next unit was evaluated using the current average monthly rental rate for single-family and multi-family units in each county. Household income, current monthly shelter payment, and affordable monthly rent were examined as well to determine the financial readiness of prospective renters.

Statewide, 15 percent of those planning to rent a single-family unit indicated they could afford to make the median monthly rent payment of $2,220. For 23 percent of these households, their current income suggests that making the median monthly rent payment would require less than 30 percent of their income. Twenty-nine percent (29%), however, were currently paying more each month for housing than the median monthly rent amount.

Among the 53,850 households across the State that intend to rent their next unit, 35 percent prefer a single-family unit. Those planning to rent single-family units on Maui were most financially prepared to do so. Residents of Kaua'i County were better equipped than residents of Hawai'i and Honolulu Counties to make the median monthly rent payment for a single-family home.

Among those planning to rent their next unit, close to half (46%) plan to rent an apartment or other multi-family unit. Among those households, about 29 percent were currently making monthly rent payments equal to or higher than the median rent amount. Another 15 percent indicated they could afford the median monthly rent payment. For 23 percent of prospective multi-family renters, the current median rent payment would require less than 30 percent of their household monthly income.

Among those who wanted a multi-family dwelling as their next unit, those on Maui were the most financially prepared to do so. About 21 percent currently pay rent equal to or higher than the median rent amount for the county.

Table 21. Financial Qualification to Rent a Single-Family Unit, Counties and State of Hawai'i, 2019

		County				
		Honolulu	Maui	Hawai'i	Kaua'i	State
Median Monthly Rent Amount		$2,593	$2,498	$1,713	$2,076	$2,220
Security Deposit + 1st Mo. Rent		$5,186	$4,996	$3,426	$4,152	$4,440
Total Effective Demand SFD Renters		10,598	3,368	3,585	1,318	18,868
	Current Payment-Same or Higher	25.3%	44.3%	23.2%	30.9%	28.7%
	Affordable Rent*-Same or Higher	14.0%	12.7%	13.5%	31.9%	14.9%
	Income-Based Qualification	20.3%	26.1%	29.6%	22.5%	23.3%

Source: Median rents from RentRange® (April 2019) for all unit sizes. Qualified renters from the HHPS 2019.
Base is households that plan to rent their next SFD unit in the State of Hawai'i in the next 5 years.

* Self-reported affordable rent amount.

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Table 22. Financial Qualification to Rent a Multi-Family Unit, Counties and State of Hawai'i, 2019

		County				
		Honolulu	Maui	Hawai'i	Kaua'i	State
Median Monthly Rent Amount		$2,256	$2,248	$1,563	$1,926	$1,998
Security Deposit + 1st Mo. Rent		$4,512	$4,496	$3,126	$3,852	$3,996
Total Effective Demand MFD Renters		19,997	1,890	2,230	384	24,502
	Current Payment-Same or Higher	19.7%	21.0%	12.9%	0.0%	18.9%
	Affordable Rent*-Same or Higher	11.9%	18.7%	18.1%	5.8%	12.9%
	Income-Based Qualification	26.3%	37.6%	18.9%	19.9%	26.4%

Source: Median rents from RentRange® (April 2019) for all unit sizes. Qualified renters from the HHPS 2019.
Base is households that plan to rent their next MFD unit in the State of Hawai'i in the next 5 years.
* Self-reported affordable rent amount.

5. Housing Preferences

a. For Owned Units

Once again, most effective demand buyers statewide (66%) preferred single-family detached homes. Single-family units are more important to buyers in Kaua'i (98%), Maui (86%), and Hawai'i Counties (82%) than in Honolulu (62%). Maui and Kaua'i also showed the lowest preference for condominium units (0.6 and 8%, respectively).

Nearly 43 percent of potential buyers said they would be looking for a three-bedroom unit and 19 percent said they would need four bedrooms. When asked about the minimum number of bedrooms they could accept, 53 percent felt two bedrooms would be enough and another 32 percent reported a three-bedroom minimum. This willingness to settle for fewer bedrooms was slightly higher than in the past, perhaps reflecting buyers' readiness to compromise on the unit size in the face of high prices. The same was true for the preferred number of bathrooms. More than three-quarters of households would prefer two to three bathrooms, and close to half (48%) of buyers conceded they would be willing to accept a unit with only one or one-and-a-half bathrooms.

b. For Rented Units

Households that planned to rent their next home in Hawai'i in the next five years were mostly renters (83%). Thirty-five percent (35%) of those wanted to rent a single-family house and 48 percent wanted a multi-family unit like an apartment (34%), condominium (8%), or townhouse (6%). Preference for single-family homes was once again much higher on Neighbor Islands, ranging from 57 to 70 percent versus 32 percent for Honolulu. On O'ahu, 9 percent of prospective renters wanted townhomes versus 2 to 3 percent on the other islands.

Across the State, renters preferred larger units with two (39%) or three bedrooms (25%). About 70 of them were willing to take units with fewer than three bedrooms. Again, the figures suggest a willingness to accept smaller units than in the past. The number of bathrooms required was also relatively low, with 64 percent reporting that they could accept one or one-and-a-half baths. Seventy-two percent (72%) of households that plan to rent their next unit said they would like to buy a home in the future. Their reasons for not doing so now most often included the high cost of housing and insufficient funds for a down payment.

C. HOUSING PRICES

The most distinctive characteristic of Hawai'i's housing market is high prices. Sumner La Croix may have been the first to point out that our housing prices have been some of the highest in the nation, dating back to at least the end of World War II. The HHPS has been following the price trends since the first edition in 1992.

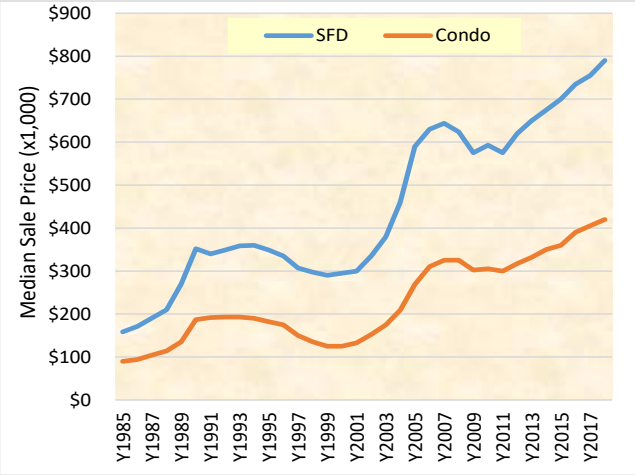
1. Sales Prices

Figure 6 shows single-family and condominium sales prices from 1985 to 2018 in Honolulu.

Our last two price run-ups are easily identified. Housing prices more than doubled in a few years. After each period of expansion, prices dropped slightly, then held in place. The adjustment period after 1989 was a decade long and the post-2008 recovery has lasted for ten years. Condominium prices regained their 2007 peak by 2012, single-family homes by 2013.

Since 2016, the median price of single-family homes went up by about 4.1 percent per year. During the same period, the median price of condominium units has increased by 5.1 percent per year, on average.

Figure 6. Housing Prices in Honolulu, 1985-2018



Source: Honolulu Board of Realtors.

Table 23 shows median sales prices for single-family homes and condominiums between 2010 and 2018. As suggested by Figure 6, the period was marked by increasing prices but was short of the rate increases expected during a run-up.

Table 23. Median Home Sales Prices, Counties and State of Hawai'i, 2010-2019

	State of Hawai'i	Counties			
		Honolulu	Hawai'i	Kaua'i	Maui
Single Family House Sales Price (in thousands)					
2010	$487	$600	$260	$498	$460
2011	$470	$580	$246	$455	$432
2012	$500	$625	$260	$459	$470
2013	$545	$650	$295	$529	$530
2014	$575	$674	$315	$533	$570
2015	$600	$700	$329	$614	$580
2016	$633	$735	$330	$626	$639
2017	$660	$760	$350	$660	$695
2018	$689	$790	$360	$700	$710
Multi-Family Condominium Sales Price (in thousands)					
2010	$310	$305	$260	$270	$378
2011	$290	$300	$213	$237	$310
2012	$318	$315	$258	$290	$358
2013	$333	$332	$250	$310	$374
2014	$351	$350	$280	$346	$415
2015	$363	$360	$275	$360	$410
2016	$390	$390	$300	$399	$415
2017	$409	$410	$312	$435	$445
2018	$430	$421	$350	$461	$500

Source: DBEDT Data Book Time Series, Table 21.36. Further details on home sales prices are shown in Appendix Table D-7.

Across the State, the median sales price for a single-family home increased 41.5 percent between 2010 and 2018 (+5.2% per year). Between 2017 and 2018, the single-family sales price rose by 4.4 percent. The increase in condominium sales prices was a bit lower at 38.7 percent between 2010 and 2018 (+4.8% per year). In 2018, it rose by 5.1 percent over the 2017 price.

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2. Rents

In 2019, Hawai'i continues to have the highest average rents in the nation, followed by the District of Columbia and New York.[37] For the past decade, Hawai'i's median gross rent has consistently been 50 to 55 percent higher than the national median gross rent.

The HHPS review of rental housing prices gathered rent data from several sources and, although the sources don't match exactly, the conclusions are the same. Our analysis is based on data from the American Community Survey, from HUD Fair Market Rent data, and from detailed rental data from RentRange®.[38]

The important finding is that rent prices have leveled off in 2017 and have grown very little since then.

Table 24. Median Rent for All Units, Counties and State of Hawai'i, 2009-2019

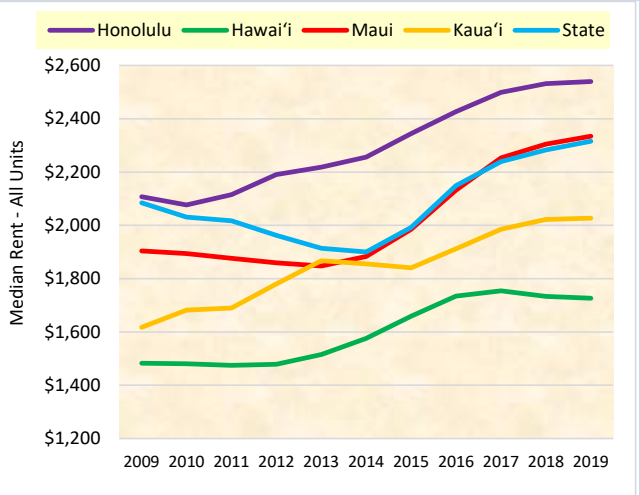
	County				State
	Honolulu	Hawai'i	Maui	Kaua'i	
2009	$2,108	$1,483	$1,904	$1,618	$2,085
2010	$2,077	$1,480	$1,894	$1,682	$2,031
2011	$2,115	$1,474	$1,876	$1,690	$2,018
2012	$2,191	$1,478	$1,859	$1,780	$1,963
2013	$2,218	$1,515	$1,848	$1,867	$1,914
2014	$2,256	$1,576	$1,883	$1,855	$1,900
2015	$2,344	$1,660	$1,985	$1,840	$1,992
2016	$2,427	$1,734	$2,132	$1,912	$2,149
2017	$2,499	$1,754	$2,253	$1,986	$2,239
2018	$2,532	$1,733	$2,304	$2,022	$2,283
2019	$2,540	$1,727	$2,334	$2,027	$2,315

Source: RentRange®, 2009-2019. Figures in current dollars.

The contract rent data suggest that, across all types (single-family and multi-family) and sizes (one-bedroom through five-bedroom) of rental units, renters in Hawai'i are paying more for their accommodations now than they were in 2014.

Figure 7 shows the change in median rents since 2009. For the State, the current median rent is 7.8 percent higher than in 2016. Maui County had the largest increase during the past three years, climbing 9.5 percent (+3.1% per year).

Figure 7. Median Rents, Counties and State of Hawai'i, 2009-2019



Source: RentRange®, 2009-2016.

HUD's Fair Market Rents for the counties are for households that qualify for government-assisted housing. They exclude units built in the last two years, renters who have been in their units for more than two years, and those receiving any form of housing assistance. As expected, FMR rents are lower than median contract rents and they continue to increase in all counties. (Table 25). Increases for Honolulu and Kaua'i Counties ranged from 7.2 to 9.9 percent, and the increase for Maui County was 12.9 percent. The FMR for the County of Hawai'i increased by 3.3 percent between 2016 and 2019.

Table 25. Average Fair Market Rent for All Units, Counties of Hawai'i, 2009-2019

	County			
	Honolulu	Hawai'i	Maui	Kaua'i
2009	$1,631	$1,160	$1,584	$1,332
2010	$1,906	$1,232	$1,682	$1,414
2011	$1,904	$1,280	$1,749	$1,470
2012	$1,977	$1,295	$1,625	$1,428
2013	$2,060	$1,150	$1,374	$1,835
2014	$2,046	$1,047	$1,318	$1,739
2015	$2,034	$1,268	$1,321	$1,330
2016	$2,172	$1,311	$1,692	$1,503
2017	$2,233	$1,359	$1,795	$1,555
2018	$2,278	$1,361	$1,848	$1,624
2019	$2,328	$1,354	$1,910	$1,652

Source: HUD, 2009-2019. Current U.S. dollars.

[37] ACS, Table B25064,5-yr. estimates, for Hawai'i, U.S., 50 States, and selected SMSAs, 2009 through 2017.

[38] RentRange®, see glossary.

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Analyses of rents by unit type and size (Table 26) show that increases were common across all unit types and sizes. Between 2016 and 2019, increases in median FMR were larger for single-family (11.2%) than for condominium (6%) or apartment (7.6%) rental units.

Table 26. Median Rent by Unit Type and Size, State of Hawai'i, 2009-2019

	Single-Family Units						Condominium Units					Apartment Units				
	1BR	2BR	3BR	4BR	5BR	All SF Units	1BR	2BR	3BR	4BR	All Condo Units	1BR	2BR	3BR	4BR	All Apt Units
2009	$1,343	$1,690	$2,290	$2,735	$3,075	$2,250	$1,325	$1,650	$2,265	$2,695	$1,999	$1,280	$1,600	$2,188	$2,640	$1,936
2010	$1,300	$1,580	$2,155	$2,665	$2,950	$2,193	$1,285	$1,580	$2,190	$2,620	$1,939	$1,210	$1,520	$2,145	$2,595	$1,883
2011	$1,290	$1,595	$2,100	$2,535	$2,945	$2,192	$1,250	$1,558	$2,160	$2,600	$1,933	$1,175	$1,475	$2,108	$2,505	$1,856
2012	$1,250	$1,595	$2,065	$2,413	$2,690	$1,996	$1,250	$1,590	$2,115	$2,515	$1,909	$1,185	$1,510	$2,030	$2,425	$1,793
2013	$1,245	$1,605	$2,078	$2,413	$2,705	$1,995	$1,273	$1,620	$2,140	$2,475	$1,898	$1,210	$1,560	$2,095	$2,480	$1,841
2014	$1,205	$1,600	$2,065	$2,400	$2,638	$1,962	$1,260	$1,638	$2,185	$2,460	$1,894	$1,210	$1,575	$2,165	$2,515	$1,878
2015	$1,223	$1,595	$2,128	$2,468	$2,748	$2,028	$1,273	$1,703	$2,290	$2,548	$1,984	$1,205	$1,630	$2,240	$2,595	$1,928
2016	$1,300	$1,658	$2,280	$2,735	$3,048	$2,200	$1,335	$1,775	$2,370	$2,795	$2,110	$1,275	$1,700	$2,343	$2,785	$2,043
2017	$1,355	$1,745	$2,405	$2,890	$3,210	$2,324	$1,395	$1,800	$2,420	$2,920	$2,185	$1,335	$1,760	$2,385	$2,875	$2,110
2018	$1,350	$1,780	$2,498	$3,023	$3,343	$2,399	$1,425	$1,835	$2,423	$2,993	$2,225	$1,355	$1,793	$2,440	$2,930	$2,149
2019	$1,365	$1,798	$2,568	$3,095	$3,373	$2,447	$1,445	$1,875	$2,485	$3,053	$2,237	$1,398	$1,820	$2,475	$2,995	$2,198
% chg (2016-2019)	5.0%	8.4%	12.6%	13.2%	10.7%	11.2%	8.2%	5.6%	4.9%	9.2%	6.0%	9.6%	7.1%	5.7%	7.5%	7.6%

Source. RentRange®, 2009-2019. Figures are current U.S. dollars. Further details are shown in Tables D-2 through D-6 in the Appendix.

Median rent for a 2-bedroom single-family unit increased by 8.4 percent from 2016 to 2019. The monthly rent for a 2-bedroom multi-family unit increased by half as much (5.6 to 7.1%) during the same period. Similarly, the median rent for 4-bedroom single-family units went up by $360 (13%) between 2016 and 2019. In the same period, median rent for a 4-bedroom condominium unit went up by $258 (9%)

The trend is not unique to Hawai'i; rents were up for all major metropolitan areas. Honolulu is consistently ranked near the top of the list of America's high-rent cities and, in 2019, our average rent was second only to San Francisco.

3. Affordable Housing

Having one housing unit per household and enough vacant units to ensure a reasonable vacancy rate does not ensure that all households will be adequately housed. There must be a mix of unit types and sizes in the right locations. A functioning housing market needs luxury, high-priced units for those who can afford them. It needs a bulk of adequate and comfortable units for the middle-market and enough safe and affordable housing units for low-income people. These are the numbers most valuable for housing planners, and the numbers that are the most difficult to find.

a. Employment and Affordable Prices

There are many definitions of affordable housing and many ways to describe the impact of affordability on the population. We have already discussed the shelter-to-income (STI) ratio and its role in estimating affordability. Households with high STI ratios are said to be living in unaffordable units. Areas with high average STI ratios are less affordable than those with lower ratios.

In recent years, wage and salary income needed to rent a median-priced, two-bedroom apartment has been proposed as a measure of housing affordability. The measure was developed by the National Low-Income Housing Coalition (NLIHC) and is available annually in the *Out of Reach Report*. A summary of the findings for 2018 is shown in Table 27. See also Table D-1 in the appendix.

Table 27. FY16 Housing Wage, Hawai'i 2018

	Hourly wage necessary to afford a 2-bedrooom rental unit at HUD Fair Market Rent, 2018
State of Hawai'i	$36.13
Honolulu County	$39.06
Hawai'i County	$25.42
Maui County	$31.13
Kaua'i County	$29.06

Source. NLIHC *Out of Reach*, 2018.

Compare Hawai'i's Housing Wage ($36.13) with the average wage of a renter in the state ($16.16)[39], and it is understandable that there are many households with high shelter-to-income ratios. In 2018, Hawai'i had the largest shortfall (-$19.98) between the average renter wage (amount renters earn) and the two-bedroom housing wage (amount required to afford an average two-bedroom rental unit). At -$11.53, Maryland ranked a distant second on this shortfall measure.

Substantial differences also exist between the City and County of Honolulu and the other counties. Honolulu rental prices necessitate an hourly wage of $39.06 to afford a two-bedroom unit at FMR, while the housing wage in the other three counties is between $25.42 and $31.13.

The NLIHC measure allows us to compare our rent wage with other states. Hawai'i's 2018 rent wage ($36.13) was highest in the nation, $3.45 higher than second-place California ($32.68).

b. Affordable units in the housing stock

We also use a definition of affordable housing units recently developed by the Urban Institute (UI).[40] They define affordable housing units as units with a monthly mortgage or rent payment that would require no more than 30 percent of monthly household income for a household earning a specified percent of the HUD Area Median Income (AMI).

Unlike affordability measures based on household income, UI measures affordability as a condition of the housing stock. It counts units in the housing stock with shelter prices suitable for households at specific HUD income levels.

We applied this approach to 2017 housing unit prices throughout the State using guidelines for 30 percent, 50 percent, 80 percent, and 100 percent of AMI for each county.
In 2017, just over half of the housing stock statewide (55.5%) was affordable to households earning 80 percent of HUD AMI. A notably greater proportion of the units affordable to households earning up to 80 percent of the AMI were suited to the higher-income households within this range. Approximately half of the units were affordable to households earning between 50 and 80 percent AMI. Only about 14 percent of the units, however, were priced such that they would be affordable to households earning less than 30 percent AMI.

[39] NLIHC *Out of Reach*, 2018.

[40] Leopold, Josh, Liza Getsinger, Pamela Blumenthal, Katya Abazajan, and Reed Jordan. (2015). The housing affordability gap for extremely low-income renters in 2013, Urban Institute Research Report, June 15, 2015.

III. HOUSING PROJECTIONS, 2019-2040

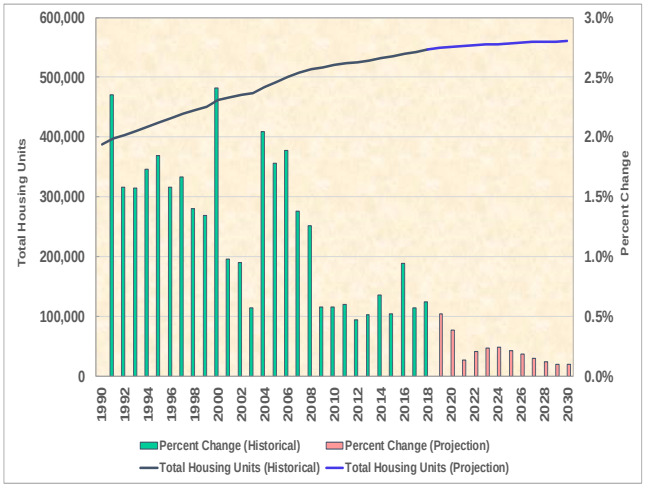
The focus of the HHPS is on planning – using housing information to develop policies and procedures to facilitate housing development that is consistent with housing demand. This future-oriented viewpoint requires more than information on past performance. It requires projections of how the housing market will function in the future.

A. HOUSING SUPPLY

The HHPS measures supply in terms of new construction each year. New construction was measured as the difference between the housing unit counts for two adjacent years. Supply projections were based on past performance of the housing market (added units) and population growth (new residents).

After testing several projection models, we selected a regression model with ARMA coefficients for the population. The model produced a reasonable outcome, as shown in Figure 8. All model parameters were statistically significant. Details are presented in Appendix Table C-2.

Figure 8. New Construction, State of Hawai'i, 1990-2030



Source: SMS, 2019

[41] Hawai'i Housing Demand 2020-2030, Hawai'i Department of Business and Economic Development, Research and Analysis Division, December, 2019.

1. Housing Supply Projection

The HHPS housing supply projection is a projection of total housing units rather than housing stock. The objective was to prepare a housing supply projection that was consistent with the housing demand projection produced by DBEDT.[41] Total housing units include occupied housing units, and vacant and available housing units, seasonal units, migrant units, and other vacancies. Historical data were taken from decennial census and ACS data.

The historical supply data show the well-known pattern of housing production over the past two decades. Steady growth in production between 1990 and 2000 was followed by slightly higher growth after 1999 and a dip after the attack on the World Trade Center in 2001. That was followed by much faster growth through the housing bubble (2002-2008). The prominent downturn in housing production followed the Great Recession in 2009.

The projection line suggests a continued increase in housing supply at a rate somewhat lower than in the previous nine years. The slowdown was generated by the decreasing rate of population after 2016. Specifically, the model predicts lower production rates between 2020 and 2025. The percentage of growth during this period ranges from 0.4 percent to 0.2 percent annually.

There is no information in the historical data itself that indicates a change in the direction of the series. On the other hand, the decrease in population growth suggested that fewer housing units would be needed. Should population decline and housing demand projections fall, our supply projection would be adjusted downward.

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2. Housing Supply Projection Caveats

The supply projection provided here was developed in an atmosphere of change. HHPS sponsors were interested in investigating a few issues that might affect this projection. We review several of those here.

Climate Change and Sea Level Rise

Recent studies (2-10) have shown that sea levels in Hawai'i will reach 6 inches by 2030, 1.1 feet by 2050, 2.0 feet by 2075, and 3.2 feet 2100.[42] Later studies suggest that the rate of change may be faster. A local study published in 2015 showed that the standard rate of change in beach erosion might be tripled by 2100.[43] That could bring about the predicted changes even earlier.

In terms of our housing projection, a study published in 2017[44] predicted that the 3.2-foot rise in sea level would destroy 6,500 structures and displace nearly 20,000 Hawai'i residents. There is no doubt that sea level rise will impact Hawai'i's housing stock in the remainder of this century, and planners should take note. Developing new housing units in the areas that will be affected by sea level rise would be unwise and that could be true even earlier than the first studies predict. The UH Mānoa study shows that the affected areas will be subject to greater damage from tsunami and hurricane storm surge well before the areas are totally inundated.

Studies continue to appear[45] and to clarify the situation. In the long run, however, the impact of sea level rise on the State's 2045 projection will be minimal and the impact on our 2020-2025 forecast will effectively be zero.

Baby Boomers

Some observers of housing trends worry that housing values may fall as baby boomers die off or sell off[46]. Two recent studies seem to support that contention, one from Fannie Mae[47] and one from the Fuller Institute[48]. The issue is relevant in Hawai'i because we have a rapidly aging population and Housing Demand Survey results suggest that our younger people are emigrating.

Baby Boomers – persons born between 1946 and 1964 - control about 32 million housing units worth more than $13.5 trillion[49]. The next generation of first-time buyers is the millennials, people born between the early 1980s and the 1990s. If Boomers decided to sell their units quickly and millennials do not buy them, the market could experience a demand shock. Demand will drop just as supply rises. Prices will fall, resulting in a large loss of value in the housing market.

The argument depends on certain characteristics of boomers that together make them look like heterogeneous groups with a single set of behaviors. Boomers have a desire to age in place[50]. They have not prepared themselves for retirement, have little savings, have health insurance problems and very few have long-term

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42 Climate Change Impacts in Hawai'i: A Summary Of Climate Change and Its Impacts on Hawai'i's Ecosystems And Communities, UH at Mānoa, Sea Grant College Program, June 2014, p. iv.

43 Anderson, T.R., et al., *Doubling of coastal erosion under rising sea level by mid-century in Hawai'i.* Natural Hazards, 2015. 78(1): p. 75-103.

44 Hawai'i Climate Change Mitigation and Adaptation Commission. 2017. Hawai'i Sea Level Rise Vulnerability and Adaptation Report. Prepared by Tetra Tech, Inc. and the State of Hawai'i Department of Land and Natural Resources, Office of Conservation and Coastal Lands, under the State of Hawai'i Department of Land and Natural Resources Contract No: 64064.

45 https://www.staradvertiser.com/2018/07/05/hawaii-news/34-of-hawaiis-coast-at-risk-as-climate-change-accelerates-study-finds/

46 Harney, Kenneth R. 2018. Housing values may fall as baby boomers die off or sell off, two studies say. Washington Post, July 18, 2018.

47 Myers, Dowel and Patrick Simmons. 2018. The coming exodus of older homeowners, Perspectives, Fannie Mae.

48 Chapman, Jeanette. 2018. Demographic and economic factors affecting the upcoming home sales market in the Washington region. The Stephen S. Fuller Institute, School of Policy and Government, George Mason University, July 10, 2018.

49 Fannie Mae quoted in Lloyd, Alcynna. 2018. Can Millennials confront the looming threat of aging baby boomers?, Housing Wire, July 11, 2018.

50 AARP's Survey of Home and Community Preferences, showed that 76% of Americans want to remain in their current home, and 77% want to stay in their current community.

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care insurance. Many of them lost a large part of their real estate value in the Great Recession. All this leads to a predictable set of expected behaviors. Baby Boomers will hang onto their homes until the market starts to fall and then sell off *en masse*.

To this point, the data do not show large numbers of sales by homeowners over the age of 65. In fact, the number of homeowners among the baby boomer generation is increasing. Additionally, evidence shows that not all boomers are tightly tied to their existing units. A 2018 AARP study showed 32 percent of seniors were willing to consider home sharing and 31 percent would consider ADU's. Over half of seniors were interested in villages that provide services to enable aging in place. Another 2018 survey conducted by Realtor.com found 85 percent of them had no plans to sell their present home.

The reality is that Boomers are a large and diverse group who will not act in lockstep with any cohort. They will approach the housing market each in their own way and in their own best interest. In the end, whatever happens will take place over many years and may not have any noticeable effect at all[51].

Table 28. Total Number and Aggregate Value of Occupied Housing Units Owned by Baby Boomers, 2017

		Units Owned by Boomers	
		# of Units	Agg. Value of Units
County	Honolulu	65,589	$47,872,716,700
	Hawai'i	16,659	$6,749,146,700
	Maui	10,826	$7,586,314,700
	Kaua'i	5,740	$3,746,144,700
State of Hawai'i		98,814	$65,954,322,800
United States		22,841,775	$6,260,165,953,800

Source: ACS 2017 5-yr. Estimates Table B25079, B25007. Owners age 65 and over.

In Hawai'i, baby boomers controlled about 98,814 housing units worth more than $65 billion. Our own survey found that Hawai'i residents become less likely to move to a new home as they get older. Sixty-four percent (64%) of seniors ages 60 to 65 said they would probably never move. For residents between 66 and 74 years of age, 68 percent have no intention of moving. At age 75 and older, the percentage of Hawai'i seniors who reported that they were unlikely to ever move jumped to 85 percent.

Millennials

Millennials are portrayed using the same kind of stereotyping. They are burdened by college loan debt, beset by a proclivity to marry late, have children even later, and not inclined to buy homes[52]. Their purchase preferences are for smaller units in the city, with higher densities near public transportation[53].

As with baby boomers, there are scholars who disagree with this viewpoint and offer evidence that millennials are a very large cohort with more diverse preferences than some might think[54].

Still other observers see all of this as much ado about nothing. That group, led by Lawrence Yun, chief economist at the National Association of Realtors, claims that those who worry about the baby boomer bust have ignored positive trends in the housing market, rising populations, and increasing demand from foreign buyers.

Even the Fannie Mae researchers don't think there is cause for major alarm but suggest it might be wise to develop some financing programs to encourage millennials to buy their first home now so they have the equity they will need to move up into the boomers old houses.[55]

[51] Molinsky, Jennifer. 2017, quoted in *Realtor Magazine*, April 20, 2017.

[52] Tabit, P.J. and Josh Winter. 2019. "Rural brain drain". Examining millennial migration patterns and student loan debt, *Consumer and Community Context*, Vol. 1, January 2019, pp. 7-14. Links millennials preference for cities to student loan debt. Millennials, especially rural millennials, go to college to escape the lack of opportunity in their rural home towns. They incur student debt in the process and move to cities to get jobs and pay back their debt.

[53] Realtor Magazine. 2017. The big boomer sell-off coming in the 2020s?, Realtor, April 20, 2017, p. 1.

[54] Stoetzer, Ethan. 2018. How millennials will reshape American politics in 2020. *Politics*, January 22, 2018.

[55] Myers and Simmons, ibid., p. 3.

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Vacation Rental Units

Vacation Rental Units (VRUs) are discussed in the Tourism section of this report (p. 65). They are clearly relevant to the supply of residential housing units in Hawai'i. If units are taken out of the housing stock and made available to non-residents, the housing supply is decreased. The decrease in housing stock will have the effect of increasing housing prices and asking rents.

There is evidence that the number of VRUs in Hawai'i has been rising. The Hawai'i Tourism Authority's annual Visitor Plant Inventory (VPI) tells us the State's inventory of vacation rentals is large and growing.

The Census shows the percentage of Hawai'i's total housing units used for seasonal or recreational purposes has been increasing. There is no evidence yet that the units removed from the housing stock are the ones that are being let to visitors in as short-term rentals. Most observers would agree, however, that VRU's represent a decrease in the supply of Hawai'i's housing stock.

Recent government actions to curb the spread of short-term rentals to visitors may have a significant effect. The success of those efforts is not known as we write this report. They are intended to significantly reduce the use of residential units for commercial business. If they are successful, then fewer units will be removed from the supply, and many may be returned to the housing stock as long-term rentals. In that case, our supply prediction would be increased even without construction activity.

Out-of-State Homebuyers

If a property is sold to a buyer who lives outside the State of Hawai'i, there may or may not be an impact on housing supply.

The buyer may treat the property as a vacation home or a second home, in which case the unit becomes part of total housing units, but not part of housing stock. The unit is occupied when the owner is in town, and vacant when the owner is away. It becomes a seasonal and recreational unit unavailable for use by Hawai'i residents.

Alternatively, the buyer may treat the unit as an investment, renting it all or most of the time the owner is away from Hawai'i. If the rental is available on a long-term contract, the unit is part of the housing stock. If the rental is available to visitors on a short-term contract, the unit is not part of the housing stock. Technically, it is a vacation rental and is removed from total housing to become a commercial accommodation unit.

To the extent that out-of-state buyers treat their homes as second homes or as vacation rentals, the units they purchase are not part of useable housing stock. If out-of-state buyers increase, then the stock projection must go up. DBEDT's measurement of out-of-state land sales shows fewer out-of-state sales every year. Thus, we expect little impact on our projection.

Government Spending on Housing

Government spending affects housing supply in two ways. First, it enables the development of housing units at the low end of the market that would not be built without subsidies. Housing built with government funding can be controlled using deed restrictions or agreements that require the units to remain within the affordable housing stock. Both subjects are treated elsewhere in this report.

To the extent that government funding is increased as a percentage of total construction costs, housing supply can be expected to increase. Federal and state allocations to housing in Hawai'i increased significantly since the last HHPS. In 2019, those allocations returned to their 2014 levels. The $200 million appropriation in 2018 will increase production of rental units during the 2020 through 2025 period.

In-Migration

Planners have long understood that in-migration is related to higher home prices and higher rents. Migrating households represent an instant increase in demand and supply cannot respond fast enough. Some economists have debated this

basic model with a counterproposal that the amenities of the receiving municipality were the cause of both in-migration and housing costs. The issues were recently disentangled in an article[56] that showed, even adjusted for the characteristics of the receiving city, in-migration increases housing costs. Further, the contribution of in-migrants to higher housing costs was greater than the contribution of newly formed local households.

Hawai'i has had high in-migration, both foreign and domestic. It has higher amenities than most other States and it certainly has high rents and housing prices. Further, although the research does not describe the mechanism that links migration and shelter costs, it is not unreasonable to expect that in-migration will result in a decrease in supply relative to demand.

This weaker link between in-migration and supply is not likely to affect our projection. The projection model is based on total housing units as affected by population. In-migration is a component of population change and, therefore, already included in our projection figures. Unless there is a very large, short-term increase in in-migration, our projection will not be affected.

Out-Migration

The possible impact of net out-migration is much like our discussion of in-migration. The difference is that Hawai'i is currently experiencing increasing out-migration high enough to cause measurable population decline.

Other components of population change held constant, out-migration will free up housing units and cause an increase in supply without additional construction.

Evidence from the demand survey suggests that an increasing number of people are leaving the state and that lack of affordable housing is one of the primary reasons for their move.

Certainly, if outmigration continues or increases, there will be a positive impact on supply. But our supply projection model, based on population change and outmigration at its projected rate, would not be affected.

3. The Pipeline

The supply projection 2020-2025 is the number of housing units required to accommodate the rate of unit production adjusted for changes in population. It is similar in concept to the housing demand projection produced by DBEDT and is well suited to this project.

The HHPS 2019 scope of services added a request that we investigate housing supply using a "list of existing and planned housing projects in the City and County of Honolulu as the basis for gathering improved or supplemental information" on housing supply.[57] During the final contract negotiations, other counties agreed to supply similar lists so that the analysis could be applied statewide. For this analysis, the existing units are those built between 2000 and 2018 (inclusive). The planned units are those that are expected to be built between 2019 and 2025. The latter are sometimes referred to as units "in the pipeline" and ready to be built.

The County lists were collected, combined, and expanded to accommodate items of interest to one county or another. Results for the State have been summarized in Table 29.

a. Classifying Housing Units

Our definition of "total government-assisted units" is very broad. It includes units that were directly funded by federal, state, or county resources (loans, grants, tax credits, or tax exemptions), units that were supported by government grants for land acquisition or infrastructure, and market-rate units that were developed as part of inclusionary housing policy in which the attached

[56] Sharpe, Jamie. (2019 Re-evaluating the impact of immigration on the U.S. rental housing market, *Journal of Urban Economics*, Vol. 111, May 2019, pp. 14-34.

[57] Hawai'i Housing Finance and Development Corporation. 2018. RFP No. 18-017-PEO, Addendum No. 4, July 11, 2018, p. 2.

affordable housing was funded by the government.

Table 29 shows the breakdown by project status. Completed units are those that were completed each year according to the definition for each county. Planned units are those that have all the required permits and licenses to be classified as active projects in each county. Preliminary units are those for which plans have been discussed with the counties and have not been cleared as active projects. Some of those are still in very early planning stages.

It goes without saying that the State pipeline numbers are highly influenced by the City and County of Honolulu data. With the lion's share of Hawai'i's population, Honolulu's pipeline list makes up 92 percent of the total. Lists for the other counties are much smaller and reflect their production and planning in recent years.

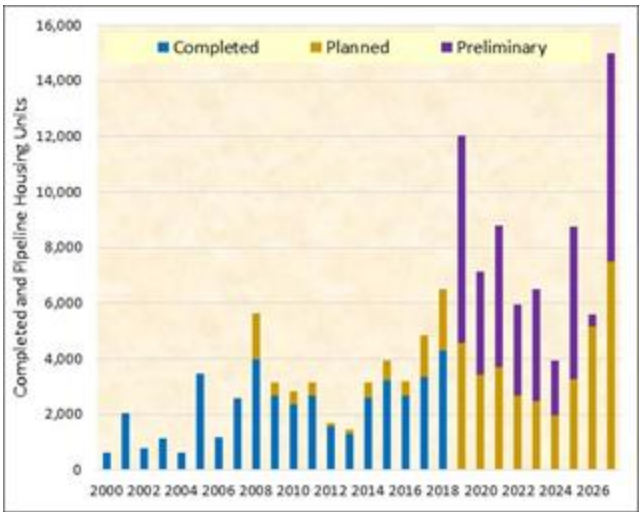
Across the State, government-assisted housing units are continually reclassified in the process of planning and construction. Figure 9 shows one point in time (mid-2019). Completed units resulting from government assistance are produced each year and flow into the housing market. They are shown as blue bar segments from 2000 through 2019.

Table 29. Government-Assisted Housing Units, State of Hawai'i, 2000-2025

	Government-Assisted Units		
	Completed	Planned	Preliminary
2000	606		
2001	2,039		
2002	773		
2003	1,122		
2004	633		
2005	3,465		
2006	1,158		
2007	2,564	15	
2008	3,997	1,651	
2009	2,663	481	
2010	2,352	464	
2011	2,663	494	
2012	1,559	131	
2013	1,292	174	
2014	2,601	532	
2015	3,238	710	
2016	2,674	532	
2017	3,365	1,488	
2018	4,306	2,209	
2019		4,554	7,474
2020		3,519	3,715
2021		3,811	5,112
2022		2,835	3,254
2023		2,474	4,044
2024		2,132	1,955
2025		3,269	5,473
2026		5,173	435
After 2026		10,982	21,604

Source. Government-Assisted Housing lists.

Figure 9. Completed, Planned, and Preliminary Government-Assisted Units, State, 2000-2025



Source: Government-Assisted Housing lists. The last column has been truncated (see text).

Planned units[58] are shown in gold. Note that some "planned units" are listed before 2019. That is an artifact of the list construction method[59]. They are projects that began in a year prior to 2019 and still have units that are scheduled for completion after 2019.

The same situation exists for "preliminary" units. These units in various stages of development, from preliminary project discussions to "only needs one more permit." Those are shown as purple segments.

The last column in Figure 9 has been truncated at 15,000 units. There are 10,982 planned units and 35,205 preliminary units (Table 29) included in that column. Those units represent projects with start dates in the far distant future.

b. Affordable and Market Rate Units

If we trim the end of this 25-year government-assisted housing series, we can get a better idea of what the numbers mean[60] for short-run housing production in Hawai'i. Table 30 shows the number of units built and planned for five years on either side of 2019.

Between 2014 and 2018, there were 6,101 affordable housing units produced in the state – 41 percent of total production. Another 8,590 market-rate units were produced during that same period, for an average of 2,938 units per year. Between 2019 and 2024 (inclusive), there are 12,555 affordable units and 17,155 market-rate units committed and ready for production. The affordable units account for 42 percent of these planned housing units.

On average, 3,300 units were constructed per year for five years before 2019. Of these, 47 percent were affordable. Plans are to build 3,439 units per year in the next five years, 41 percent of which will be affordable.

Table 30. Affordable and Market-Rate Housing Units, State of Hawai'i, 2014-2024

	Government-Assisted Units		
	Affordable	Market Rate	Total
2014	1,425	1,187	2,612
2015	2,051	1,260	3,311
2016	998	1,730	2,728
2017	1,784	1,679	3,463
2018	1,570	2,819	4,389
2019	2,671	3,719	6,390
2020	1,917	2,437	4,354
2021	2,505	4,050	6,555
2022	1,499	2,855	4,354
2023	2,999	2,065	5,064
2024	964	2,029	2,993

Source. Government-Assisted Housing lists.

[58] In the City and County of Honolulu, this classification includes "committed" units, those with all permits in order, perhaps awaiting financing.

[59] Ours is a list of projects. The classification is for units. Hence, a project that began in 2008 can have units yet unbuilt, or "planned".

[60] In the years before 2010, numbers are less reliable because recoding was sporadic. In the years after 2024, the planned and preliminary unit counts may be based on plans that have not been fully conceived.

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B. HOUSING DEMAND

The treatment of housing demand estimates and needed units is somewhat different in 2019 that it has been in the past. It begins from Hawai'i's most recent population projections as presented by DBEDT in their 2045 Series.[61]

1. Official Demand Estimates

In December of 2019, DBEDT released the latest update of its housing demand projections.[62] A decline in Hawai'i's population had resulted in a dramatic decline in the State's housing demand estimate from about 66,000 housing units in 2017 to 36,000 units in 2019.

DBEDT housing demand estimates measure the number of housing units required to house the new households each year. Estimates were based on the population residing in households and assumptions about the average household size (household formation).

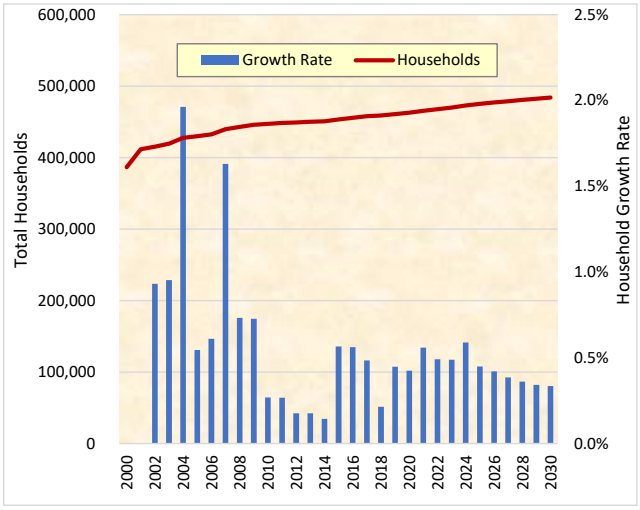
Three estimates were presented. The low estimate assumed that the population decline would continue in the short run and create the need for 25,737 units in 2035. The high estimate assumed that the population decline was an aberration and growth would continue as before 2017. That would result in demand for 46,573 units by 2030. The intermediate number was the average of the high and low estimates and would produce demand for 36,155 units by 2030. For this study we elected to use the intermediate estimate.

The primary driver of the decrease in the housing demand is population decline and the primary driver of the population decline is out-migration. Year-on-year population growth has been falling in all four counties since 2013. In 2017, the population of the City & County of Honolulu fell below its 2016 level and it fell again in 2018. Population growth rates continued to fall on all islands in 2018, the rate of change in Kaua'i County was zero.

The City & County of Honolulu's projections agree with the general direction of the State's projection (albeit for slightly different reasons), and the HHPS Housing Demand Survey found that our projected number of needed units fell between 2016 and 2019.

Figure 10 shows our own household growth estimates 2000 and 2030. The number of households will continue to grow, but at a slower rate than in the past.

Figure 10. Total Households, State of Hawai'i, 2000-2030



Source. DBEDT Data Book Time Series, Table 1.50 2000-2017; SMS estimates based on DBEDT Hawai'i Housing Demand: 2020-2030.

Changing model assumptions will alter results. Using DBEDT's lower population projection rather than the intermediate one would decrease the total number of households and needed housing units. Increasing employment would push up household incomes and release pent-up demand. Increasing interest rates would change the new projection as well. A host of other caveats, discussed in Section II.B.3, below, may affect

[61] Population and Economic Projections for the State of Hawai'i to 2045. Research and Economic Analysis Division Department of Business, Economic Development and Tourism (DBEDT). June, 2018.

[62] Hawai'i Housing Demand: 2020-2030, Department of Business, Economic Development and Tourism, Research and Analysis Division, December 2019.

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these projections. In all, we feel confident that the general trends shown for DBEDT's latest Housing Demand Projections and the HHPS estimates of Needed Units reflect the most likely trends for the next five to ten years.

2. Total New Units Needed

Since 1997, HHPS has used population and housing projections along with survey data to develop estimates of unmet demand for housing in Hawai'i. They are called "needed unit estimates" and identify a set of housing units that are of interest to housing planners in Hawai'i.

Our needed units estimate has three components: (1) a 5-year housing demand estimate based on population change only (18,078), (2) a 5-year target for reducing pent-up demand caused by years of supply shortages (28,459), and (3) a 5-year estimate of the number of units needed to accommodate homeless households (3,619).[63] These 50,156 units represent the number (and characteristics) of units useful to planners.

The foundation for our estimates were discussed in previous sections, especially those on demand and supply projections, and the discussion of survey demand estimates.

The needed units estimate will cover housing unit demand for the next five years, 2020 through 2024. A new procedure for calculating needed units was applied on 2019. We calculated the unmet demand portion the same way and adjusted it to accommodate population change, then added units needed to accommodate homeless households entering the affordable housing market.

Table 31 shows summarizes the process used to generate Needed Units estimates for 2020-2024.

Table 31. Procedure for Estimating Unmet Demand, 2019

Element	Number	Comment	Steps	
Total Housing Units, 2019	455,502	total occupied housing units/ households		
Will move	273,632	will move at some time, excludes "never move"	-181,870	never movers
Final demand (10 yr)	186,978	probably move, not sure when, DKRF	-86,654	no plan to move, 10yr or less
Effective demand (10 yr)	141,764	has plan and date to move, will stay in Hawai'i	-45,214	will leave Hawai'i
Needed units (10yr)	60,005	not qualified to purchase or rent, 2019-2029	-81,759	qualified to buy
Needed units (5yr)	28,459	not qualified to purchase or rent, 2019-2024	-31,546	needed Units, 2025-2029
DBEDT est. pop growth	46,537	units needed to house population growth, 2019-2024	+ 18,078	add DBEDT demand 2019-2024
Homeless entering mkt.	50,156	units to house homeless persons entering the market	+ 3,619	add homeless unit estimates
Special needs impact	51,956	units to house special needs persons entering market	+ 1,800	add estimate for special needs

Source: Housing Demand Survey, 2019.

The first four lines of the process were taken from Table 15. There were an estimated 455,502 occupied housing units in Hawai'i in 2019. Based on the HHPS Housing Demand Survey, about 273,632 of these households (60%) were going to move from the current housing unit to another at some time in the future. Of those, 86,654 might move (32%) but had no idea when that would happen or were sure it would not happen in the next ten years. Since we were trying to measure demands for the next five or ten years, we subtracted those households to get our estimate of final demand at 186,978 households. We then subtracted 45,214 households (24%) who reported that they would be looking for a unit outside the State of Hawai'i when they next moved. That produced our estimate of Effective Demand of 141,674 households.

[63] We eliminated units needed for special needs groups entering the housing market because our numbers were not strong enough. That makes our needed units estimate a conservative one.

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We used survey data to classify households as either qualified or unqualified to purchase the unit they were looking for in the next ten years. Qualification procedures were applied separately for would-be owners and renters and then combined. That produced our ten-year estimate of unmet demand at 60,005 units.[64] The ten-year estimate was divided in half to produce the 5-year estimate of unmet demand at 28,459.[65]

Next, the unmet demand estimate was adjusted for population change. DBEDT Housing Demand Projections were also ten-year estimates. We halved them and added those 18,078 units to the unmet demand estimate.

Finally, we added the 3,619 affordable housing units needed to accommodate homeless households entering the housing market between 2020 and 2025 (Table 32). That gave us our estimate of 50,156 needed units in 2019.

The DBEDT demand estimates and homeless units seem reliable enough, but perhaps we should focus for a moment on the ten-year unmet demand estimate. First, we note that needed unit estimates have been about the same for the last three HHPS -- 60,000 units (± 4,000) since 2011.

There were 59,215 doubled-up-with-family units in 2019 and 25,213 of those wanted to move but could not for financial reasons. There were 34,002 households doubled-up with unrelated individuals who wanted to move but could not for financial reasons. In summary, we find 59,215 doubled-up households, which is indicative of unmet demand and consistent with our 50,156 needed units.

The percent of doubled-up households was 13 percent in 2019. These were households with more than one family per housing unit, sharing a unit with other relatives.[66] Crowding figures are about the same as doubled-up: 13.6 percent in 2019.[67] We don't have a national figure for doubled up, but in 2017, crowding in Hawai'i was the highest in the nation.[68]

Other data suggest pent-up demand is high in Hawai'i. Pent-up demand is high where there are many multi-generational households. There were 42,213 such households[69] in Hawai'i in 2019. That was 13.3 percent of all households, consistent with 13.6 percent crowded and 13.0 percent doubled up. In 2017, the U.S. Census reported 36,424 multi-generational households, about 8.0 percent of the housing stock.

Pent-up demand is high where there are relatively high numbers of households with hidden homeless persons in them. In 2019, there were more than 90,000 households in Hawai'i.

Pent-up demand is high where there are higher numbers of subfamilies. In 2017, the Census identified 36,566 subfamilies[70] in Hawai'i or 8.0 percent of all occupied housing units. Nationally the Census found 3.3 percent of occupied housing units with at least one subfamily. Hawai'i's subfamily rate is 2.5 times higher than the national rate.

Pent-up demand is high where there are many millennials living at home with parents or other relatives.[71] In 2017 there were 308,956 adults aged 18 to 34 in Hawai'i – 29 percent of the adult population. That was about the same as the percent of young adults in the nation that year (30%). Nationally, 35 percent of those young adults were living at home with their parents or other relatives. In Hawai'i, the comparable figure was 64 percent.

Table 32 shows needed units by HUD income guidelines. The guidelines are also qualifications for assistance through HUD programs. Table 33 shows the same projection distributed according to the survey income in each county as measured in the Housing Demand Survey.

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64 In 2016 the figure was 64,693 units in 10 years, indicating that our unmet demand estimate fell between 2016 and 2019. That was expected due to decreasing population and the increase in units produced since 2016.

65 This number cannot be compared with the 2016 HHPS Report. We substituted the DBEDT Housing Demand Projection figure that year.

66 Excludes sharing with non-relative. HHPS 2019, Table 45, p. 7.

67 Same definition as the Census. Table 4, Page 7.

68 ACS 2017, 5-yr estimates, Table B25014.

69 Three or more generations in one housing unit, self-reported in the HHPS 2019 Housing Demand Survey. Distinguish this from the multi-generational (2 or more) data reported for Native Hawaiians on page 73.

70 ACS, Table B11013, 5-yr estimates, Hawai'i and United States, 2017.

71 See Broberg, Brad. 2018. The State of Housing Supply and Demand, *On Common Ground*, National Association of Realtors, December 12, 2018; Freddie Mac. 2018. Young Adults and Household Formation Report, March 16, 2018; Joint Center for Housing Studies. 2019. The State of U.S. Housing in 2019, JCHS for Harvard University.

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Table 32. Needed Housing Units by HUD Income Classification, Counties & State of Hawai'i, 2020-2025

	Total Units Needed, 2020 through 2025								
	HUD Income Classification								
	LT 30	30 to 50	50 to 60	60 to 80	80 to 120	120 to 140	140 to 180	180+	Total
State of Hawaii	10,457	5,730	3,141	6,910	6,055	4,011	5,854	7,997	**50,156**
Ownership Units	2,134	1,158	1,352	3,754	3,320	2,156	3,982	5,734	23,590
Single-Family	1,719	765	805	2,981	1,867	1,470	2,623	4,593	16,822
Multi-Family	415	393	547	773	1,453	686	1,359	1,141	6,768
Rental Units	8,322	4,573	1,789	3,156	2,736	1,855	1,872	2,263	26,566
Single-Family	3,257	1,871	470	1,724	986	1,047	851	1,149	11,356
Multi-Family	5,065	2,702	1,319	1,432	1,749	808	1,021	1,114	15,211
Honolulu	4,200	2,923	1,979	2,944	3,037	1,710	2,405	2,970	**22,168**
Ownership Units	543	520	860	1,772	1,553	1,198	1,622	2,243	10,311
Single-Family	392	190	412	1,271	628	675	866	1,484	5,918
Multi-Family	151	329	448	501	925	523	756	759	4,393
Rental Units	3,657	2,403	1,119	1,172	1,484	512	783	727	11,857
Single-Family	1,070	682	165	513	271	99	156	292	3,249
Multi-Family	2,587	1,721	954	658	1,213	413	627	435	8,608
Maui	1,721	777	492	1,272	740	647	1,800	2,955	**10,404**
Ownership Units	351	253	126	464	211	257	1,104	1,839	4,605
Single-Family	351	230	33	365	157	257	881	1,620	3,894
Multi-Family	0	23	93	99	54	0	223	219	711
Rental Units	1,370	524	366	808	529	390	696	1,116	5,799
Single-Family	594	418	132	393	333	285	377	561	3,093
Multi-Family	776	106	234	415	196	105	319	555	2,706
Hawaii	3,475	1,356	373	2,285	2,143	1,163	1,198	1,309	**13,303**
Ownership Units	756	285	196	1,413	1,556	561	924	1,012	6,703
Single-Family	687	264	196	1,249	1,081	398	635	911	5,420
Multi-Family	69	21	0	164	474	164	289	102	1,283
Rental Units	2,719	1,071	178	872	587	601	274	297	6,600
Single-Family	1,225	443	49	514	307	384	251	215	3,389
Multi-Family	1,494	628	129	358	280	217	24	82	3,211
Kauai	1,060	674	297	408	136	492	451	763	**4,281**
Ownership Units	484	100	170	105	0	139	333	640	1,971
Single-Family	289	80	164	97	0	140	242	579	1,590
Multi-Family	195	20	6	8	0	0	91	62	381
Rental Units	576	574	127	304	136	352	119	123	2,310
Single-Family	367	328	124	303	75	279	67	81	1,625
Multi-Family	208	246	3	1	61	73	51	42	685

Source: Housing Demand Survey and Hawai'i Housing Model, 2019. Housing units needed to eliminate pent-up demand and accommodate new household formation between 2020 and 2025 for the State of Hawai'i and its counties by preferred tenancy and unit type. Note: Rows and columns may not sum exactly due to rounding error resulting from data weighting.

Table 33. Needed Housing Units by Income Classification, Counties and State of Hawai'i, 2020-2025

	Total Units Needed, 2020 through 2025							
	Income Classification							
	Less than $30k	$30k to $45k	$45k to $60k	$60k to $75k	$75k to $100k	$100k to $150k	More than $150k	Total
State of Hawaii	11,289	5,595	6,009	6,106	6,610	8,303	6,244	50,156
Ownership Units	2,376	1,320	2,732	2,923	4,227	5,529	4,483	23,590
Single-Family	1,832	897	1,927	1,952	2,915	3,859	3,438	16,821
Multi-Family	544	423	805	971	1,311	1,670	1,045	6,769
Rental Units	8,913	4,274	3,277	3,183	2,384	2,774	1,761	26,566
Single-Family	4,303	1,782	1,433	1,898	569	816	493	11,294
Multi-Family	4,610	2,492	1,845	1,286	1,815	1,958	1,268	15,272
Honolulu	3,979	2,539	2,241	2,368	3,439	4,077	3,526	22,168
Ownership Units	515	370	778	1,197	2,174	2,731	2,545	10,311
Single-Family	363	119	356	605	1,273	1,463	1,740	5,918
Multi-Family	152	251	423	592	901	1,268	805	4,393
Rental Units	3,464	2,168	1,462	1,171	1,265	1,346	980	11,857
Single-Family	1,284	347	489	425	378	178	148	3,249
Multi-Family	2,180	1,821	974	746	887	1,169	832	8,608
Maui	2,039	1,174	1,279	1,143	1,734	1,822	1,213	10,404
Ownership Units	460	316	376	490	929	1,224	810	4,605
Single-Family	407	205	282	391	849	1,023	736	3,893
Multi-Family	53	111	94	99	80	201	74	712
Rental Units	1,579	858	903	653	805	598	403	5,799
Single-Family	915	633	451	509	161	255	169	3,093
Multi-Family	664	225	452	144	644	343	234	2,706
Hawaii	3,904	1,497	2,285	1,982	943	1,774	918	13,303
Ownership Units	887	509	1,461	1,209	774	1,129	734	6,703
Single-Family	761	475	1,188	932	472	993	600	5,420
Multi-Family	126	34	273	277	302	136	134	1,283
Rental Units	3,017	988	825	773	169	645	184	6,600
Single-Family	1,555	581	409	377	30	384	54	3,389
Multi-Family	1,462	407	415	396	139	261	130	3,211
Kauai	1,367	385	204	613	494	630	588	4,281
Ownership Units	514	125	117	27	349	445	394	1,971
Single-Family	301	98	102	24	322	381	363	1,590
Multi-Family	213	27	15	2	28	65	31	381
Rental Units	852	260	87	587	145	185	194	2,310
Single-Family	549	221	84	587	0	0	122	1,625
Multi-Family	303	39	3	0	145	185	72	685

Source: Housing Demand Survey and Hawai'i Housing Model, 2019. Housing units needed to eliminate pent-up demand and accommodate new household formation between 2020 and 2025 for the State of Hawai'i and its four counties, by preferred tenancy and unit type. Note: Rows and columns may not sum exactly due to rounding error resulting from data weighting.

Tables 32 and 33 show the method of estimating needed units, or pent-up demand, as it has been used since 1997. Experience has shown that the information in those tables is too detailed to serve housing planners and policy-makers in their work.

Figure 11 shows a simpler view of needed units by presenting the total number of units needed by the State and each of the four counties for the next five years. These numbers include those units needed to house new households (as specified in DBEDT's Housing Demand Projection), as well as to address unmet demand and to accommodate current homeless households that will be entering the housing market.

The data provided in Figure 11 is shown without detail regarding unit type (single-family v. multi-family) or tenure (own v. rent). In demand survey data, those details are gathered to serve as part of the analysis. The housing planning function is carried out under the assumption that the preference for single-family owned units can reasonably be filled by providing affordably-priced multi-family or rental units.

Figure 11. Needed Housing Units by HUD Category and Income Classification, Counties & State of Hawai'i, 2020-2025

	Total Units Needed, 2020 through 2025								
	HUD Income Classification								
	LT 30	30 to 50	50 to 60	60 to 80	80 to 120	120 to 140	140 to 180	180+	Total
State of Hawaii	10,457	5,730	3,141	6,910	6,055	4,011	5,854	7,997	50,156
Honolulu	4,200	2,923	1,979	2,944	3,037	1,710	2,405	2,970	22,168
Maui	1,721	777	492	1,272	740	647	1,800	2,955	10,404
Hawaii	3,475	1,356	373	2,285	2,143	1,163	1,198	1,309	13,303
Kauai	1,060	674	297	408	136	492	451	763	4,281

		Total Units Needed, 2020 through 2025							
		Income Classification							
		Less than $30k	$30k to $45k	$45k to $60k	$60k to $75k	$75k to $100k	$100k to $150k	More than $150k	Total
State of Hawaii		10,123	5,679	5,591	5,730	7,191	8,762	7,080	50,156
	Honolulu	3,979	2,539	2,241	2,368	3,439	4,077	3,526	22,168
	Maui	2,039	1,174	1,279	1,143	1,734	1,822	1,213	10,404
	Hawaii	3,904	1,497	2,285	1,982	943	1,774	918	13,303
	Kauai	1,367	385	204	613	494	630	588	4,281

Source: Housing Demand Survey and Hawai'i Housing Model, 2019

3. Housing Demand Projection Caveats

Other demand related issues:

a. Rising Mortgage Rates

An increase in mortgage rates nearly always reduces home sales, particularly among first-time homebuyers. While mortgage rates remain low by historical standards, some experts have been predicting the rates will rise. Zillow predicted a 5.8 percent increase by the end of 2019[72] but we have not yet seen that kind of increase. In fact, in early 2019, observers were reporting that rates were at near-record lows and Freddie Mac was predicting only 4.5 percent rates for July 2019.[73]

In its June 2018 Economic Commentary and Forecast, the Mortgage Bankers Association noted, "We forecast that 30-year mortgage rates will reach 5 percent by late 2018 or early 2019, pushed up by firming inflation, growing deficits, and the strong economy. Faster wage growth is likely to overcome any headwind of increasing mortgage rates, but more home price appreciation in combination with the housing inventory shortage could put a damper on purchase market growth."[74]

Current predictions by the Mortgage Bankers Association have national rates for 30-year fixed-rate mortgages increasing only slightly over the next several years, reaching 5.1 percent in 2021.

In Hawai'i, mortgage rates hover around 3.125 percent for a 30-year fixed-rate mortgage. Interviews with mortgage officers at local banks conducted in March and April 2019 were very positive. They said they expected low interest rates to continue and that qualification guidelines were expected to remain the same. They did note that the market was slowing down a bit – homes staying on the market slightly longer, fewer buyers paying more than asking prices – but there was no mention of belt-tightening. They were handling financing for "a limited number of out-of-state buyers" and expected that to continue.

One stakeholder noted some concern about the declining population in the State and the repercussions to Hawai'i's economy, particularly the banks, construction, and employment. The possibility of a worldwide recession that would impact the travel industry would make residents very nervous about buying was also mentioned.

b. Risk of Recession

Often the threat of a recession can affect the housing market as much a recession itself. The market frequently responds to a potential recession with decreased demand for housing units. As with increasing mortgage rates, this is most prevalent among first-time homebuyers who fear being caught on the front end of declining real estate values.

Economic experts suggest that the odds that the U.S. will be in recession in the next six months increased from 16 percent in May to 19 percent in June. The odds of a recession are low, as none of the classic causes of U.S. recessions—overheating risk, a shock to the economy's balance sheet, or financial imbalances—look worrisome. A decline in consumer sentiment and a drop in housing permits increased the probability of recession, while equity prices and limited initial claims for unemployment insurance benefits helped limit the increase in the odds of a recession.

A recent poll by the Honolulu Star-Advertiser indicated that the level of concern about a recession among Hawai'i residents was evenly divided among those who were concerned, somewhat concerned, and not concerned. If we were to move into a recession, the nature of the housing units needed to meet housing demand predicted in this report would certainly be affected.

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[72] Allen, J.D. 201287. Zillow makes its 2019 real estate predictions, *The East Hampton Press & the Southampton Press*, December 28, 2018.

[73] Lucas, Tim. 2019. Mortgage rates forecast for March 2019, *The Mortgage Reports Editor*, February 21, 2019.

[74] Strong Economic Growth, Rate Hikes to Continue. MBA Economic and Mortgage Finance Commentary: June 15, 2018. Web. 26 June 2018. https://www.mba.org/news-research-and-resources/research-and-economics/forecasts-and-commentary/economic-commentary-archives.

c. Slowing Population Growth

All measures of Hawai'i's population indicate that population growth is slowing, but the timing and degree to which the growth rate will decline is less certain. The most recent Census data estimates that Hawai'i's population declined by about 3,700 people from July 1, 2017 to July 1, 2018. That's the fifth-largest population decline of any state.

Because housing demand estimates are closely tied to anticipated population growth and household formation, changes in the average annual growth rate for the population will necessarily impact demand.

d. Tax Reform

At the end of 2017, when the Tax and Job Act details were just appearing, many housing experts were concerned. Several parts of the act were thought to be problematic and some powerful opponents of those policies reacted strongly[75]. National surveys of housing experts showed them split, but with a plurality of 41 percent predicting pessimistic outcomes[76]. Their objections included:

- **a.** Lowering the threshold for the mortgage interest deduction (MID) to $750,000 or less would be a disincentive to home purchases
- **b.** Deductions for state and local taxes (SALT) were capped at $10,000, thus reducing disposable income that might be applied to home purchases.
- **c.** Increasing the standard deduction was expected to reduce the number of taxpayers who itemize deductions and, therefore, to take SALT or MID deductions in the first place.

All of this was expected to produce a slowdown in home sales in the short run and decreasing home prices by the end of the year.

Results after One Year

One year after they took effect, issues a and b do not seem to be true. Issue c has had some weak effect, but only in high-priced, highly-taxed blue states[77].

On the issue of decreasing the use of SALT and MID deductions, there have been two studies. In one, Zillow looked at taxpayers who took the SALT and MID deductions in tax year 2015 and compared them with taxpayers who took the deductions after tax reform was passed in 2018. They compared the number taking the deductions and the average annual home value appreciation for a year after filing.

Roughly one in five tax filers (22%) used the SALT deduction in a typical U.S. ZIP code in 2015. In those areas, annual home value appreciation in July 2018 was about 0.3 percentage points slower than the pace prior to the passage of tax reform in December 2017. In ZIPs with the most intensive use of the SALT deduction (44% of filers), home value appreciation slowed by 0.6 percentage points.

Controlling for common trends across markets, somewhat slower growth in home value was attributable to tax reform in ZIP codes with high shares of homeowners that historically used the SALT deduction, compared to those areas with less usage historically. The same does not appear to be true for the MID[78].

In another study[79], CoreLogic found no statistical evidence that the new tax law had any impact on

[75] The Tax Cuts and Jobs Act – What it means for homeowners and real estate professional, National Association of Realtors®, 2017 at https://www.nar.realtor/tax-reform/the-tax-cuts-and-jobs-act-what-it-means-for-homeowners-and-real-estate-professionals. This includes NAR reaction to the three issues discussed below, as well as objections to other elements of the proposed law, including some that were removed at NARs' urging.

[76] Zillow's 2018 Q1 Home Price Expectations Survey, as reported in De Vita, Suzanne. 2018. Experts on housing less optimistic as a result of Tax Cuts and Jobs Act, RISMedia.com, Feb 21, 2018, downloaded from https://rismedia.com/2018/02/21/experts-housing-less-optimstic-result-tax-cuts-jobs-act/.

[77] Tarrazas, Aaron. 2018. Housing market showing few ill effects from tax reform, Zillow, August 30, 2018.

[78] Test results were positive but not statistically significant.

[79] Sands, Wade. 2018. What are the effects of the Tax Cuts and Jobs Act on Housing? Corelogic Housing and Policy Division downloaded at https://www.corelogic.com/blog/2018/10/what-are-the-effects-of-the-tax-cuts-and-jobs-act-on-housing.aspx.

home prices or sales between June 1, 2017 and March 1, 2018. That was true no matter what the price of the home was.

Housing experts note problems in the housing market these days (fewer residential building permits, rising mortgage rates, scarcity of land, rising labor costs, and tariffs on building materials[80]). Still, most find that objections to the Tax Cut and Jobs Act were overstated in 2017. Even Lawrence Yun of NAR has said that the Act has had no significant impacts. Other experts say that whatever impact there may have been has been offset by other benefits of the Law, including general economic growth, personal savings prompted by lower taxes, and direct saving attributable to lower tax rates. We note, however, that we have found no empirical studies citing relating those outcomes to the Tax Cuts and Jobs Act.

Regardless, the portents for the future, even by opponents of the Act, do not include serious impacts of the new tax policy on housing prices or construction.

e. Student Loan Debt

Studies suggest that, beginning in the early 2000s, the high cost of a college education was affecting enrollments. The financial industry and the federal government reacted by producing education credit products for both the students and parents. In response, educational institutions raised their tuition and fees, which resulted in a sharp increase in student debt.

By 2019, student debt in the U.S. reached $1.41 trillion and became the second largest credit debt in the country, trailing only mortgage debt.[81]

The mechanism by which student loan debt affects local housing markets is what the Fed calls "complex".[82] On the one hand, student debt can reduce the buyer's ability to accumulate a down payment or qualify for a loan. On the other hand, a college education leads to higher lifetime earnings and insurance against unemployment. In either case, it delays the entrance of young people into the housing market.

Surveys of students with college loans[83] provide some examples of how this works. Fully 87 percent of all student debtors said their loans would delay life choices like marriage, starting a family, and continuing education. Others (61%) said repaying their loans would delay retirement because they would not be able to accumulate enough funds in their retirement accounts.

With respect to the impact on their housing prospects, 20 percent owned a home and 44 percent were paying rent (usually with others). Thirty percent (30%) were living with family or friends and paying little or no rent. Among the 80 percent who did not own a home, 83 percent said their student loans would delay their purchase of a home, 5 percent said there would be no delay, 7 percent said they didn't know if they would be delayed, and 5 percent said they never wanted to own a home. Among those who were living with family before college, 42 percent said their loans forced them to delay moving out of their parents' house.

Discussions with local realtors revealed that Hawai'i's slow home sales are even slower among young people and that the necessity to repay student loans was sometimes mentioned as a problem for young buyers.

In Hawai'i, less than half of the students had student loan debt in 2019, and the average debt was $35,000, up 5.8 percent from 2018. Data were not available at the county level. Hawai'i student debt is just below average in the national student debt scale. That may be due, in part, to lower debt incurred by in-state students. Those who opted to attend mainland schools may have incurred higher debt.

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[80] Tankersley, Jim. 2018. The Trump tax cuts were supposed to depress housing prices. They haven't*", New York Times*, August 27, 2018.

[81] Stolba, Stefan Lembo. 2019. Student loan debt climbs to $1.4 trillion in 2019, Experion.com, June 4, 2019, at https://www.experian.com/blogs/ask-experian/author/stefan-lembo-stolba/.

[82] Guerin, Jessica. 2019. Federal Reserve says student debt has hampered housing market*, HomeWire*, January 17, 2019

[83] National Association of Realtors and American Student Assistance. 2017 Student loan debt and housing report 2017: When debt holds you back, NAR, December 2017.

About half of Hawai'i's recent college graduates have some college debt. That number has been rising and we see no evidence that the situation will change soon. In a market characterized by very low inventory, with high and rising prices, college graduates with student loan debt are likely to delay home purchases. The net effect of student loan debt on the housing demand estimates would be negative.

The impact of student loan debt on entry into the housing market may be correlated with the loss of population over the last few years. The decline in population and housing demand since 2017 may involve young people disproportionately. Young people report leaving the state due to lack of opportunities in the kind of jobs they spent the last four years qualifying for and a lack of affordable housing. However, since we have already incorporated the impact of lack of jobs and housing options, perhaps the net impact of student loan debt is insignificant.

f. Homeless/Special Needs Households

The estimated number of needed housing units does not include homeless households or households with special needs. Including units required to accommodate persons entering the housing market from a homeless or residential treatment facility would increase the number of needed units. It would also impact the types of housing units needed between 2020 and 2025.

As outlined in Section III, to provide housing to households requiring minimal support services would require an additional 3,619 housing units. These majority of these units would likely be studio rentals, and about 250 larger rental units would be needed to accommodate larger families. Locating supportive services, such as standard case management, job training, and financial assistance may be needed as well.

It is difficult to estimate the number of housing units needed to accommodate homeless persons with multiple conditions or to estimate the number of affordable housing units that will eventually be needed when other special needs households enter the market.

C. NEEDED UNITS BY INCOME LEVEL

As identified by the Housing Demand Survey, the 2018 median household income for the State was $74,985. The median was somewhat higher for the City and County of Honolulu ($95,404). The median income for Maui and Kaua'i counties was approximately equal ($74,710 and $74,357, respectively). At $59,473, the annual median household income for Hawai'i County was well below the state median.

1. Types of Units Needed

Tables 32 and 33 reflect the demand for housing units by county, tenure and unit type for the next five years. They have been estimated for each of eight market levels following U.S. Department of Housing and Urban Development (HUD) income guidelines.

The distribution of needed units by tenure, type, and market-level was developed from Housing Demand Survey data. The analysis employs the assumption that needed units are distributed according to the effective demand estimates from the survey. It also excludes households deemed highly qualified to purchase or rent their next home, as these units will likely be developed by the private sector. The detail produced in this analysis will be useful in a variety of housing planning efforts in the next five years. It is relevant, reliable, and utilitarian.

Effective demand includes only Hawai'i residents who are planning to move to a unit in the State of Hawai'i in the next five years. The analysis for Tables 32 and 33 did not account for people who are currently doubled-up for economic reasons.

The lion's share of the needed units is concentrated at the lowest HUD income levels. This finding suggests that the market is more effective in producing high-end units than low-end units. Inefficiencies are exacerbated in periods of rapid market expansion when fewer low-end units are built. More middle-market and low-end units are built during periods of market adjustment.

Needed units are also concentrated in the rental market rather than the ownership market. Again,

the current housing market produces units for sale more efficiently than units for rent.

The estimates in the two tables above reflect the preferences of Hawai'i's likely movers, but do not account for their willingness to accept alternatives or their financial qualifications to make their preferred move. As was noted in the prior section on qualified demand, not every household is financially prepared to pursue their preferred housing situation.

A portion of demand survey respondents who indicated their preference to purchase their next residence conceded that they might have to rent instead. Similarly, several households that intend to buy a single-family home when they move noted that they would consider buying a multi-family dwelling if they could not find a single-family unit they could afford. Finally, a percentage of the survey respondents who indicated that they would be purchasing their next unit also reported that their current financial situation was incompatible with that goal (currently living in public housing, receiving Section 8 assistance, or with no money for a down payment).

We did not explicitly include nearly 60,000 respondent households that were doubled up. Many of those households were, however, included because one or both families in the households were unqualified to buy or rent another unit on their own.

Housing units needed to accommodate homeless persons re-entering the housing market were included in Tables 32 or 33. Households entering the affordable housing market from Special Needs housing have not been included in those tables. Most are in group quarters (prisons, dormitories, nursing homes, etc.) but some are located outside the market (homeless persons, for example) and some, like youths exiting foster care, are living with their foster families in occupied housing units. The data on this group, along with the process by which they enter the marketplace, are not yet clear enough to speculate on the number of units they might require in any given year. We are certain, however that including them would increase the number of needed units in Table 32 and 33.

Applying any one of these possible adjustments to the needed units' tables will result in a shift in the total number and type of housing units needed to accommodate Hawai'i's residents by 2025.

2. Units for Elderly Housing

Analysis was also conducted to identify the subset of total needed units that would be required to accommodate elderly households, that is, households with one or more persons 60 years of age or older, no children under the age of 18, and no persons other than immediate family. Of the 50,156 units needed for households between 2020 and 2025, 13 percent were for elderly households statewide (6,714 units; Table 34). This is up from 9 percent in 2016. All other needed units referenced here as "family units", would be for the use of all other types of households.

Considering just the units needed for elderly households, about 29 percent (1,967 units) are needed for low- and moderate-income households (80% AMI or less). The demand for single-family versus multi-family units was almost evenly distributed among elderly households. Of the 6,714 needed elderly units, there was demand for 3,129 (47%) single-family dwellings.

Table 34. Needed Housing Units by HUD Income Classification, Elderly Persons, Counties and State of Hawai'i, 2020-2025

	Total Units Needed, 2020 through 2025								
	HUD Income Classification								
	LT 30	30 to 50	50 to 60	60 to 80	80 to 120	120 to 140	140 to 180	180+	Total
State of Hawaii	400	751	113	704	1,273	678	901	1,894	6,714
Ownership Units	358	190	64	400	772	349	653	1,723	4,509
Single-Family	282	0	14	354	363	152	423	1,229	2,818
Multi-Family	78	190	50	52	412	177	229	503	1,691
Rental Units	23	542	39	308	506	354	250	183	2,205
Single-Family	0	0	0	39	44	100	96	32	312
Multi-Family	23	542	39	269	462	253	154	151	1,894
Honolulu	288	714	72	538	1,159	436	486	1,330	5,022
Ownership Units	288	185	50	273	703	193	331	1,237	3,261
Single-Family	211	0	0	223	291	96	198	764	1,783
Multi-Family	78	185	50	50	412	97	133	473	1,478
Rental Units	0	529	22	265	456	243	154	93	1,762
Single-Family	0	0	0	0	0	0	0	0	0
Multi-Family	0	529	22	265	456	243	154	93	1,762
Maui	62	6	16	21	26	75	208	275	689
Ownership Units	43	0	0	16	10	29	197	233	528
Single-Family	43	0	0	16	10	29	146	203	447
Multi-Family	0	0	0	0	0	0	51	30	81
Rental Units	13	4	11	4	25	58	16	30	162
Single-Family	0	0	0	0	25	47	16	0	89
Multi-Family	13	4	11	4	0	10	0	30	73
Hawaii	49	22	15	132	88	167	160	155	787
Ownership Units	27	0	0	109	59	127	99	155	576
Single-Family	29	0	0	116	62	27	79	164	476
Multi-Family	0	0	0	0	0	81	20	0	100
Rental Units	9	9	6	29	25	53	80	0	211
Single-Family	0	0	0	29	19	53	80	0	180
Multi-Family	9	9	6	0	6	0	0	0	31
Kauai	0	9	11	13	0	0	48	134	215
Ownership Units	0	5	14	2	0	0	26	98	144
Single-Family	0	0	14	0	0	0	0	98	112
Multi-Family	0	5	0	2	0	0	26	0	32
Rental Units	0	0	0	10	0	0	0	60	70
Single-Family	0	0	0	10	0	0	0	32	42
Multi-Family	0	0	0	0	0	0	0	28	28

Source: Housing Demand Survey and Hawai'i Housing Model, 2019.

IV. HOUSING ISSUES

A few housing issues associated with housing in Hawai'i were selected for special attention in 2019. These included housing for persons with special needs, homelessness as a housing issue, the impact of the visitor industry on residential housing, homelessness as a housing issue, housing for Native Hawaiians, and two others.

A. SPECIAL NEEDS HOUSING IN HAWAI'I

Beginning in 2011, the HHPS identified housing-related issues among persons belonging to ten special needs populations in Hawai'i including:

- The elderly (age 62 and older) and frail elderly (elderly with physical or mental limitations that may interfere with their ability to independently perform activities of daily living)
- Persons with severe mental illness.
- Persons with alcohol and/or other drug addiction
- Persons with physical disabilities
- Persons with developmental disabilities
- Persons with intellectual disabilities
- Persons living with HIV or AIDS
- Victims of domestic violence
- Emancipated foster youth
- Exiting offenders

Many members of special needs populations live in existing households. Depending on their specific needs, they may be cared for by family members, engage services that come to the home, or have modifications done to their home to enable them to remain in place.

Some special needs persons may receive/require some public assistance or services to enable them to live in their current household. Others are transitioning from care programs and may need extra assistance finding or paying for appropriate housing.

A third group needs residential service programs or other group quarters that provide substantial levels of service delivered onsite. These persons with special needs may create demand for housing that is separate from, and in addition to, the rest of the residential housing market.

1. Demand for Special Needs Housing

Persons in special needs populations may experience challenges in obtaining or retaining housing. Low income, the need for supportive services in or near their homes, and the temporary nature of some special needs services can keep them from securing adequate and affordable housing.

a. Economic Barriers to Accessing Housing

Persons with special needs are often unable to afford adequate market-rate housing due to low rates of employment. For example, persons with substance addiction were more likely to be unemployed than employed.[84] Survivors of domestic violence were absent from work for an average of seven days at a time.[85] This resulted in a considerable loss of income.

Persons exiting prison leave without cash, food, transportation, or community support.[86] Many had less than high school diplomas, lacked adequate job training or work experience, and many suffered a physical disability or mental illness. There is also a bias against hiring former prisoners. As a result, it was difficult for exiting offenders to obtain steady work at pay rates high enough to afford market-rate rents.[87]

Though most of them do not require support in activities of daily living, exiting offenders will move into transitional housing if available. Ideally, transitional housing for exiting offenders provides substance abuse treatment, reintegration

[84] Substance Abuse and Mental Health Services Administration, *Results from the 2018 National Survey on Drug Use and Health: Summary of National Findings*.

[85] Rothman, Hathaway, Stidsen, & de Vries (2007). How employment helps female victims of intimate partner violence. *Journal of Occupational Health Psych*, 12, p. 136.

[86] Comprehensive Offender Re-entry Plan, State of Hawai'I Department of Public Safety, 2019.

[87] Urban Institute Justice Policy Center (2008). Employment After Prison: A Longitudinal Study of Releases in Three States. October, 2008. http://www.urban.org/sites/default/files/alfresco/publication-pdfs/411778-Employment-after-Prison-A-Longitudinal-Study-of-Releasees-in-Three-States.PDF.

counseling, and support services that encourage adherence to terms of release and promote successful reintegration into the community. In September 2019, the State's only Federal Halfway House is closing, and no replacement has been identified.[88]

Most young adults who exit the foster care system need to secure their own housing when they age out of the foster system. There are state- and federally-funded programs to facilitate transition from foster care to independent adulthood. Young people exiting foster care are less likely than average to have a high school diploma and many have difficulty finding employment that would qualify them for market-rate rentals.[89]

b. Need for Special Services

Although public housing, Section 8, and other similar housing support programs help to mitigate the economic barriers to accessing housing, many special needs persons may need access to support or treatment services delivered at or near their residence.

Table 35. Households with someone who has challenges performing activities with daily living[90]

At least one person in a household	O'ahu	Maui	Hawai'i	Kaua'i	Statewide
Difficult to walk or climb stairs	52,424	9,178	12,077	3,339	81,018
Difficult to bathe or dress themselves	19,587	3,015	3,181	1,192	27,575
Difficult to travel	28,857	5,042	1,441	1,730	42,688

As shown in Table 35, 81,018 households stated that "someone in their household had a physical, mental or emotional condition that makes it difficult to walk or climb stairs." Roughly 27,575 households included at least one member who had difficulty bathing or dressing themselves. In 42,688 households statewide, at least one member had a physical, mental, or emotional condition that made it difficult to travel to doctor's offices or shopping places. In these households, at least one member may require assistance with activities of daily living. This assistance may be provided by another family member or by a commercial vendor.

Table 36. One-person Households with someone who has challenges performing activities with daily living[91]

One Person Households	O'ahu	Maui	Hawai'i	Kaua'i	Statewide
Difficult to walk or climb stairs	15,147	2,250	3,221	753	21,370
Difficult to bathe or dress themselves	4,031	344	718	159	5,252
Difficult to travel	8,172	1,014	1,655	305	11,146

Nineteen to 26 percent of Hawai'i households are single-person households (Table 36). Persons in these households, along with households that include frail elderly, persons with advanced terminal illness, or persons with severe mental or physical disabilities, may be unable to perform activities associated with daily living. They are unable to live alone and will require shelter in group quarters where daily living support and medical treatment are available.

Persons with substance addiction will often enter residential facilities where treatment and counseling are integrated into the residential context. During long-term residential treatment, an addict will go through a course of treatment and receive counseling, job training, and other support services.[92] Upon the completion of residential treatment, persons recovering from substance addiction may move into sober houses, a form of transitional housing.

Victims of domestic violence require shelter that provides protection from abusers and that facilitates access to childcare services, financial and employment support services, and counseling.

c. Special Needs Housing is Often Temporary

If a person with special needs does secure affordable housing with access to support services, the challenge shifts from *becoming* housed to *staying* housed.

[88] *Hawai'i's Only Halfway House is Closing, Putting More Offenders Behind Bars*, Civil Beat, August 20, 2019.

[89] Hawai'i Kids Count (2012). Issue Brief. Improving Outcomes for Youth Transitioning Out of Foster Care. http://www.yeshawaii.org/wp-content/uploads/2015/09/TUES-HawaiiKidsCountBrief.jpg.

[90] HHPS Housing Demand Survey 2019.

[91] HHPS Housing Demand Survey 2019.

[92] National Institutes of Health, National Institute on Drug Abuse (2012). Principles of Drug Addiction Treatment: A Research-Based Guide (3rd ed.).

Housing in residential service programs - from domestic violence shelters to prisons - are, by their nature, temporary. After a designated period, residents are expected to move into permanent housing. Sponsoring agencies provide housing support only if their funding lasts.

d. Special Needs Persons in Need of Housing

Estimating the number of persons with special needs who need housing is challenging for a variety of reasons.

First, it is often difficult to estimate the number of people in the State who have a specific special need. Even when we have a population estimate, the number of persons who need housing is often unknown. Census estimates of the frail elderly and persons with disabilities say nothing of their housing need (all such persons are sheltered in existing households), and breakdowns of the group quarters population are not published.

Second, many agencies that serve persons with special needs are not required by contract or charter to provide housing. They may not know the housing needs in their target populations. Some may even provide housing referrals but keep no record of services provided outside of those required by charter or contract.

Third, co-occurring disorders are common in this group. In one study, 40 percent of persons with mental health problems also reported substance use problems.[93] About 65 percent of incarcerated persons have substance abuse issues.[94] Victims of domestic violence are more likely than other individuals to have HIV, mental health difficulties, or substance dependence, stemming from their abuse.[95] Co-morbidity causes double-counting and inflates housing need estimates.

Table 37. Special Needs Group Sizes

Special Needs Group (Statewide)	Number Persons	Source
Elderly-Related		
Elderly (65+) (2017)	253,750	2017 ACS
Elderly (65+) with any Disability (non-institutionalized) (2017)	82,723	2017 ACS
Elderly (65+) living alone (2017)	44,001	2017 ACS
Persons receiving Aid to Aged, Blind & Disabled (2016 average per month)	928	Hawai'i DHS Data Book January 2017
Substance-Abuse Related		
Substance abuse offenders in treatment programs (2017)	4,922	Substance Abuse & Mental Health Svcs. Admin. Behavioral Health Barometer, Hawai'i Volume 5, Released 2019, data from 2017 Survey
Persons with Substance Abuse (2017)	85,000	Substance Abuse & Mental Health Services Admin. Behavioral Health Barometer, Hawai'i Volume 5, Released 2019, based on data from 2017 Survey
Domestic-Violence Related		
Survivors in shelters one night 2018	445	13th Annual Domestic Violence Count , Hawai'i Summary conducted 09/13/18, SMS Calculation
Survivors with unmet requests for shelter one night.	29	13th Annual Domestic Violence Count, Hawai'i Summary conducted 09/13/18, SMS Calculation
Persons living with AIDS/HIV (2017)	2,393	HIV/AIDS Surveillance Report, State of Hawai'i DOH, December 31, 2017
Persons with Serious Mental Illness, Adults 18+ (2017 Average of five years)	36,000	Substance Abuse & Mental Health Services Admin. Behavioral Health Barometer, Hawai'i Volume 5, Released 2019, based on data from 2017 Survey
Paroles and Ex-offenders	852 per year	2018 Annual Statistical Report, Fiscal year 2018, Hawai'i Paroling Authority
Foster Care Children Exiting because of Emancipation (2016)	66	Hawai'i DHS Data Book January 2017

[93] Substance Abuse and Mental Health Services Administration (2016). Mental and Substance Abuse Disorders.

[94] The National Center on Addiction and Substance Abuse (2010). *Behind Bars II: Substance Abuse and America's Prison Population*.

[95] World Health Organization (2013). *Global & Regional Estimates of Violence Against Women: Prevalence of Health Effects of Intimate Partner Violence and Non-Partner Sexual Violence*.

Nevertheless, it is necessary to develop some estimate of the size of the special needs population. Table 37 presents some estimates of the number of persons in each special needs population. The counts are duplicated across categories and not every person with a special need requires housing.

Table 37 illustrates the challenge of determining the size of special needs groups and the size of the number of people currently being served. To better identify future needs for residential services with wrap-around services, a new approach needs to be developed. Ideally, this approach will correspond to the types of care facilities that are available. For example, instead of considering aged individuals as a group, we could identify the characteristics of adults age 65+ who use the services of a residential care facility versus a skilled nursing facility or other service provider. Once these characteristics are grouped by type of facility, we can better estimate total demand.

2. Inventory of Special Needs Housing

In this section, we deal with challenges in trying to assess system capacity for housing persons with special needs. Where available, we include data on type of facilities and vacancies.

Eight facilities statewide offer temporary shelter for survivors of domestic violence. The capacity of these shelters varies because some have a "no turn away" policy meaning they will accommodate as many survivors and family members as necessary. Stays at these facilities can last up to 120 days. During their stays, staff members work with survivors to find appropriate long-term residences.[96]

A "Special Treatment Facility" is a facility that provides a therapeutic residential program for care, diagnosis, treatment, or rehabilitation for socially or emotionally distressed persons, mentally ill persons, persons suffering from substance abuse, and developmentally disabled persons. There are 24 such facilities in the State: four on Hawai'i Island, one on the island of Maui and 17 on O'ahu. It is unclear the number of beds or vacancy level for each facility.[97]

"Therapeutic Living Programs" (TLPs) are long term (up to 6 months) residential programs for adults with severe and persistent mental illness who do not need the care of a specialized treatment facility. The primary goal of the program is to assist clients in meeting their basic needs until they can transition into an independent living option of their choice. Support is flexible, focused, and based on recovery. There are nine TLPs statewide: four on Hawai'i Island, one on the island of Maui, and four on O'ahu. It is unclear how many beds or vacancies for each of these facilities.[98]

"Developmental Disabilities Domiciliary Homes" are described under *Chapter 333F of Hawai'i Revised Statutes-Services for Persons with Developmental Disabilities or Mental Retardation.* They provide 24-hour supervision or care, excluding licensed nursing care, for a fee, to not more than five adults with mental retardation or developmental disabilities. There are 45 of these facilities statewide: one on Hawai'i Island, three on Maui and 41 on O'ahu. The number of beds and the occupancy rates for these facilities are unknown.[99]

"Community Care Foster Families" serve the aged and disabled persons by providing housing, supervision, direct care, and management of resident's non-medical and medical service needs. As shown in Table 38 below, there are 1,166 homes with 2,975 beds statewide. This is a significant increase from the 492 homes and 1,203 beds in 2016. These homes serve a mix of Medicaid and private pay patients.[100]

Table 38. Community Care Foster Families

	O'ahu	Maui	Hawai'i	Kaua'i	State
Number of Homes	957	57	130	22	1,166
Capacity	2,433	139	350	53	2,975

[96] Hawai'i State Coalition Against Domestic Violence.
[97] Hawai'i Department of Health, Office of Healthcare Assurance, State Licensing Section, January 2019.
[98] Hawai'i Department of Health, Office of Healthcare Assurance, State Licensing Section, January 2019.
[99] Hawai'i Department of Health, Office of Healthcare Assurance, State Licensing Section, January 2019.
[100] Hawai'i Department of Health, Office of Healthcare Assurance, State Licensing Section January 2019.

Table 39 shows the number and capacity for Adult Residential Care Homes (ARCH) and the number of EXP (Expanded Services Programs) and ARCH II EXP, which are ARCH II with expanded services).

Table 39. Adult Residential Care Homes, Hawai'i, as of January 2019

	Number Homes	Capacity	Vacant	Vacancy Rate
ARCH I	200	882	542	61%
ARCH II	4	109	85	78%
Total	204	991	627	63%
EXP	222	1098	676	62%
ARCH II EXP	35	423	315	74%
Total EXP	257	1521	991	65%
Grand Total	461	2512	1618	64%

ARCH I and ARCH II are intended to serve adults with minimal service needs, assist with activities of daily living. EXP and ARCH II-EXP provide 24-hour assistance with activities of daily living. These two programs also provide skilled nursing services, if needed. Statewide, there are 461 licensed ARCH homes providing 2,512 beds. This is a decrease of 23 homes and 154 beds compared with 2016. As of the last report noted above, 64 percent of these beds were vacant.

Table 40. Assisted Living Facilities, Hawai'i, as of January 2019

	O'ahu	Maui	Hawai'i	Kaua'i	State
No. Facilities	14	1	1	1	17
Capacity	2,219	144	220	100	2,683

Assisted Living Facilities (Table 40) provide a combination of housing, meal services, health care services, and personalized support services designed to respond to individual needs. Statewide there are 14 facilities with a 2,683 bed capacity.[101] This is a decrease of one facility since 2016, but an increase of 283 beds.

Table 41. Skilled Nursing and Intermediate Care Facilities, Hawai'i, 2019

	O'ahu	Maui	Hawai'i	Kaua'i	State
No. Facilities	28	3 +1	9	5	46
Capacity	2,830	459	886	333	4,508

Hawai'i's Skilled Nursing and Intermediate Care Facilities (ICF) provide types of care like those provided by ARCH homes but are housed in larger facilities (Table 41). ICF provides 24-hour assistance with activities of daily living and care provided by licensed nursing and paramedical personnel on a regular long-term basis.

Skilled nursing facilities provide skilled nursing and related services to residents who require 24-hour medical or nursing care or rehabilitation services. Statewide 46 facilities offer this level of care with 4,508 beds.[102] This is a decrease of four facilities and an increase of 153 beds.

Table 42 shows the number of Intermediate Care Facilities for Individuals with Intellectual Disabilities. Statewide there are 17 facilities with a total of 86 beds.[103] This is a decrease of one facility and two beds.

Table 42. Other Intermediate Care Facilities, Hawai'i, 2019

	O'ahu	Maui	Hawai'i	Kaua'i	State
No. Facilities	13	4	0	0	17
Capacity	62	24	0	0	86

Combining Community Care Foster Families, ARCH, Assisted Living Facilities, SNF and ICF, there are 12,754 beds providing different levels of care. This is a 19 percent increase over 2016 (2,006) primarily because of the increase in Community Care Foster Families.

[101] State of Hawai'i Department of Health, Office of Health Care Assurance, Medicare Facilities, June 23, 2016.
[102] State of Hawai'i Department of Health, Office of Health Care Assurance, Medicare Facilities, July 2019.
[103] State of Hawai'i, Department of Health, Office of Healthcare Assurance, Medicare Section, July 2019.

3. Needed Units for Special Needs Population

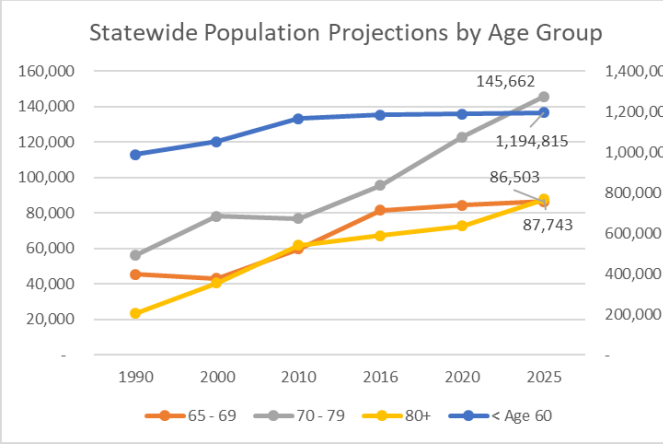
There are three types of units required for this population: units in care homes with appropriate services, temporary units in transitional programs, and housing units for people exiting programs.

a. Currently in Housing, Need for Care Homes/Facilities, or in-Home Services.

The largest special needs group is the elderly. The projection by age that DBEDT provided in its 2045 Series Report indicates that the population for the State below age 65 will grow very little between 2020 and 2025. However, the number of persons aged 65+ will increase significantly from 279,686 to 319,908 (14%; Figure 12).

Based on the 2020 65+ population, we have one "bed" in a care home/facility for every 22 seniors. By 2025, the number of 65+ seniors is projected to increase by 14 percent. If the need continues to be the same, the state will require a total of 14,541 beds, an increase of almost 2,000 beds.

Figure 12. Population Projection, State of Hawai'i, 1990-2025



With only 4.5 percent of seniors cared for in a home or facility, it is likely that family or care services will be required for many of the other 300,000+ seniors in the state age 65+. These seniors will choose to, or will have to, remain in their homes or with family, many of these homes will require retrofitting such as grab bars, ramps, emergency call systems, special telephones for the blind, etc.

Individuals with serious mental illness may also be seeking beds in a home or facility. The number of persons with SMI is assumed to increase proportionally between 2020 and 2025. In 2017, 36 percent of individuals with any mental illness received some type of service (including residential). Assuming this group still makes up 3.3 percent of the population, this would equate to 2,250 individuals by 2025.

b. Need for Shelter/Clinics/Transitional Housing, then Permanent Housing

The special needs groups seeking residential shelters/clinics (a form of transitional housing) are domestic violence survivors, persons with foster care, and perhaps persons with HIV/AIDS.

There are 19 identified domestic violence programs in Hawai'i, not all of which provide shelter for survivors.[104] In one night in 2018, there was an estimated need for 474 units for survivors and it is likely that many had children that stayed with them. Domestic Violence service providers believe the need is much higher and hope that, over time, more people who are abused will seek assistance. Assuming identified need increases at the rate of population for 20+, an additional 15 to 20 units will be required at a minimum by 2025. Most of the survivors exiting the shelter will need affordable, safe housing.

There are 4,922 Substance Abuse offenders in treatment programs. Some of these programs are residential treatment facilities. If the number of offenders increases at the same rate as the population, there will be 5,080 offenders seeking treatment in 2025. Likewise, current residential treatment programs will have to increase their availability accordingly. Upon the completion of residential treatment, persons recovering from substance addiction may move into sober houses, many of which are expected to be transitional in nature. Upon completion of the program, they will

[104] 13th Annual Domestic Violence Count , Hawai'i Summary conducted 09/13/18,

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need assistance finding housing and subsidies to pay for rent while seeking employment.

The Hawai'i Paroling Authority identified 852 parolees and exiting offenders in one year. Ideally, most of them will have spent time in transitional housing prior to leaving the facility to provide them the resources and skills they will need to acclimate to community living. Unfortunately, the only Federal transition facility is closing in late September 2019, and it is unclear how many State facilities are available. The need is for group homes with specialized services that can accommodate at least 426 (assume a stay of six months) soon to be released or placed on parole offenders. Upon leaving the transitional home, there will be a need for assistance to find around 852 housing units per year. It is unclear if the number released per year will grow in the next five years.

Each year approximately 66 youth age out of the Foster Care system. There is a need for a transitional-type group setting for them that provides the training and resources to find employment, apply for scholarships, grants, and find affordable housing. By 2025 an additional ten spaces/units per year will be needed.

Approximately 2,393 individuals have AIDS/HIV. Based on the HMIS analysis (to be discussed in the next section), there were 107 persons who had been served in by a homeless program who self-identified as having HIV/AIDS and of these 28 exited to permanent housing. Having a transitional option while waiting for permanent housing will be beneficial for this group.

Overall, just based on the Special Needs Group discussed here, there is a significant need for:

- Care facilities and/or home service providers for the elderly and for persons with serious mental illness;

- Transitional shelters/clinics for
    - Domestic Violence Survivors
    - Substance Abuse Offenders
    - Paroles and Ex-Offenders
    - Emancipated Foster Care Youth
    - Persons with AIDS/HIV.
- Permanent housing available when persons exit their transitional shelters/clinics. Generally, these groups will require subsidized housing and assistance in finding housing.

4. Recommendation

As the population of Hawai'i continues to grow and age, identification of the demand for, and inventory of, special needs housing demand and supply will become more important. Even as we recognize that not every individual that has a special need will require a specific housing option, over time a better tool for projecting and tracking this population will be in order.

The following section on homelessness uses the data available in the State's Homeless Management Information System (HMIS). The data from the HMIS feeds into a coordinated entry system that matches homeless persons with available housing. The system identifies the specific needs within the population to enable a better match of supportive services required.

In fact, many of the people in the Special Needs group will become homeless if not offered both the transitional places to retreat and prepare for permanent housing and assistance in finding and funding permanent housing rental units upon leaving the transitional programs.

We strongly recommend that the State and County agencies serving persons with special needs begin exploring how to use HMIS data to determine the programs special needs persons will need in conjunction with housing.

B. HOMELESSNESS IN HAWAIʻI

1. Introduction

Homelessness in Hawaiʻi is a persistent and vexing problem. Thousands of individuals and hundreds of families struggle to access and maintain housing while local, state, and federal governments funnel millions of dollars into outreach, shelter, housing, and service programs to curtail the problem.

Needs in the homeless community are diverse, but one constant is the need for permanent housing. To end homelessness, we must begin by ensuring the availability of housing units necessary for this sector of the population.

In accordance with Housing First best practice principles, now adopted federally and locally, it is understood that people need the safety and stability of a home in order to address challenges and pursue opportunities.[105] The availability of permanent housing is if we are to sustainably house Hawaiʻi's homeless. Additionally, a supply of supportive housing and service programs is needed to assist those dealing with the disabilities and life challenges that often compound housing struggles. Issues like mental illness, substance abuse, physical and developmental disabilities. Housing First prescribes that these issues are best dealt with once a person is stably housed.

HHPS 2019 continues to support the position that the lack of affordable housing is the primary driver of homelessness and that poverty and pathology are secondary issues.[106] That viewpoint is also reflected in Hawaiʻi's primary housing planning document, the Consolidated Plan (HHFDC 2015).

a. Definition of Homeless Status

The definition of homelessness has been refined since the last HHPS. HUD has added four categories of homelessness in its recent Final Rule Defining Homeless.[107]

1. Individuals and families who lack a fixed, regular, and adequate nighttime residence including an individual who is exiting an institution where he or she resided for 90 days or less and who resided in an emergency shelter or a place not meant for human habitation immediately before entering that institution;

2. Individuals and families who will imminently lose their primary nighttime residence;

3. Unaccompanied youth and families with children and youth who are defined as homeless under other federal statutes who do not otherwise qualify as homeless under this definition; and

4. Individuals and families fleeing, or attempting to flee, domestic violence, dating violence, sexual assault, stalking, or other dangerous, life-threatening conditions related to violence against an individual or family member.

b. Context, Policies and Impact

Hawaiʻi homelessness began an unprecedented climb in 2010, with overall numbers increasing 26 percent statewide by 2016.[108] Unsheltered numbers increased even more significantly, climbing 47 percent during the same time period. Homelessness had become one of the most visible issues in the state.

By 2014, momentum gathered around system-level changes to the homeless service system. Pilot projects and the implementation of several new evidence-based strategies were well underway, including the development and utilization of the Vulnerability Index & Service Prioritization Decision Assistance Tool (VI-SPDAT) to assist in identifying the highest need clientele.[93] This included new funding and increased investment in proven and strategies such as homeless prevention, Rapid Rehousing, Coordinated Entry, and an enhanced focus on Housing First practices within existing programs.

[105] USCIH, https://www.usich.gov/solutions/housing/housing-first/
[106] See HHPS 2006, 2011, 2016; Homelessness Section.
[107] McKinney-Vento Homeless Assistance Act. HUD's Final Rule implementing the new definition at 24 CFR Part 91, 582 and 583. D*efinition above reflects the changes.*
[108] HUD, Hawaiʻi Point-in-Time Count Data.

By 2016, the development of Coordinated Entry Systems (CES), for the O'ahu Continuum of Care (CoC), Partners in Care (PIC) and the neighbor island CoC, Bridging the Gap (BTG), made significant strides to streamline and increase efficiency in the homeless service system. The CES system connects individuals and families seeking services to the complete network of resources and housing options available within their CoC. In 2017, both CoCs launched their respective CES systems.

Prevention and Rapid Rehousing programs expanded significantly from their onset in 2010, initially funded by a $2 million federal grant. Prevention efforts have become an essential piece of effective homeless policy, often referred to as "closing the front door" to homelessness. Rapid Rehousing Programs are a key tool for moving homeless into permanent housing as quickly as possible.[109]

All these system changes were tipping the scale in the homeless crisis in Hawai'i and, in 2017, Hawai'i saw the first decrease in the Homeless Point-in-Time count in eight years. This reduction of 8.8 percent statewide was followed by two consecutive years of modest reductions.

In 2018, Hawai'i had the third-highest per capita rate of homelessness among the 50 states – 460 persons per 100,000. The homeless population decreased again from 2018 to 2019 by about 1.3 percent. However, there were still 6,448 homeless persons in Hawai'i on any given night in 2019 (Table 43).

Table 43. Homeless PIT Counts, State and Counties of Hawai'i, 2009-2019

	Year											Pct. Chg. 2016-2019
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Sheltered	3,268	3,535	3,632	3,726	3,745	3,813	3,666	3,613	3,420	3,055	2,810	-22.2%
O'ahu	2,445	2,797	2,912	3,035	3,091	3,079	2,964	2,767	2,635	2,350	2,052	-25.8%
Hawai'i	321	286	229	170	160	211	220	271	275	200	243	-10.3%
Maui	422	392	394	420	421	445	505	484	395	399	420	-13.2%
Kaua'i	80	60	97	101	73	78	88	91	115	106	95	4.4%
Unsheltered	2,514	2,299	2,556	2,520	2,590	3,105	3,843	4,308	3,800	3,475	3,638	-15.6%
O'ahu	1,193	1,374	1,322	1,318	1,465	1,633	2,162	2,173	2,324	2,145	2,401	10.5%
Hawai'i	615	313	337	447	397	658	1,021	1,123	678	669	447	-60.2%
Maui	581	399	658	454	455	514	632	661	501	474	442	-33.1%
Kaua'i	125	213	239	301	273	300	251	351	297	187	348	-0.9%
Total	5,782	5,834	6,188	6,246	6,335	6,918	7,509	7,921	7,220	6,530	6,448	-18.6%
O'ahu	3,638	4,171	4,234	4,353	4,556	4,712	5,126	4,940	4,959	4,495	4,453	-9.9%
Hawai'i	936	599	566	617	557	869	1,241	1,394	953	869	690	-50.5%
Maui	1,003	791	1,052	874	876	959	1,137	1,145	896	873	862	-24.7%
Kaua'i	205	273	336	402	346	378	339	442	412	293	443	0.2%

Source: State of Hawai'i PIT Counts, 2009-2019.

c. Methodology

There are two primary sources for homeless counts in Hawai'i: the annual Point-in-Time (PIT) Count;[110] and the Homeless Management Information System (HMIS).

The PIT count is gathered in an annual multi-night survey of homeless shelters and locations where homeless persons are known to congregate. PIT

[109] https://www.huduser.gov/Publications/pdf/Strategies for preventing_Homelessness.pdf

[110] See, for example, Partners in Care 2019 Point-in-Time Comprehensive Report for a detailed description of the methods, definitions, and results of the count. https://www.partnersincareoahu.org/sites/default/files/PIC%202019%20Oahu%20PIT%20Count%20Report%20-%20FINAL.pdf

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Count data has been best used to track progress and changes within the homeless community over time, as it is a snapshot taken once a year.

The other source is the Homeless Management Information System (HMIS), which maintains data on homeless persons in shelters or encountered at unsheltered locations across the state.[111] The HMIS data file is populated by homeless services agencies and providers based on the clients they serve. The HMIS database is used daily by providers and state agencies to assist in the management and tracking of persons seeking services and in the coordination of resources in the homeless sector.

Most of this section of the report is based on an analysis of HMIS data gathered from April 2018 to April 2019. SMS obtained a de-identified listing of all single and family households encountered by Homeless Providers in Hawai'i from April 2018 to 2019. The overall dataset included all program types and households served regardless of housing status.

Analysis was done by household, rather than by individual, to identify the number of housing units needed to meet demand. The housing demand analysis considered only homeless households within outreach, emergency, and transitional shelter programs, and excluded those who had exited to permanent housing since entering programs.

2. Number of Homeless Households

Based on the HMIS data, there were 6,610 households served in homeless programs between April 2018 and April 2019. Of those 4,910 households, more than 70 percent were not permanently housed. Some of these unhoused households may have self-resolved during the year (found housing or were otherwise no longer homeless). Others may still need housing. Regardless, all were unhoused at some point during the year, and all were seeking help and assistance into housing from one or more homeless providers in Hawai'i.

These households represent an important part of the unmet demand for housing in Hawai'i. Their numbers are not included in Census data (the basis for population counts and housing demand estimates). They are not included in annual counts of occupied housing units and they are not housed in any public sector residential programs (Group Quarters). Their need for a housing unit represents unmet demand, new demand that is added to the demand estimates we develop from population and housing production data.

Characteristics of Homeless Population

Most homeless households are individuals (85%) (Table 44). The remainder are "family households," two or more individuals who reside together. There were 724 family households in the data (15%) and about six percent of those were couples or two-person households. The remaining nine percent of households had more than two members, with a few having eight or more persons in the unit.

Couples and family households made up a larger percentage of the homeless population in Maui and Kaua'i counties (about 25%). In Honolulu and Hawai'i Counties, groups were about 15 percent of the homeless count.

Table 44. Household Size Among Homeless Persons

HH* Size	Hawai'i	Kaua'i	Maui	O'ahu	State
1	236	290	515	3,145	4,186
2	29	27	55	183	294
3	18	8	38	96	160
4	11	7	18	70	106
5	11	6	8	54	79
6	3	4	8	33	48
7	3	2	1	25	31
8+	0	0	0	6	6
Total	311	344	643	3,612	4,910

Source: Hawai'i HMIS Data, 2019.
* HH = Household

[111] See, Yuan, Sarah, Hong Vo, Kristen Gleason, and Javzandulam Azuma. 2016. Homeless Services Utilization Report, 2016, University of Hawai'i at Mānoa, Center on the Family, 2015.

3. Reducing the Number of Homeless

There are three significant leverage points where actions can be taken to reduce the number of homeless persons:

- While still housed, preventing homelessness;
- Immediately upon entering homelessness, providing housing as quickly as possible;
- When being placed in permanent housing from a homeless shelter, currently in programs.

All three options rely on the availability of affordable rental units.

a. Preventing Homelessness

Of the 6,610 households served in homeless programs between April 2018 to 2019, 2,177 (33%) of them were new to the homeless service system. Reducing in-flow to the homeless system and preventing homelessness is necessary to reduce the homeless problem.

There are two measures used to identify the households likely to become homeless: At-Risk-Households and Hidden Homeless. In the 2019 HHPS Housing Demand survey, respondents were asked how long they could stay in their current residence if they were to lose their primary source of household income. Twenty-five percent (25%) of Hawai'i households reported that they would be forced out of their homes after two months or less of sustained income loss. That was higher than the 21 percent of at-risk households in 2016.

The other indicator of potential homelessness examines households that have doubled up, also known as "hidden homeless." According to the U.S. Census, doubled-up households are defined as those that include at least one "additional" adult – in other words, a person 18 or older who is not enrolled in school and is not the householder, spouse or cohabiting partner of the householder. We exclude households sharing accommodations because they prefer to live as extended families.

Across the State, the percentage of households that contained hidden homeless persons increased from 17 percent in 2016 to 20 percent of households in 2019, as shown in Table 45.

Across the four counties, there was little difference in the percentage of at-risk or hidden homeless. Hawai'i County had lowest percent at risk of homelessness (21%) and hidden homeless (15%), but all other counties were within two percentage points of the Statewide average.

Table 45. Households At-Risk or with Hidden Homeless, State and Counties of Hawai'i, 2019

	At-Risk of Homelessness		Hidden Homelessness	
	At-Risk House-holds	House-holds Not at Risk	Some Hidden Homeless	No Hidden Homeless
Hawai'i	21%	79%	15%	85%
Honolulu	26%	74%	21%	79%
Kaua'i	24%	76%	19%	81%
Maui	24%	76%	22%	78%
State	25%	75%	20%	80%

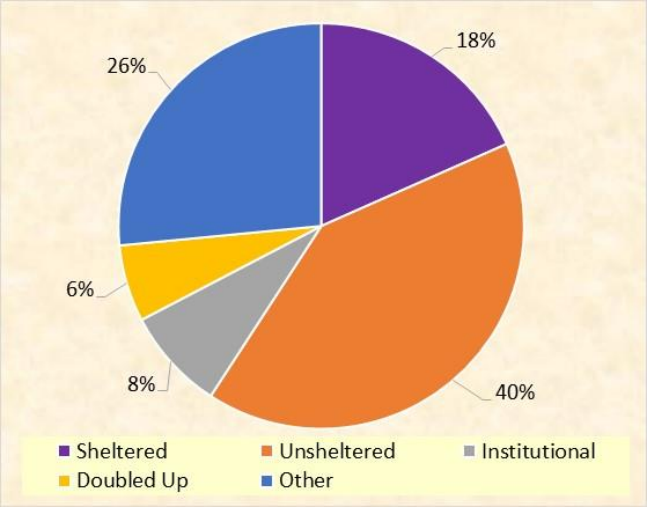
*The questions used to identify hidden homeless households changed after HHPS 2011. Source: HHPS 2019.

In all four counties, hidden homeless and those at risk of homelessness were more likely to be people who were younger, relatively recent arrivals to our state, and persons with fewer economic resources. Hidden homeless households were also larger, with 5.8 persons per household on average.

It was more common for hidden homeless persons to be doubled up with family members than with unrelated individuals. In 2019, more hidden homeless wanted to move in the next five years (37% compared to 31% in 2016). Further, hidden homeless households had lower income per household member than households that did not include hidden homeless members ($21,250 vs. $33,750).

Understanding where people lived prior to entering programs can help identify strategies to reduce homelessness. Figure 13 presents a breakout of these locations.

Figure 13. Location Before Entering Programs[112]



Source: Hawai'i HMIS Data, 2019.

The largest number of homeless persons entering shelters came from "unsheltered" locations (40%) followed by "other shelters" (18%). Others (8%) were in "institutional" settings prior to entering a homeless shelter. Roughly six percent (6%) were "doubled-up" with family or friends and two percent came directly from housed locations.

Many of the persons exiting from other shelters or institutional settings were likely special needs individuals coming from institutions like prisons or hospitals, or from other shelters such as HIV/AIDS transitional homes. Strategies to prevent homelessness in these groups were discussed in the earlier Special Needs Section.

Homeless prevention programs, prior to and at the onset of homelessness, can be an extremely effective tool for reducing homelessness in high-cost housing markets. Successful systems include supportive services (especially upon discharge from institutions), mediation in housing court, and subsidies for rents and mortgages.[113] The goal is to effectively prevent an episode of homelessness before it happens.

In 2019, Hawai'i homeless service providers prevented 1,198 households from becoming homeless. Progress in eliminating homelessness depends on reducing that level of in-flow. If only 10 percent of at-risk households lose their primary source of income, then approximately 14,000 households would need assistance to keep them from becoming homeless.

Table 46. Number of Households Assisted to Keep Them from Becoming Homeless

Program Type	Hawai'i	Kaua'i	Maui	O'ahu	State
Homelessness Prevention	204	15	102	877	1,198

Source: Hawai'i HMIS Data, 2019.

b. Providing Housing as Quickly as Possible

Rapid Rehousing programs have become essential for moving individuals and families out of homelessness quickly. Adhering to Housing First methods, these households are provided financial assistance to help access housing immediately. Often this type of housing includes wraparound support services before and after placement to assist with challenges related to the move. Statewide, 1,420 households of this type were placed by Rapid Rehousing programs statewide in a year.

Table 47. Number of Households Assisted in Exiting Homelessness

Program Type	Hawai'i	Kaua'i	Maui	O'ahu	State
Rapid Rehousing	211	46	84	1,079	1,420

Source: Hawai'i HMIS Data, 2019.

4. Unmet Demand for Housing for those in Homeless Programs

Among households being served, some cannot find or afford market-priced housing. The rest need additional support services, before and after placement. Table 48 shows total 2019 unmet demand for individuals, couples/2-person households, and family households of three or more. To estimate the number of needed housing

[112] HMIS, April 2018 to April 2019 Data.

[113] HUD, https://www.huduser.gov/Publications/pdf/Strategies_for_preventing_Homelessness.pdf.

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units, we postulated that Individuals, couples and 2-person households can be accommodated with a studio. Families of three or more would need a larger unit.

Statewide, there were 4,186 individuals, 294 couples or families of two, and 430 larger families, who received homeless services over the course of the year but did not exit to permanent housing.

Table 48. Unhoused Households Statewide

Homeless Classification	Households
Individuals	4,186
Couples and Family Households of 2	294
Family Households of 3+	430
Total Households	4,910

Source: Hawai'i HMIS Data, 2019.

a. Households with No Special Needs

At program intake, clients complete the VISPDAT, which identifies any conditions or special needs that could affect their ability to access or maintain housing. These data are collected in HMIS. Table 49 shows the number of households for which VISPDAT data indicated no need for special services. About half of unhoused households in homeless programs in the target year had no conditions or special needs that would affect their ability to access or maintain housing.

Table 52 shows a need for 1,471 affordable or subsidized studios statewide for individuals (1,372) and couples or small families of two (99). An additional 289 family households of three or more would need larger units. Services needed by individuals and families with no special needs are limited and usually short-term. They include case management, job training, counseling, and short-to-mid-term financial or other assistance – services that do not require in-residence delivery.

b. Households with a Single Special Need

Many individuals and families need additional short to long-term support or residential services to sustainably maintain housing. Table 50 shows the breakdown of supportive housing and service needs statewide for unhoused households who have declared a single condition.

The largest unhoused group with a single condition was the 558 households dealing with substance abuse. Serving households with substance abuse issues requires an adequate supply of residential detoxification and treatment facilities, after which permanent housing units will be required. Our review of substance abuse treatment facilities (see Special Needs) showed that all or nearly all such facilities have waitlists. If our 558 households were to exit homelessness this year, we would need 558 additional substance abuse slots. After treatment, Hawai'i would need 558 housing units, 535 studios, and 23 larger units.

Mental health conditions affected 501 households in the 2019 HMIS target group. Serving their needs requires a combination of short-term treatment facilities and longer-term supportive housing services, depending on the nature and severity of the condition. Access to adequate medical care and treatment is likely necessary for this group to maintain housing. Data on what percentages of mentally limited homeless persons proceed to independent housing is hard to find. We have assumed that about half of the households would remain in permanent supportive housing and half would proceed to permanent housing. Thus, these cases will result in the need for 501 additional mental health beds and, eventually, 251 new housing units.

Table 50 shows 367 households having at least one person with a physical disability and 36 with at least one person having a developmental disability. Some of these households will need no residential treatment and proceed directly to permanent housing. Their units may require ramps, grab bars, easy access showers, etc. and housing for the developmentally disabled may requires wraparound services. Other households in this group may require some living assistance, either in an institutionalized setting or in small family care homes. Using the assumption that half of the households with a physical or developmental disability will be able to proceed to permanent housing, Hawai'i will need about 201 new affordable housing units and 202 spaces to accommodate households in need of assisted living situations.

c. Households with Multiple Conditions

There were 1,688 unhoused households that had more than one condition (Table 51) in the 2019 target year. For these households, overlapping conditions and complex household situations will require case management services. CES must identify on a case-by-case basis the most appropriate solution for each household.

This makes it even more difficult to develop assumptions about types of housing needed by these households. More than 90 percent of them are individuals. They will need treatment beds and studios with wrap-around services. The rest are families and only 57 of them had three or more members. This suggests that the complexity in the multiple conditions group is caused by co-morbidity rather than group size.

Table 49. Unhoused Households with No Special Needs

Households with No Special Needs	O'ahu	Hawai'i	Maui	Kaua'i	State
Individuals	1,049	35	209	79	1,372
Couples and Family Households of 2	66	8	25	9	99
Family Households of 3+	191	24	45	20	289
Total	1,306	67	279	108	1,760

Source: Hawai'i HMIS Data, 2019.

Table 50. Unhoused Households with a Single Condition

Substance Abuse Only	O'ahu	Hawai'i	Maui	Kaua'i	State
Individuals	386	14	55	51	506
Couples and Family Households of 2	21	0	5	3	29
Family Households of 3+	15	3	4	1	23
Total	422	17	64	55	558
Mental Illness Only	O'ahu	Hawai'i	Maui	Kaua'i	State
Individuals	328	34	54	26	442
Couples and Family Households of 2	16	4	2	0	22
Family Households of 3+	26	4	7	0	37
Total	368	42	63	26	501
Physical Disability Only	O'ahu	Hawai'i	Maui	Kaua'i	State
Individuals	224	18	39	31	312
Couples and Family Households of 2	18	3	7	4	32
Family Households of 3+	17	2	2	2	23
Total	159	23	48	37	367
Developmental Disability Only	O'ahu	Hawai'i	Maui	Kaua'i	State
Individuals	14	0	5	2	21
Couples and Family Households of 2	3	1	1	0	5
Family Households of 3+	3	1	4	2	10
Total	20	2	10	4	36

Source: Hawai'i HMIS Data, 2019.

Table 51. Unhoused Households with Multiple Conditions

Multiple Conditions	O'ahu	Hawai'i	Maui	Kaua'i	State
Individuals	1,144	135	153	101	1,533
Couples and Family Households of 2	59	13	15	11	98
Family Households of 3+	32	12	11	2	57
Total	1,235	160	179	114	1,688

Source: Hawai'i HMIS Data, 2019.

Some part of each subgroup will need permanent supportive housing. Using the assumption that half of the households with multiple conditions will be eventually proceed to permanent housing, Hawai'i will need residential treatment facilities for another 844 individuals, and another 844 studio apartments later. For those who are less fortunate, Hawai'i will need an additional 844 permanent supportive housing slots.

d. Summary of Needed Units

The homeless population upon which the former analysis was conducted consisted of 6,037 households active in homeless programs in the 12 months between April 2019 and March 2019.[114] By the end of that period, 1,127 of those households were permanently housed, suggesting that about 19 percent of homeless households can be accommodated without additional units each year. The remaining 4,910 homeless households never exited programs or exited to unknown destinations. These households require housing units that must be added to the current housing stock.[115] Table 52 summarizes the foregoing analysis and lays out the number and types of units that are needed for short-term (Transitional Shelter) and long-term (PSH and Affordable Housing) treatment of households with each type of conditions.

Table 52: Housing Units Needed to Accommodate Homeless Persons in 2019

Type of Household	Transitional Shelter Units[116]	Permanent Supportive Housing (PSH) Units	Affordable Housing Units
Individual or Couple (Studio)			1,471
Family HH 3 or more persons			289
Substance Abuse HH	*558*		558
Mental Health HH	*251*	250	251
Physical Disability HH		183	184
Developmental Disability HH		18	18
Mixed Conditions HH	*844*	844	844
Total	*1,653*	1,295	3,615

There is a demand for 1,653 additional transitional shelter beds, mainly for substance abuse (558) and mental health treatment (251), as well as mixed conditions. There is a need for 1,295 additional permanent supportive housing units for individuals and families with various special needs. Finally, there is a need for 3,615 additional subsidized or unsubsidized affordable housing units for individuals and families throughout the state.

An assumption was made for households in the mental health, physical disability, developmental disability, and mixed conditions categories: 50 percent of them would need PSH and 50 percent could either immediately, or after a time in transitional shelter, sustain an affordable rental unit, with or without wraparound services.

Overall, there are 4,910 households represented above. Households counted as needing transitional housing were also counted in the affordable housing category, as the transitional housing unit is not a permanent housing destination. Households without a head of household or with inadequate data collected were not included.

The SMS projections are more modest than similar projections generated by the Corporation

[114] Households without a head of household were excluded, as well as households with inadequate data collected.

[115] See Number of Homeless Households, Para 2, p. 62.

[116] Following HUD definitions, these units are fundamentally residential treatment facilities and not emergency shelter.

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for Supportive Housing (CSH).[117] CSH estimated a need for 6,000 additional housing units.

This section of the SMS analysis focused on housing demand within homeless programs only. We developed estimates of current units needed beyond market capacity. The CSH report included a demand analysis for all levels of housing intervention, including demand for Prevention and Rapid Rehousing funding, as well as incorporating projected demand and financial modeling used for cost analysis. If annual newly homeless numbers remain high, demand for additional units in these categories will rise.

5. Maintaining Permanent Housing and Reducing Recidivism

One of the biggest challenges for keeping formerly houseless persons in permanent housing is their ability to afford rental payments over a longer period.

The average income for an unhoused homeless individual served in the state was $375 a month (Table 53). Homeless two-person family households did slightly better at $864 ($432 per person). Larger households per person income decreases as family size increases.

There is little likelihood that these households (especially those with conditions and special needs) can maintain available market-rate housing without deep, long-term subsidies, in the absence of significantly increased income.

In the 2019 Housing Demand Study, renters were asked how much per month they spent on rent and utilities. Average costs for single household renters was $1,280 a month, up to $2,200 a month for a 4-person household. Based on the average incomes for unhoused homeless households, an average subsidy of $960 a month would be needed for these families to pay rent on a market-rate unit.

Table 53. Average Homeless Household Income Source: Hawai'i HMIS Data, 2019.

Household Size	Hawai'i	Kaua'i	Maui	O'ahu	State
1	$521	$593	$413	$338	$375
2	$786	$1,595	$1,091	$700	$864
3	$1,445	$1,814	$1,127	$709	$946
4	$1,385	$2,709	$1,530	$980	$1,230
5	$1,057	$2,538	$1,191	$957	$1,115
6	$2,055	$2,575	$2,172	$931	$1,345
7	$1,493	$2,892	N/A	$1,245	$1,335
8+	N/A	N/A	N/A	$1,278	$1,278
HH Average	$673	$813	$576	$401	$470

Current subsidy programs pay varying amounts of subsidies for shorter and longer periods of time. Rapid Rehousing Programs can last from a few months to two years and can pay the entire rent for a household. These programs try to taper down assistance over time to promote long-term sustainability post-program. The Hawai'i Public Housing Authority (HPHA) Rental Subsidy Program can pay up to $500 a month for larger households. The Federal Housing Choice Voucher Program, more commonly referred to as Section 8, lasts for as long as the household qualifies and only requires a household to pay 30 to 40 percent of their gross income in rent depending on the affordability of the selected unit.

Waiting lists for these programs range from immediate access for some Rapid Rehousing funds for highly vulnerable families, the Public Housing Subsidy program is no longer accepting

[117] Corporation for Supportive Housing, Hawai'i Housing Projections and Financial Modeling, 2017.

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applications due to limited supply, and up to three to five years for Section 8. Finding affordable units and landlords willing to work with homeless or Section 8 clients can prove challenging. This limits the potential of the program's success.

6. Strategy and Planning Implications

Our objective for 2019 was to bring together data to help planners develop homeless support programs and to estimate the number of housing units that might be needed to house homeless persons entering the ranks of the housed.

Between April 2018 and May 2019, nearly 9,000 households were served in Prevention, Outreach, Shelter, and Housing programs statewide. Of those, more than 2,500 households exited to permanent housing. That was about 30 percent of the total households served over the course of that year, which leaves about 70 percent of the served population still homeless, struggling, receiving services, or unaccounted for.

Table 54. Household Exits to Permanent Housing by Program Type

	Households Served	Permanent Housing	Exit Rate
Homelessness Prevention	1,187	702	59%
Rapid Rehousing	1,389	734	53%
Street Outreach	2,518	185	7%
Emergency Shelter (ES)	2,584	670	26%
Transitional Housing (TH)	935	272	29%
Total	8,613	2,563	30%

Source: Hawai'i HMIS Data 2019.

In addition to all the currently homeless persons, newly homeless will continue to enter the system, as shown in the number of at-risk and hidden homeless households. Over our 12-month period, approximately 2,000 individuals and 500 families became newly homeless. Given no significant changes in the economy, these numbers are likely to continue. While lower than the numbers served, these are less than the numbers being permanently housed.

The following are recommendations to improve the housing and policy environment, hopefully leading to progress in solving the homeless crisis in Hawai'i.

a. Increase Funding for Prevention Programs

In order to "close the front door" to homelessness, enhanced targeted prevention programs are needed to lessen the number of newly homeless families entering shelters and the streets each year. In the last year, statewide prevention programs served about 1,200 households. If those households had become homeless, the State could have seen an 18 percent increase in households on the streets or in shelters that year.

Prevention efforts reduce costs and pressure on the homeless service system. Prevention programs are more successful in keeping households in permanent housing over a longer period compared to other programs. It is easier, more humane, and more affordable to keep people in housing than to find them housing after they have become homeless.

More than 30 percent of those served by homeless service providers between April 2018 and April 2019 were newly homeless households. Reducing the number of households entering homelessness is a cost-effective way to reduce overall homeless numbers and is a significant leverage point in the system for addressing homelessness.

b. Increase Rent Subsidies

The cost of not placing homeless households into permanent housing is very high. For example, many of these individuals and families are served in emergency shelters for extended periods of time. The average length of stay in an emergency shelter in Hawai'i in the fiscal year 2017 was 112 days.[118] A shelter bed funded by the U.S. Department of Housing and Urban Development costs, on average, $8,000 more each year than a Section 8 housing voucher. A shift in resources, with an emphasis on expanding state-level prevention and rental subsidy programs and efforts, would lessen overall homeless program

[118] Hawai'i HMIS, Service Utilization Reports

expenses by targeting this sector of the population.

The average unhoused individual served during the year made less than $400 a month.[119] This reality is in stark contrast to average monthly housing costs paid by single-person households statewide: $1,280.[120]

Existing programs, including Section 8, HPHA Rental Subsidy Program, and Rapid Rehousing Programs, should be expanded to reach more of the unhoused population. Subsidies will need to be significant and long-term. Subsidies are often the only alternative to homelessness when there is a lack of affordable housing stock for the lowest income groups.

Extending the length of time a subsidy is available will enable newly placed households to continue in permanent housing and keep them from again becoming homeless.

Concern over landlords' reluctance to accept housing vouchers and subsidies remains a persistent problem in the service community. Finding a unit with a landlord who will accept a homeless or at-risk client can make the housing process even more time-consuming. The government could promote renting to low-income persons or leasing to social service organizations by providing incentives to those landlords willing to participate. Some programs have had more success in finding and maintaining affordable rentals long term by "master leasing" units and acting as the intermediary between their clients and the landlords.

Other options include creating Section 8 landlord guarantees and providing prompt money-back options for landlords who claim losses in excess of the security deposit due to damages caused by Section 8 tenants.

Piloting and expanding programs such as these may help increase the stock of housing units available to lower-income sectors of the population.

c. Build Additional Affordable, Permanent, and Supportive Housing Units

Adequate investment in suitable supportive temporary and permanent residential housing options, as well as supportive services for those in off-site housing, is necessary to effectively assist these households.

"Supportive housing not only resolves homelessness and increases housing stability, but also improves health and lowers public costs by reducing the use of publicly funded crisis services, including shelters, hospitals, psychiatric centers, jails, and prisons".[121] While the cost of housing this population can be quite high, the alternative is higher. For example, in Los Angeles, the average public cost for an unsheltered homeless person was $2,897 per month and the average public cost for a resident in supportive housing was $605 per month, a five times greater cost to the public for those unhoused versus those who were provided supportive housing.

Consideration should be given to identifying shelters or other facilities that can be retrofitted to provide single-person units offering specific supportive services. Supportive services can be delivered more efficiently when clients are in a residential setting. Depending on the conditions and special needs of the individuals, some shelters may be Permanent Supportive Housing or Transitional, eventually exiting to a permanent housing location with or without services. Given the number of individuals with single and multiple conditions, providing additional Supportive Housing options in the state will be necessary.

[119] Hawai'i HMIS Data 2019.
[120] HHPS Demand Survey, 2019.
[121] USICH, www.usich.gov/solutions/housing/supportive-housing/

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C. HOUSING AND TOURISM

Hawai'i has a thriving visitor industry because it has many amenities – a pleasant climate, scenic beauty, great beaches and water sports, good visitor products and infrastructure, a well-trained and experienced labor force, a pleasant lifestyle, and a host culture that provides a foundation for hospitality and our Aloha Spirit.

The visitor industry has been Hawai'i's number one industry since replacing sugar and pineapple production in the nineties. It provides 164,000 jobs per year, accounts for a substantial percentage of the GSP, and contributes $1.8 billion each year in Hawai'i State General Excise Tax and the Transient Accommodations Tax.

Overall, residents understand the economic benefits of tourism. However, with visitor arrivals approaching the 10 million mark, residents seek benefits beyond the economic, a greater return on their "investment." While residents largely continue to view the industry favorably, some indicators of Hawai'i Resident Sentiment have weakened.[122] A strong visitor industry may also bring higher population growth, greater external housing demand, and higher housing prices.

What is of interest to us here is the impact of the visitor industry on the residential housing market in Hawai'i. Do rising room rates affect residential rents? Does the increasing demand for alternative visitor accommodations lead to a loss of residential housing stock?

1. Traditional Relationship

The traditional relationship between tourism and housing markets starts with tourism's benefits to local economies. Virtually all sources agree: (1) tourism is a good way to turn non-economic assets into exports, improve the economy, create jobs, and generate income[123]; and (2) if you choose the visitor industry as a way to run your economy, you can expect high housing prices[124] and other problems.[125] Fitz (2006) showed that tourism leads to an increase in second homes[126], which increases property taxes and Biagi, *et al*. found that higher housing prices lead to issues in affordability, displacement, and gentrification.[127] These research findings will not surprise anyone in Hawai'i's visitor industry.

In Hawai'i, the academic literature has not produced much on the direct impact of tourism on the housing market. The popular press, on the other hand, continues to investigate the issues. Some went as far as to claim, "Some people complain that illegal rentals have caused housing prices to soar and have torn apart communities where residents know all their neighbors".[128] In addition to these public reaction stories, some data appeared, noting that, "at 80 percent occupancy, the average Airbnb rent in 2015 would bring in $5,900 per month." That is nearly 3.5

[122] Hawai'i Tourism Authority, *HTA Resident Sentiment Survey 2018 Highlights, 2019*.

[123] Gunderson, Ronald J. and Pin T. Ng. 2005. Analyzing the effects of amenities, quality of life and tourism on regional economic performance using regression quantiles, *Regional Analysis & Policy*, vol. 35, no. 1.

[124] Reeder, Richard J. and Dennis M. Brown. 2005. Recreation, tourism, and rural well-being. United States Department of Agriculture, Economic Research Services, Economic Research Report Number 7, August, 2005. See also Ko, Dong-wan and William P. Stewart. 2002. A structural equation model of residents' attitudes for tourism development, Tourism Management, Vol. 23, pp. 521-530, 2002. See also, Affordable homes and tourism are election issues in Midhurst, *Midhurst and Petworth Observer*, (UK), April 13, 2015.

[125] Carlino and Saiz (2008) used visitor arrivals as a measure of consumer preference for local amenities. They found: (1) amenities were linked to population and job growth; (2) "beautiful cites" attracted more skilled employees; (3) growth in visitor arrivals was related to accelerated housing price appreciation, especially in supply-inelastic markets; and (4) local investment in physical amenities resulted in increased demand for visits. They saw this as evidence of a self-perpetuating cycle of tourist development housing appreciation.

[126] Fitz, Richard G. (1982) Tourism, vacation home development and residential tax burden: A case study of the local finances of 240 Vermont towns, *American Journal of Economics and Society*, Vol. 41, No, 4, pp. 375-385, October 1982.

[127] Biagi, Bianca, Dionysia Lambiri, and Alessandra Faggian. 2012. The effect tourism on the housing market, in Uysal, M., *et. al.*, (eds.), *Handbook of Tourism and Quality-of-Life Research: Enhancing the Lives of Tourists and Residents in Host Communities*, International Handbooks of Quality-of-Life, Springer Science+Business Media B.V. 2012.

[128] Riker, Marina. 2015, State, City looking to crack down on illegal vacation rentals, *Honolulu Civil Beat*, March 10, 2015.

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times the average rent for a residential rental unit in 2015.[129]

What concerns us here is one particular part of visitor industry operations in Hawai'i -- the number of rental properties being used for short-term rentals to transient parties. Short-term means rental contracts for 30 days or less. Transient parties include visitors from out of state and residents, traveling overnight or longer interisland.

These types of rental units have been discussed using a variety of names. In this report, we will use the term Vacation Rental Units (VRU). As used here, VRUs include single-family house rentals, multifamily condominium rentals, and bed and breakfast properties. For 2019, we also looked at additional alternative accommodation types: timeshare, room or rooms in the owner's place of residence, and cottage or other units on owner's property. Some VRUs started as visitor accommodations units and others may be transformed residential housing units. In Hawai'i, as in other visitor destination areas, VRUs are subject to regulations, registrations, business taxes, and tourist taxes. In addition, like other visitor communities, there are claims that some VRUs operate illegally, in violation of zoning codes or tax responsibilities.

Regardless of the nomenclature, there is little doubt that the number of VRUs in Hawai'i has been increasing. The Visitor Plant Inventory (VPI) shows an increase from 10,768 in 2015 to 13,082 in 2018[130], a 21 percent increase in just four years. The VPI Supplemental Report extracted data from four vacation rental booking sites to show that Individually Advertised Units (IAU) counts of VRU may have been as high as 30,135 in 2018.[131]

VPI supplemental studies show that short-term IAUs exist in nearly all communities in Hawai'i, suggesting that residential housing stock may have been affected. The same studies also show that the units are heavily concentrated in visitor destination areas. Because the regulation and permitting of vacation rentals is under each county's jurisdiction, counties have different permitting requirements and may prohibit short-term rental units outside specific districts.

2. Visitor Research Data

Hawai'i's tourism economy has been growing impressively for the last ten years. Between 2009 and 2018, visitor arrivals grew from 6.4 million to 9.8 million (53.1%).

Table 55 presents data for the recovery period following the Great Recession. Before the Recession, visitor volume reached 7.4 million visitor arrivals. The recovery was completed by the middle of 2012, but visitors continued to flock to Hawai'i. The two most recent years showed strong growth in arrivals of 5 - 6 percent.

Throughout this period of growth, the pattern of visitor accommodations has shifted. The percent of visitors who stayed at commercial visitor accommodations units grew during the recovery years but slowed down after 2016 to return to the 2009 level.

[129] Honolulu rental market: Affordable rental housing study update, 2014, prepared by Ricky Cassiday for Department of Community Services, City and County of Honolulu, December 30, 2014, p. 115.

[130] The Hawai'i Visitor Plant Inventory is an annual count of visitor accommodations units conducted by HTA. The study develops a list of visitor properties and then surveys them to measure the number of rooms available to visitors. Obtaining an accurate list of VRUs has been increasingly difficult and VPI has acknowledged that VRU counts may be underestimated.

[131] The report notes that the count includes listings of properties on the North Shore of Kaua'i that were temporarily closed due to limited access after the April flooding and rentals in the Puna area that may have been destroyed following the May volcanic eruption.

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Table 55. Hawai'i Visitor Industry Statistics, 2009-2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% Chg 2009-2018
Visitor Arrivals (x1,000) by air	6,420	6,917	7,174	7,867	8,003	8,196	8,563	8,822	9,278	9,827	53.10%
Number of Parties (x1,000)	2,899	3,102	3,282	3,497	351	3,662	3,915	4,010	4,191	4,431	52.80%
Percent Use Commercial Units[a]	87.6	88	88.8	89.4	89.7	89.6	89.4	89.7	87.6	87.6	0.00%
Percent Use Traditional Units[b]	82.2	82.4	82.6	83	82.5	81.9	80.9	75.6	74.3	72.4	-11.90%
Percent Use VRU	5.4	5.6	6.2	6.4	7.1	7.8	10.7	7.7	11.8	13.5	150.00%
Hotel Occupancy Rate (%)	65.3	70.7	73.3	76.9	76.6	77.1	78.8	79.1	80.2	80	22.50%
Average Daily Room Rate	$177	$175	$189	$205	$230	$235	$244	$254	$264	$277	56.60%
Average Residential Rent Rates	$1,755	$1,730	$1,743	$1,768	$1,806	$1,844	$1,917	$2,019	$2,069	$2,083	18.70%

[a.] The percent of all visitor parties that used any type of commercial visitor accommodations units. Excludes those who stayed with family and friends and those who remained aboard a cruise ship.
[b.] The percent of all commercial accommodations user parties that use traditional visitor accommodations units – hotels, apartment hotels, condominium hotels, hostels, or timeshare units.
Sources: DBEDT, HTA Annual Reports, RentRange®.

The number of visitors that used traditional visitor accommodations units[132] grew but at a slower pace than visitor arrivals -- from 5.3 million in 2009 to 7.1 million in 2018 (+35% growth vs. +53% growth for arrivals). However, the share of visitors that used traditional units declined from 82.2 percent to 72.4 percent over the past ten years.

There was a notable increase in demand for vacation rental units (B&Bs, private rooms, and shared rooms). The percent of visitors that used these units increased 1.5 times between 2009 and 2018 (5.4% to 13.5%). The growth rate for the use of VRUs by Hawai'i's visitors outpaced the use of traditional visitor accommodations during this time.

Hotel occupancy rates rose from 65.3 percent to 80 percent during the recovery for a 22.5 percent growth rate over ten years. Most of the growth occurred before 2015 and occupancy rates have been relatively steady for the last three years. Moreover, even if the traditional visitor accommodation unit numbers suggest some loss of market share to VRUs, the share of revenue may not have been affected.

Average daily hotel room rates rose from $177 to $277 during the same period, a growth of 56.6 percent.

Finally, the median monthly rent for residential housing units in Hawai'i rose from $1,755 in 2009 to $2,083 in 2018 -- an 18.7 percent growth rate over ten years. Therefore, as the post-recession recovery proceeded, growing visitor arrival numbers were met by rising visitor rents (ADR). Residential rents grew by only a third of the rate in the visitor industry. A property owner considering the prospects of renting to visitors rather than residents might have been convinced by the numbers. There was a substantial difference in what could be charged for a room night – perhaps 3-times the local residential rate. In addition, there was a potential for even higher rents in the future as visitor rental rates grew much faster than residential rates.

3. Housing Study Research

This study brings additional data to the subject. A set of questions sponsored by the Hawai'i

[132] Hotels, apartment hotels, condominium hotels, hostels, or timeshare units.

Tourism Authority (HTA) were included in the demand survey and there was a separate survey of out-of-state property owners. The demand survey queried Hawai'i property owners on the use of their real estate as a rental property and asked whether they rented to visitors. The out-of-state property owners' survey asked similar questions of a sample of owners whose tax billing address was outside of Hawai'i. It also borrowed data from the most recent visitor research by HTA.

4. Estimating VRU from Visitor Data

The HTA Visitor Plant Inventory (VPI) provides historical data on accommodations units available to house Hawai'i's visitors. The 2018 VPI reports that there were 13,082 vacation rentals available for visitor use in 2018 that was a +3.3 percent increase in units from 2017 (12,661). However, in the VPI Supplemental Report of the 2018 VPI, based on data extracted from the four booking websites, there were 30,135 Individually Advertised Vacation Rental Units (IAU)[133] listed in the State of Hawai'i in 2018. Furthermore, the total number of bedrooms available, represented by these IAU was 49,348.

HTA explained that this count was based on data extracted from four vacation rental booking sites. Even though VPI includes vacation rentals as a property type, "due to the large number of vacation rental properties and the fluid nature of the vacation rental supply, identifying and gathering survey data from vacation rentals has been a challenge. As a result, the Visitor Plant Inventory survey has likely undercounted the actual number of Vacation Rental Units."

The supplemental study estimate is a better match than the VPI counts for visitor reports of VRU usage. The estimated number of IAUs in Hawai'i in 2017 was 38,100, as reported in VPI. However, HTA noted, the figure may be overestimated[134] and the 2018 figure is a better estimate because a change in technology allowed the vendor to identify duplicate listings across platforms. Therefore, the best estimate of the number of VRUs in Hawai'i in 2018 was approximately 30,000

.

5. Estimating VRUs from Survey Data

Two important data sources, first developed in the HHPS 2016, were used to estimate the number of VRUs in Hawai'i. The first was the Housing Demand Survey. In that survey of 5,599 Hawai'i resident households, we asked homeowners if they rent out any residential property they own and, more specifically, how many properties did they regularly rent out on a short-term (less than 30-day) basis. The short-term basis question is a better determinate of units available for visitors to rent than directly asking the owners if they rent to visitors. As mentioned earlier, a visitor would include those Hawai'i residents who live on another island; owners may not make that distinction and would instead classify their renter as a resident.

The second source was the Out-of-State Property Owners Survey, in which we asked 2,251 out-of-state property owners a similar set of questions to help estimate the number of VRUs they might contribute to the inventory.

Combining those data, SMS developed an analysis model in which the 2,251 Out-of-State surveys represented about 58,535 out-of-state property owners and the 5,599 Housing Demand Survey respondents represented 455,502 resident households. The results show that there were 64,843 units available for short-term rental to visitors in 2018.

[133] HTA 2018 VPI, pp. 60-61.

[134] The Supplemental Study suggests the estimate may be overstated, noting: "Because of the lack of unique identifying information associated with each vacation rental unit listed on the booking sites, it is currently not possible to identify and eliminate much of the double and triple counting that occurs when a property is listed on multiple booking sites."

Table 56. Residential Properties Rented Out on a Short-term Basis

Residential Properties Rented out on a Short-term basis	County				
	Total	Honolulu	Maui	Hawai'i	Kaua'i
Hawai'i Resident Owners (Demand Study)	43,712	31,013	5,091	5,633	1,975
Out-of-State Owners	21,131	6,042	6,797	3,038	5,255
Total Residential Properties Rented out on a Short-term basis	64,843	37,054	11,888	8,671	7,230

Source: HHPS Demand Survey, 2019; Out-of-State Owners Survey, 2019.

6. Adjusting the Estimate to Comparable VRU

Adjusting the Estimate from HHPS Results.

That figure of 64,843 units available for rent on a short-term basis included at least some commercial visitor rental units. These are units that would be included in the hotel or condo rental pool and would be classified as a traditional condo/condotel under the VPI unit classification.

The two surveys asked the question, "How is your rental property advertised to renters." If they answered, "Through a hotel pool or condo management company," then we can eliminate them from the VRU count. Using figures from both surveys, we determine that 55,576 units would be classified as VRU.

The estimates from VPI and the SMS studies would need to be adjusted for differing definitions and procedures. The VPI Supplemental Study measured IAU as the number of units offered for rent by the on-line booking sites Airbnb, HomeAway, TripAdvisor, and VRBO, at a specific point in time.

The Out-of-State Survey measured VRUs as the number of properties rented to visitors on short-term contracts. We adjusted that count to only include individually rented units (instead of those managed by a hotel or condo pool). VPI Supplemental study estimates would be short of the Out-of-State Survey estimate by (a) the number of units not being advertised when Internet downloads were made; (b) the number of units not advertised on those specific online booking sites, and (c) the number of units that do not advertise.[135]

Adjusting Units included in the VPI Supplemental Studies for advertising methods.

The 2018 supplemental study used four online booking sites: Airbnb, TripAdvisor, HomeAway, and VRBO, where VRBO is a subsidiary of HomeAway. Those four sites accounted for 57.9 percent of the advertising methods mentioned by our Out-of-State Owners and only 36.7 percent of our Hawai'i resident owners.[136] If we use the most conservative value of 57.9 percent used those online sites then the VPI Supplemental estimate of 30,135 would actually represent 52,047 actual VRU in Hawai'i for 2018 (Table 57).

[135] VPI 2018, p. 60.

[136] Out-of-State Property Owners Survey, 2018.

Table 57. Adjusting the Estimates

	State Total (HHPS 2019)	Advertise through a hotel rental pool or condo management company	Individually Rented Units "Non-Commercial"	Advertised using AirBnB, VRBO, HomeAway, or Trip Advisor (HTA VPI Supply)	Adjusted VPI Supplemental Estimate
Hawai'i Resident Owners (Demand Study)	43,712	5.8%	41,177	36.70%	82,112
Out of State Owners	21,131	31.9%	14,399	57.90%	52,047
Total Vacation Rental Units	64,843		**55,576**	30,135	**52,047**

The locus of decision-making issue: Again, one of the findings of the Out-of-State Survey was that many property owners did not know how their units were rented. About 62 percent of them used a rental agent and 43 percent were not sure because someone else advertised the property for them. We assumed these "unaware" respondents had renter profiles similar to those of property owners who reported advertising details. That may have been optimistic. Property managers may be more likely to rent, more likely to list on booking websites, and more likely rent on short-term contracts.

In summary, the estimated number of VRU properties in Hawai'i available to visitors differs considerably depending on the source. The adjusted number from the VPI supplemental studies is about 52,000 and the estimate from the HHPS surveys is about 55,600.

7. Impact on Housing

Estimating the impact of VRU requires that we look at the related items in the multiple data sources available to us.

a. Units Used for Visitor Rental

Speculation is that the increase in visitor arrivals, the slow growth of visitor plant, the pressure of visitor demand for units outside of resort areas, and the rise of Internet booking sites decreased the size of the residential housing stock. The HHPS surveys found that there were between 52,000 and 55,600 housing units available for rent to visitors on short-term basis in 2018.

b. The Shared Economy

The HHPS Housing Demand Survey also asked questions related to the "shared economy" as part of VRU use in Hawai'i. Among all Hawai'i homeowners, 15,922 (6.5%) rented rooms in their homes; 5,495 (2.2%) rented out a cottage or other unit on their property; and 1,632 (0.7%) even rented out their whole house, part of the year

c. Impact on Residential Rents

Some studies have suggested that there is a relationship between greater use of vacation rentals and higher housing prices. The National Association of Realtors (NAR) blogs that VRUs increase rents, decrease affordability, and draw developers' attention to the top of the market. Local researchers report that VRUs exacerbate the affordable housing problem by reducing our housing stock and driving up rents, which in turn inflates demand for investment properties at the high end of the market.[137]

Figure 14 brings together some foundation data for visitor and residential rents in Hawai'i over the last nine years. For the visitor data, we took the average daily room rate (ADR) for all commercial properties.[138] Figures shown here are six times

[137] Usborne, Isis and Benjamin Sadoski. 2016. The hidden cost of hidden hotels: the impact of vacation rentals in Hawai'i, in UNITE HERE Local 5, May, 2016, p. 8.

[138] DBEDT Data Book 2015 has rates for hotels, condo hotels, and timeshare units. We used Hospitality Advisors reports for 1st quarter 2016 estimate.

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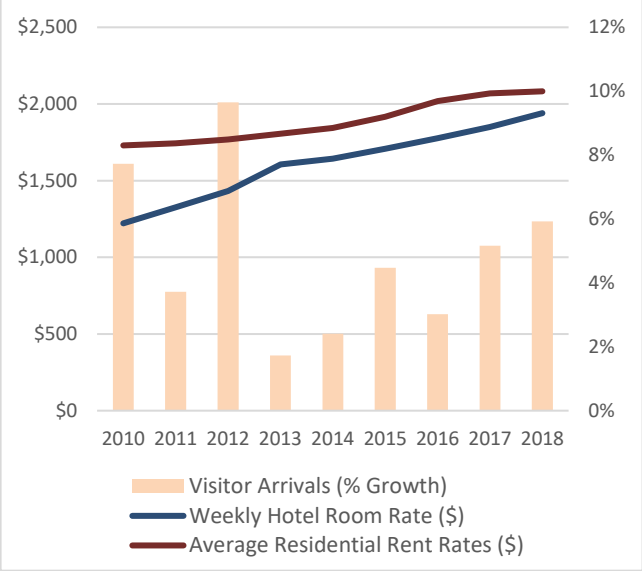
the ADR to accommodate the scale of the graph. The graph compares the weekly (7-day) rate with the monthly rate for residential housing. The objective was to compare rates of change over time. For the residential figures, we chose the contract rent rates for all rental units in the State.[139] We added the hotel occupancy rate as a rough demand indicator.

In response to the Great Recession, both hotel room rates and residential rates fell and showed no sign of recovery until 2011. In fact, residential rents did not recover until sometime in 2012. Hotel room rates rose quickly with 8 – 12 percent growth per year until 2013. Residential rents grew only 1 to 2 percent annually

Figure 14. Hotel Room Rates and Resident Rent Rates, 2010-2018



Source: HTA; RentRange®.

Visitor rates increased again in 2014 and have maintained a steady 4 to 5 percent growth. Hotel room rate growth has mirrored the growth in overall visitor arrivals through much of the period after the Recession.

Residential rent rates also seemed to have accelerated in the 2014 to 2015 period but have slowed down in the last two years.

Therefore, in the present time frame, the two rent rates do not seem to be following in a similar pattern. However, that does not mean they are not related, of course. Proving that would require a more complex econometric analysis - one that is beyond the scope of this project.

Recently, a Hawai'i researcher investigated the link between the number of vacation rentals in Hawai'i and rising rent prices.[140] The research showed that residential rents in neighborhoods with high concentrations of vacation rentals did not rise significantly between 2016 and 2019. Our own unpublished research found similar results. These neighborhood-by-neighborhood studies lend support to the rates shown in Figure 14. Still, we await definitive research to establish the link between decreasing residential rental stock due to VRU conversion and rising residential rents.

On June 17, 2019, the Honolulu City Council passed two bills that contained strong regulations for O'ahu's vacation rental industry.[141] The resulting Ordinance 19-18 allows for 1,715 owner-occupied bed-and-breakfast rentals in the County. The County says that 816 of those are currently registered and that there are 8,000-10,000[142] units operating illegally on O''ahu.

New units must be B&B-type VRUs located in resort areas (Waikīkī, Ko Olina, and Turtle Bay). They must be registered and renewed annually. The Ordinance prohibits transient vacation units without a Nonconforming Use Certificate (NUC) and regulates hosting platforms. It requires them to file monthly reports with the Department of Planning and Permitting (DPP). It makes it illegal to advertise short-term rentals not compliant with zoning regulations in Ordinance 19-18. Vacation rental owners may not advertise without publishing their registration number in the ad.

[139] Rent Range, average monthly rent for all rental units.

[140] Rickie Cassiday. 2019. Cost for monthly housing in Hawai'i not hurt by illegal vacation rentals, study finds Hotel Online, Sunday September 22, 2019.

[141] Hawai'i News Now. 2019. City Council approves tough new regulations for vacation rental industry, *Hawai'i News Now*, June 17, 2019. https://www.hawaiinewsnow.com/2019/06/18/city-council-poised-approve-tough-new-regulations-vacation-rentals/

[142] Rizzo, Cailey. 20-19. O'ahu just passed a new law that could affect your Airbnb, *Travel + Leisure*, June 26, 2019.

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Violators will receive citations, and if they persist in advertising, they will receive fines as per the law. It is no longer necessary to prove that an illegal contract was signed or that there was intent to commit a crime. The advertisement is the crime.

The Ordinance provides for fines of $1,000 for first offense and up to $10,000 per day for repeat violations. These are the highest fines ever proposed for short-term rental violations.

The law was passed and signed in June. In July, DPP informed 5,000 vacation rental operators that their units were being considered for action under the ordinance. Ordinance 19-18 went into effect August 1, 2019.

In July, the City began to announce that there would be quick action on enforcement. They suspended front-desk operation to handle an expected increase in activity under the new rules. They added new staff to deal with increased inspections[143] and to convince rental landlords they were serious about enforcement.[144]

Initial reactions were interesting. The anti-vacation rental forces were quiet. Those against the new law were quick to predict serious problems. They spoke of reduced visitor accommodations stock, rising local rents, and home prices. They predicted that local landlords would be ruined financially and would be forced to sell their rental properties. Nationally, there was a prediction that the new regulations would hurt Hawai'i's economy (Expedia) and that Hawai'i would lose 7,000 jobs, 336 million in household income, 77 million in state taxes (Hawaiian Air). Countering that, pro-Ordinance representatives predicted that local rents will fall and that more new homes will be available at lower prices.

As a middle ground, there were predictions that effects would be minimal and short-term. Some researchers say that property sales, business terminations, and tax revenue decreases may happen, but not in any dramatic way. Santa Monica, after whose vacation rental law Honolulu's was patterned, passed their law in 2015 and did not experience large changes.[145]

Most researchers and market experts agreed it was too early to tell what the ultimate economic impacts will be on neighborhoods and landlords, real estate markets, visitor arrivals, and expenditure accounts.[146]

A few impacts have already been felt. Early articles in August and September noted that short-term rental listings dropped 37 percent in the first two weeks,[147] reports of vacation cancellations, and loss of revenue by those who supply post-arrival goods and services to visitors[148]. Some said that, in their attempt to find alternative reservations, they discovered that hotel and other rental properties had raised their rates substantially,[149] taking advantage of hapless tourists.

All counties have their own new rules for regulating vacation rentals as documented in the Department of Commerce and Consumer Affairs (DCCA) website.[150] We are not aware of and plan to use Honolulu as a field test of the economic impact of vacation rental regulation.

[143] Associated Press. 2019. Honolulu adds inspectors to help enforce vacation rental law, Friday, August 16, 2019.

[144] City and County of Hawai'i. 2019. Short-Term Rentals, last update 8/23/ 2019, https://www.honolulu.gov/dppstr

[145] Schenfeld, Nikki. 2019. Real estate market impact if vacation rental bills pass, KHON2 June 9, 2019.

[146] Fujii-Oride, Noelle. 2019. Impact of O'ahu's vacation rental crackdown, Hawai'i Business Magazine, September 16, 2019.

[147] Associated Press. 2019. O'ahu illegal rentals drop after short-term rental law OKed, Associated Press, Wire Service Content, August 7, 2019.

[148] Lapan, Tovin. New vacation rental rules of O'ahu spark cancellations, complaints, Travel Weekly, August 15, 2019.

[149] Jedra, Christina. 2019. Tourists scramble as O'ahu vacation rentals disappear under new law, *Civil Beat*, August 12, 2019.

[150] See http://cca.hawaii.gov/ins?s=Transient+Vacation+Rentals&type=usa for updated information.

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D. HOUSING AND NATIVE HAWAIIANS

There were 455,502 households in Hawai'i in 2019. Of those, 117,371 households (25.8%) were Native Hawaiian households.[151] Over 6-out-of-10 Native Hawaiian households (62.4%) lived in the County of Honolulu and 19 percent resided in Hawai'i County. Maui County was home to 13 percent of Native Hawaiian households and the remaining five percent lived on Kaua'i.

Almost two-thirds (64.9%) of Native Hawaiian households, the head of household had lived in Hawai'i all their life, compared to just 36 percent in non-Native Hawaiian households.

The household size among Native Hawaiian households was notably larger; almost half of all Native Hawaiian households (46.6%) have four or more people compared to just 21 percent of non-Hawaiian households. Native Hawaiian households were much more likely than other households to be crowded with more than two persons per bedroom (21.2% v. 10.9%) and much more likely to be doubled up (24.5% v. 9.0%). Native Hawaiian households also tended to be more multi-generational, with 63 percent of multi-person households having two or more generations living under the same roof, while only 45 percent of non-Native Hawaiians live in multi-generational households.

Of the Native Hawaiian households surveyed, 11 percent were living on Hawaiian Homestead Land (12,755 households) in 2019, similar to 2016.[152] Also, among Native Hawaiian households, 20 percent had at least one member on the waitlist to receive a DHHL award (23,883 households) on which they intended to reside. Of those households, only about three-quarters (73.0%) were sure that they intend to have a house on that land.

An additional 21,399 Native Hawaiian households stated that they have a household member eligible to apply for a Hawaiian Home Lands lease but were not yet a leaseholder nor an applicant.

Table 58. Crowding and Doubling Up, Native Hawaiian Households, State of Hawai'i, 2019

		Native Hawaiian Households		Non-Native Hawaiian Households		Total	
		Count	Percent	Count	Percent	Count	Percent
Household Size	**4 or more-person-HH**	54,672	46.6%	72,198	21.4%	126,870	27.9%
Crowded Based on Persons Per Room	**More than 2 or more persons per bedroom**	23,975	21.2%	34,932	10.9%	58,907	13.6%
Households doubled up	**Yes**	28,702	24.5%	30,549	9.0%	59,250	13.0%

The household income of half (51.8%) of the Native Hawaiian households in 2019 was under $75,000, like the household income distribution (49.5%) of non-Native Hawaiians. Although both groups have a similar distribution of income, the income of the Native Hawaiian households supports a greater number of household members than non-Native Hawaiian households.

Over two-thirds of Native Hawaiian households lived in a single-family dwelling (66.7%) versus 57 percent of non-Native Hawaiians. The figure is down from 73 percent of Native Hawaiians living in single-family dwellings in 2016. Interestingly, Native Hawaiians were less likely to be living in a condominium than non-Native Hawaiians (5.3% v. 12.7%).

[151] According to definitions used for the study, a Native Hawaiian household is one in which at least one person identified as Hawaiian or Part-Hawaiian resides. The figures will not match Census or ACS data which define a Native Hawaiian Household as one in which the householder (head of household) is all or any part Hawaiian. The unweighted sample size for Native Hawaiian households for the 2019 Demand Survey was 2,481.

[152] The counts reported from the survey differ from DHHL wait list, as the survey counted households and the wait list captures all unique individuals.

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More than half (56.3%) of Native Hawaiian households continue to own their current residence, similar to the non-Native Hawaiian households (58.0%) ownership rate. This was a greater percentage of Native Hawaiian homeowners in 2016 (54%), but similar to the figure in 2011 (57%).

Overall, the monthly mortgage payment made by Native Hawaiian households was similar to non-Hawaiian households, with a third (35.3%) of the Native Hawaiian households paying $2,000 or more per month. However, Native Hawaiian households were less likely than other households to have paid off the mortgage on their current residence (19.3% v. 27.7%).

The percentage of Native Hawaiian and non-Native Hawaiian households renting their current residence was similar (39.2% v. 38.4%). The distribution of monthly rent paid by Native Hawaiian households and non-Native Hawaiian households was also very similar, with the median monthly rent being between $1,400 and $1,699.

Consistent with the findings on household income, Native Hawaiian households were more likely to be receiving rental assistance of some type than were non-Native Hawaiians (18.2% v. 12.8%). Roughly 8,400 Native Hawaiian households received some type of assistance (16,600 non-Native Hawaiians households receive rent assistance). Slightly more Native Hawaiians versus non-Native Hawaiian households lived in public housing (4.0% v. 2.7%), Native Hawaiians were much more likely than non-Native Hawaiian households to be recipients of Section 8 rental assistance (9.8% v. 5.6%).

The Housing Demand Survey indicated that 32 percent of Native Hawaiian households would be considered at risk for homelessness, up nine percentage points from the 2016 study. Among non-Native Hawaiian households, the comparable figure was 23 percent. These households reported they would become homeless if they lost their primary source of income for more than two months.

Native Hawaiian households sheltered many more hidden homeless persons than non-Native Hawaiian households. The Housing Demand survey data show that 38 percent of Native Hawaiian households included at least one person who was residing there because they had insufficient resources to buy or rent their own place (hidden homeless). The comparable figure for non-Native Hawaiian households was 19 percent.

When asked how soon they planned to move to another home, four out of ten Native Hawaiian households indicated that they would probably never move, similar to non-Native Hawaiians (38.8% vs. 40.3% of non-Native Hawaiian households). One-third reported that they plan to move within the next five years, with an additional four percent planning to move in six to ten years.

When they move, Native Hawaiian households were more likely to remain on the same island (63.1%), with only 7 percent planning to relocate to another island in the State. Among those who plan to relocate to another island, almost half (44.9%) stated that they wanted to move to Hawai‘i Island. A significant portion of households, 16 percent of Native Hawaiian households, planned to leave Hawai‘i when they move.

For those who planned to move within the State, 73 percent of Native Hawaiian households expected to purchase their next home, while 17 percent of these households, plan to rent their next unit, with the remaining households uncertain about their next tenure. Half of these movers would prefer a single-family home (54.4%) with two-thirds expecting three or more bedrooms and three-quarters (77.7%) expecting at least two bathrooms.

Over half (54.7%) of Native Hawaiian households planning to buy their next home reported that they had no more than $75,000 available for the down payment. A larger percentage of Native Hawaiian (7.8%) than non-Native Hawaiian households (3.9%) reported that they had no funds available for a down payment. Almost half (44.9%) of Native Hawaiian households planning to purchase their next home could afford to make a median monthly

mortgage payment of no more than $2,000 a month. This ability to pay was similar to non-Native Hawaiian households.

Among Native Hawaiian households not planning to buy their next home, more than 7 out of 10 indicated that it was simply too expensive to purchase a unit in Hawai'i. Another major reason (44.8% of households) stated that they could not afford the down payment. For those Native Hawaiian Households who might rent when they move next, more than half (56.9%) feel they can only afford up to $1,400 per month for all housing costs.

Table 59. Demand and Housing Preferences, Native Hawaiian and Non-Native Hawaiian Households, 2019

		Native Hawaiian Households		Non-Hawaiian Households		Total	
		Count	Percent	Count	Percent	Count	Percent
Effective Demand Movers	Prefer to Buy	18,379	45.8%	49,921	49.1%	68,300	48.2%
	Prefer to Rent or Other/Unsure	21,779	54.2%	51,686	50.9%	73,465	51.8%
	Total	40,158	100.0%	101,607	100.0%	141,765	100.0%

Source. HHPS Demand Survey, 2019.

Previously, we calculated the Effective Demand for housing to be 141,765 households (Table 15). Of those units, 40,158 (28.3%) would be from Native Hawaiian households. Across the State, units needed to house Native Hawaiians were almost evenly divided between ownership (46%) and rental units (54%).

Finally, we have prepared a table of needed units for Native Hawaiian households (Table 60). Of the 50,156 housing units needed to accommodate Hawai'i's households between 2020 and 2025, approximately 14,407 will be needed by Native Hawaiian households.

Fifty-seven percent (57%) of the 14,407 units would be needed to accommodate Native Hawaiian households that earned 80 percent or less of the HUD AMI (8,142 units). Approximately 13 percent of the needed units would be required to house Native Hawaiian households earning more than 180 percent of AMI annually.

Statewide, of the units needed to accommodate Native Hawaiian households, demand for single-family dwellings was roughly 65 percent (9,338 units).

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Table 60. Needed Housing Units by HUD Income Classification, Native Hawaiian Households, Counties and State of Hawai'i, 2020-2025

	Total Units Needed, 2020 through 2025								
	HUD Income Classification								Total
	LT 30	30 to 50	50 to 60	60 to 80	80 to 120	120 to 140	140 to 180	180+	
State of Hawaii	3,554	1,319	473	2,797	1,853	736	1,765	1,911	14,407
Ownership Units	912	519	145	1,711	655	696	1,383	1,746	7,766
Single-Family	771	313	142	1,287	506	641	1,221	1,520	6,400
Multi-Family	140	206	3	424	149	55	163	226	1,366
Rental Units	2,642	800	328	1,086	1,199	40	381	165	6,641
Single-Family	1,207	353	30	662	459	19	140	68	2,938
Multi-Family	1,435	447	298	424	740	21	241	97	3,703
Honolulu	2,349	986	206	2,046	1,256	478	1,208	1,117	9,644
Ownership Units	522	384	0	1,240	286	478	910	1,074	4,893
Single-Family	392	190	0	861	178	423	820	849	3,713
Multi-Family	130	194	0	378	108	55	89	225	1,180
Rental Units	1,826	602	206	806	970	0	298	43	4,751
Single-Family	731	250	0	513	271	0	99	42	1,907
Multi-Family	1,095	351	206	293	699	0	199	1	2,844
Maui	374	143	59	219	237	106	334	472	1,945
Ownership Units	120	74	0	115	68	67	264	362	1,068
Single-Family	120	62	0	70	67	66	228	361	974
Multi-Family	0	12	0	45	0	0	35	1	94
Rental Units	254	69	59	104	170	40	71	110	876
Single-Family	222	67	15	65	148	19	29	26	590
Multi-Family	32	2	44	39	22	21	42	84	286
Hawaii	727	164	178	439	335	101	209	277	2,430
Ownership Units	222	61	131	329	302	101	197	265	1,607
Single-Family	222	61	131	329	261	101	159	265	1,528
Multi-Family	0	0	0	0	41	0	38	0	79
Rental Units	504	104	48	109	34	0	12	13	824
Single-Family	212	36	0	17	15	0	13	0	292
Multi-Family	292	68	48	92	19	0	0	13	532
Kauai	105	26	29	94	25	51	13	45	388
Ownership Units	47	0	14	27	0	51	13	45	198
Single-Family	37	0	11	27	0	51	13	45	185
Multi-Family	10	0	3	0	0	0	0	0	13
Rental Units	58	26	15	67	25	0	0	0	191
Single-Family	42	0	15	67	25	0	0	0	149
Multi-Family	16	26	0	0	0	0	0	0	41

Source. Housing Demand Survey and Hawai'i Housing Model, 2019. Note: Rows and columns may not sum exactly due to rounding error resulting from data weighting. The method of calculation for Honolulu single family ownership units among LT30 and 30 to 50 households was adjusted to align with the overall needed units for those two subpopulations

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E. SUSTAINABLE AFFORDABILITY

A sustainable lease is a leasehold arrangement that sustains a property in an affordable price range for a specified period. Details of the arrangement vary and are written to preserve government-assisted affordable housing stock and to facilitate housing acquisition by low-income households.

Leasehold arrangements have been included in the HHPS studies over the last 16 years.[153] That research has determined that about 16 to 18 percent of potential homeowners want to lease their next home. Another 30 to 35 percent would be willing to consider leasing. Together the two groups demonstrate that leasing is a reasonable solution for about 45 percent of households, as many as 5,500 households per year statewide.[154]

As more conditions or features were added to the lease questions, leasing became more attractive to potential buyers. Several features that have been attractive to HHPS respondents in the past include: (1) a nominal down payment [46%], (2) a renewable long-term lease (66 to 99) years [55%], (3) ability to pass the lease to heirs [61%], and a guaranteed buyback at a fixed ROI [71%].

In the end, 50 to 60 percent of potential buyers prefer fee simple ownership. They would not consider leasehold in any format.

The characteristics of those who are interested in leasehold are of interest. In the past, we have said that leasehold arrangements are most attractive to those who need them most.[155]

Leases appealed more to renters than to owners. They appealed to households that were crowded and/or doubled up. They had strong support among households earning between 80 and 140 percent of the AMI on O‘ahu. On Maui and Kaua‘i, interest was highest among households making less than 80 percent of County AMI.

Results of past research show that there is a role for the sustainable lease concept in developing affordable housing in Hawai‘i. Leasehold arrangements can provide access to more affordable housing units and maintain them in the affordable housing stock. Even where leasehold property is unpopular, a sustainable lease appeals to many potential homebuyers.

a. The 99-Year Lease Research

The 2019 Housing Demand Survey investigated a specific sustainable lease product proposed by the Hawai‘i Housing Finance and Development Corporation. Elements of the lease product were introduced two at a time, as shown in Figure 15.

The questions were asked only of Demand Survey respondents who were going to move to a unit in Hawai‘i, wanted to purchase their next residence, and said they could afford monthly payments between $1,100 and $2,999. In total, 608 respondents answered all four questions.

Analysis began with 56 percent willing to buy under the proposed sustainable lease. That was much higher than the starting position of any question we have used in the past. In part, that may have been because we were asking the persons most qualified to use the program. The initial question in the past was whether the respondent would prefer to buy leasehold or fee simple property. This year the set began by asking people to give their evaluation of the owner-occupancy and shared equity option of the 99-year lease product (Figure 15).

As each subsequent question was asked, some respondents changed their position on the lease. When asked about the multi-family and 99-year lease option, 25 percent said they preferred the lease, 30 percent were willing to consider a lease, and 39 percent said “no.” The third question introduced the non-profit agency but reduced the lease period to 60 years. The “yes” responses went down to 24 percent, willing-to-consider went up to 34 percent, and negative responses dropped to 36 percent.

[153] Hawai‘i Housing Planning Study, 2006, 2011, and 2016. The individual questions used were formulated differently at times, and they were asked of different groups of respondents. See Appendix Exhibit C-3 for details.

[154] None of the leasehold research respondents were qualified by income or any other resources, so the number of lessees is likely to be over-estimated.

[155] Hawai‘i Housing Planning Study 2016. p. 72.

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Figure 15. 99-Year Lease Questions

No.	Features	Question Wording
SL1	Owner occupancy and shared equity	The State or county government can assist private home builders in making homes more affordable by reducing the cost of development. If you purchase a government-assisted home at an affordable price, you must (1) own and occupy the home for an initial period of at least 10 years and (2) share a percentage of the increased value of your home if you no longer use the home as your primary residence (e.g., you rent or sell it). Would you be willing to buy a home at an affordable price with the 10-year owner-occupancy and shared equity appreciation restrictions?
SL2	Multi-family and 99-year lease	The State is looking into developing townhouses and condominium units on State land and offering these homes for sale in leasehold at affordable prices. If you purchase an affordable leasehold property, you would own the housing unit and make fixed land lease payments to the State over the term of the lease, say 99 years. You could sell or transfer ownership subject to the 10-year occupancy and shared equity appreciation restrictions we covered in the last question. Would you be willing to buy an affordable townhouse or condo with a 99-year lease on State land?
SL3	Non-profit agency and 60-year lease	Would you consider buying an affordable leasehold property if the land was owned by a non-profit agency, instead of the State, and leased to you for 60 or more years?
SL4	Summary: Owner occupancy, pass to heirs and buy-back at Fair ROI, non-profit agency	Would you consider buying this kind of leasehold property from a non-profit agency if you had to occupy it as your primary residence and never rent it, but could pass the home on to your children with a new long-term lease or sell the home back to the non-profit at a fair return on your investment?

The general impact of the piecemeal introduction of elements of the 99-year lease product was to increase the number of people who were willing to consider the option. Each new set of options added to the complexity of the issue.

The fourth question summarized the major elements of the product in slightly different languages. At that point, 34 percent preferred the 99-year lease, 37 percent who were willing to consider it, and 36 percent who still said “no,” indicating they preferred fee-simple property. We did not lose any respondents as we went along, and the number who said “don’t know” or refused to answer a question dropped steadily as we proceeded with the interview.

During the process, 71 percent of respondents changed their positions on the issue, some more than once.

In the end, 27 percent preferred the 99-year lease option (Figure 15) and another 40 percent were willing to consider it. Applying those figures to the demand estimates in the survey, the market potential for the product would be as many as 32,000 buyers (including those willing to consider) in the next five years. That is, there could be 32,000 households wanting to begin the process of obtaining a 99-year lease on a multi-family condominium unit on State-owned land with a 99-year lease as described in the survey. A more conservative estimate would be 13,300 buyer households based on those who answered “yes” to the lease questions.

Our questions were asked of people who expected to move in the next five years. In year one, about 2,600 households may apply to buy a multi-family unit with a 99-year lease with the conditions described in Figure 15. All of them would be able to pay between $1,100 and $2,999 per month in shelter payments.

Table 61. 99-Year Lease Reaction by County

	State	Honolulu	Hawai‘i	Kaua‘i	Maui
Yes, would buy a 99-year lease	27%	23%	31%	46%	43%
Willing to consider a 99-year lease	40%	43%	36%	24%	30%
No, not interested	27%	27%	30%	22%	23%
Other	6%	7%	3%	7%	4%
Total	100%	100%	100%	100%	100%

Percent of movers who wish to buy and expect to pay between $1,100 and $2,999 in monthly shelter costs.

Results differed to a small extent across counties. The overall support was between 66 and 73 percent. The “would buy” response showed that a lesser preference on O‘ahu (23%) compared to the other counties (31 to 43%). At the same time, O‘ahu had the highest proportion (43%) of people who were willing to consider the 99-year lease.

Older people were less likely (63%) to favor the lease than younger people (73%) and support reached 78 percent among people younger than 35. Married people were more likely (75%) than single, widowed, divorced, or separated people (66%) to be willing to use the lease product.

Native Hawaiians were more likely (84%) than non-Hawaiians (69%) to favor the new lease product.

There was no systematic difference in household income. That was not surprising since income varies with household size. Neither was there a substantial difference in support for the lease product when we looked at HUD income levels. These are adjusted for household size. As expected, the lower HUD classifications were more in favor of the lease. In the less than 30 percent AMI category, support reached 81 percent. Also expected, people in the highest classification were least likely to approve (64%). In the mid-range, we found that households with incomes between 50 and 80 percent of AMI expressed less support (65%) than we expected, and those with incomes between 120 and 180 percent of the area AMI were more likely to support the lease (80%).

Current homeowners were less likely (65%) to favor the 99-year lease than were current renters (83%).

Renters who want to own (84%) were more likely to favor the 99-year lease than homeowners who want to own their next units (65%).

Crowded households were more likely to approve the lease, and support among households with more than 1.5 persons per room (the U.S. Census definition of extremely crowded) reached 77 percent.

People who were going to move relatively soon were more likely to value the 99-year lease product. Those who wanted to move in the next five years (about 80%) were willing to use or consider the lease. Among those whose plans to move were less immediate (5 to 10 years), 59 percent were interested.

People who live in multi-family units, whether renters or owners, were more likely (74%) to approve of the State’s proposed 99-year lease than people who live in single-family units (69%). The same was true for those who wanted to move to a multi-family unit (78%). This is a familiar finding based on the respondent’s experience with multi-family living accommodations.

F. HOUSING AND TRANSPORTATION

The Housing and Affordability Index,[156] also called the H+T Index, provides a different perspective on housing affordability by including transportation costs in the equation. The Index provides insights throughout the U.S., including Hawai'i.

The more traditional measure of affordability recommends that housing costs should not exceed 30 percent of household income. Under this view, a little over half (55%) of US neighborhoods are considered "affordable" for a typical household. However, that measure fails to consider transportation costs, which are typically a household's second-largest expenditure. The H+T Index offers an expanded definition view of affordability. It sets a new benchmark: combined housing and transportation costs should not exceed percent of household income.

Based on the 45 percent of combined housing and transportation costs plus percentage of household income benchmark noted, all four counties have significantly higher index levels (Table 62). Hawai'i County, the largest of the islands, has the highest transportation costs and combined index overall.

Table 62. Housing & Transportation Index by County

Counties	Housing Cost (% of HH income)	Transportation Cost (% of HH income)	Combined (% of HH income)
Hawai'i	33%	29%	61%
Maui	34%	23%	57%
Honolulu	33%	19%	52%
Kaua'i	32%	24%	56%

Concepts such as these are the foundation for transit-oriented-development (TOD) nationally - building affordable housing centered on public transportation hubs in order to keep housing and transportation costs affordable to working-class households. Questions related to the interest in living near a transportation hub were included in both the 2016 and 2019 Housing Demand Surveys.

The tables below show Index results for each of the Counties and select communities.

Table 63. Examples of O'ahu Housing & Transportation Index

Areas on O'ahu	Housing Cost (% of HH Income)	Transportation Cost (% of HH income)	Combined Cost (% of HH income)
C&C Honolulu	33%	19%	52%
Kapolei	35%	22%	57%
Pearl City	33%	20%	53%
Kailua	45%	21%	66%
Urban Honolulu[157]	29%	16%	45%

Table 64. Examples of Maui Housing & Transportation Index

Areas on Maui	Housing Cost (% of HH income)	Transportation Cost (% of HH income)	Combined (% of HH income)
Maui Island	34%	23%	57%
Lahaina	33%	21%	54%
Kīhei	32%	21%	53%
Kahului	34%	21%	54%

Table 65. Examples of Kaua'i Housing & Transportation Index

Areas on Kaua'i	Housing Cost (% of HH income)	Transportation Cost (% of HH income)	Combined (% of HH income)
Kaua'i County	32%	24%	56%
Po'ipū	53%	24%	60%
Kīlauea	37%	27%	65%
Kapa'a	26%	23%	49%
Līhu'e	33%	22%	55%

Table 66. Examples of Hawai'i Housing & Transportation Index

Areas on Kaua'i	Housing Cost (% of HH income)	Transportation Cost (% of HH income)	Combined (% of HH income)
Hawai'i County	33%	28%	61%
Hilo	30%	27%	57%
Kona	32%	26%	57%
Waimea	42%	29%	72%
Ocean View	19%	29%	48%

Statewide over 56 percent of respondents commute to and from work or school at least four days a week. The percentage of commuters is highest on O'ahu and lowest on Hawai'i Island. O'ahu has the highest percentage of commuters

[156] The Center for Neighborhood Technology's Housing and Transportation Affordability Index, http://htaindex.cnt.org.

[157] This includes areas from Hālawa to Wai'alae Kāhala.

that use public transportation at 13 percent. Maui and Hawai'i Counties have the lowest at 5 percent. This is likely due to the extensive bus service available on O'ahu.
Monthly transportation cost for households who use public transportation is highest on Kaua'i at $131.62 and is lowest on O'ahu at $95.52. This is likely due to the lower cost of gasoline on O'ahu, as well as the greater availability of mass transit. The average time for the longest commute in a household on O'ahu is almost 30 minutes, with Maui and Kaua'i averaging closer to 24 minutes.

Table 67. Commuter Characteristics

Characteristic	O'ahu	Maui	Hawai'i	Kaua'i	State
Percent of households in which one or more adults commute to and from work or school at least four days a week	58.0%	55.5%	51.3%	57.1%	56.7%
Percent of commuters who use public transportation at least three days a week	13.3%	5.4%	5.4%	8.1%	11.1%
Average monthly transportation cost for commuters who use public transportation	$92.52	$112.51	$108.59	$131.62	$101.21
Number of adult commuters in the household	1.81	1.73	1.60	1.80	1.81
Average travel time for the commuter with the longest commute in the household in minutes	29.9	24.3	29.2	23.3	28.8

a. Households that Want to Live Closer to a Rail Station (Honolulu)

Demand Survey respondents who were likely to move were asked if they would "want to move closer to one of the rail stations when they are built." Seventeen percent (17%) of them said they would want to move closer to a rail station. This percentage is lower than the 24 percent who responded positively in 2016.

Among households that wanted to move closer to a rail station, 68 percent would be interested in a multi-family, for sale unit (condo or townhouse) near a rail transit station. In 2016 when given an option between single-family and multi-family units, 52 percent selected multi-family.

Those interested in moving closer to a rail station must have one to two parking spaces. The majority of those who wanted a parking space (77%) would rather pay for the parking space as part of the purchase price of their unit rather than as a monthly maintenance fee.

Fifty-two percent (52%) of movers who would like to live near a rail station said they could afford to pay between $500 and $1,100 per month for all housing costs. The smallest number of bedrooms they can live with in their new home is two (66%) and the smallest number of bathrooms is one (44%). It is notable that there is a small percentage of those wanting to live near rail stations that want a minimum of four bedrooms (10%) and two and one-half to three bathrooms (7%), therefore having some larger units available would be beneficial.

The major characteristics of mover households that want to live near a rail station were working fulltime (79%); currently paying rent of $500 to $2,000 per month (71%); household income greater than $75,000 (51%), and significantly more likely to use public transportation currently compared to the rest of the population (25% v. 13%). It's likely that this group is looking for an entry-level opportunity to buy a unit and take advantage of the nearby rail to commute.

b. Households Wishing to Move Closer to Place of Employment (County of Hawai‘i)

On Hawai‘i County, 31 percent of potential movers “when they moved intended to move closer to the workplace of someone in the household to reduce transportation costs or commute time.” Those desiring a unit closer to place of employment compared to those who don’t differ on the following characteristics: more likely to be a renter (59% v. 54%); live in an apartment (20% v. 14%); be younger - age 18 to 34 (29% v. 16%); and single, never married (35% v. 25%).

Households that wanted to move closer to their place of employment wanted to buy their new home (46%). They would prefer a single-family home (49%) with two to three bedrooms (67%) and one and a half to two bathrooms (54%).

Twenty-three percent (23%) of future movers believe they could afford to pay rent amounts between $800 and $1,099; 40 percent can afford $1,100 to $1,999 per month. Twenty-two percent (22%) of movers who would like to buy a home closer to employment say they have less than $25,000 to pay for a down payment, and 10 percent say they have $400,000 or more. Monthly housing costs of $2,000 to $2,999 would be manageable for 23 percent of homebuyers, 31% would be able to manage a higher amount.

Hawai‘i County had the highest Housing and Transportation Index of all the Counties (61% of household income). This may be why 31 percent of Hawai‘i mover households want to move closer to their place of employment – to reduce the combined cost of housing and transportation together.

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V. PUBLIC SECTOR HOUSING RESOURCES

This section covers important public sector housing resources, including funding, public housing, public housing subsidies, and housing planning. Government-assisted housing has been a part of the government's role in zoning and in developing and maintaining public housing for the lowest income groups. Today, with the advent of inclusionary housing policy, the role of government in providing housing for its citizens has expanded to touch on nearly every type of housing in the local market.

HHPS data focus on public sector housing. In part, that is because HHPS is funded by the public sector and its data are published by government agencies. More importantly, the study has always found that housing need is greatest at the lower end of the market. Supply, demand, and needed units estimates show that housing shortages are more prominent among lower-income families and they often require subsidized housing as a solution.

A. HOUSING FUNDING PATTERNS

In the public sector, funding comes largely from two sources: federal and state governments.

1. Federal Allocations

Before 2010, USASpending tells us that federal allocations for housing in Hawai'i amounted to about $133 million per year (HHPS, 2011). Allocations were high in 2000 and 2001, then leveled off at about $70 million a year during the middle of the decade. With added funds from the American Recovery and Reinvestment Act of 2009, HUD spending rose to over $200 million a year in 2008 and 2009 and settled back to $161.3 million in 2010. Between 2012 and 2015, expenditures grew substantially to a level of $226.6 million in 2015. Federal expenditures on housing grew to $268.5 in 2018 and $269.1 million in 2019.

Table 68. Federal Housing Expenditures in Hawai'i, 2015-2019

HUD Funding for Hawaii, 2015 - 2019					
Hawaii, All Counties and State Agencies	2015	2016	2017	2018	2019
Community Planning & Development (CPD) Programs (a)	$ 30,754,643	$ 10,535,048	$ 127,283,754	$ 36,164,936	$ 36,162,130
Public & Indian Housing (PIH) Programs(b)	$ 147,507,059	$ 153,540,813	$ 171,032,492	$ 187,175,581	$ 186,833,240
Native Hawaiian (c)	$ 9,100,000	-	$ 2,000,000	$ 2,000,000	$ 2,000,000
Fair Housing	$ 580,342	-	$ 537,350	$ 487,350	$ 487,350
Multifamily Housing Programs(d)	$ 38,702,635	-	$ 41,833,576	$ 42,724,546	$ 43,619,098
Subtotal	$ 226,644,679	$ 164,075,861	$ 342,687,172	$ 268,552,413	$ 269,101,818
FHA Mortgage Insurance Programs(e)	$ 201,949,260	$ 201,949,260	$ 583,223,204	$ 5,264,612,644	$ 4,732,258,506
TOTAL	$ 428,593,939	$ 366,025,121	$ 925,910,376	$ 5,533,165,057	$ 5,001,360,324

State Agencies	2015	2016	2017	2018	2019
Community Planning & Development (CPD) Programs (a)	$ 5,480,246	$ 1,764,244	$ 28,415,304	$ 9,113,785	$ 9,334,610
Public & Indian Housing (PIH) Programs(b)	$ 61,558,633	$ 63,618,839	$ 71,820,437	$ 82,231,738	$ 80,413,466
Native Hawaiian (c)	$ 9,100,000	$ -	$ 2,000,000	$ 2,000,000	$ 2,000,000
Fair Housing	$ 580,342	$ -	$ 537,350	$ 487,350	$ 487,350
Multifamily Housing Programs(d)	$ -	$ -	$ -	$ -	$ -
Subtotal	$ 76,719,221	$ 65,383,083	$ 102,773,091	$ 93,832,873	$ 92,235,426
FHA Mortgage Insurance Programs(e)	$ -	$ -	$ -	$ -	$ -
TOTAL	$ 76,719,221	$ 65,383,083	$ 102,773,091	$ 93,832,873	$ 92,235,426

(a) CPD programs include Community Development Block Grant, HOME Investments Partnership, National Housing Trust Fund, and Homeless programs

(b) PIH programs include rental subsidy vouchers, self-sufficiency, and public housing operating and capital improvement programs

(c) Includes Native Hawaiian housing block grant, training and technical assistance, and loan guarantees

(d) Multifamily programs provide supportive housing for the elderly and persons with disabilities. They are distributed directly to projects.

(e) Includes mortgage insurance for single family and multifamily (rental housing) loans. They are distributed directly to projects.

Source: HUD Honolulu Field Office. Note: HUD expenditures are by Fiscal Year, although certain funds, including Continuum of Care and Fair Housing funds are subject to a one-year lag. Funds are awarded by formula grant or competitively to the State, Counties, and private entities.

Among other uses, funds allocated through Community Planning and Development Programs can be used to produce or preserve housing units. They include CDBG, HOME, HOPWA, and ONAP

and amounted to about $39.8 million in 2015 and $38.2 million in 2019. Funding increased notably in 2017, when HUD granted the State additional funding for the Housing Trust Fund. In all, the level of funding to build units has been relatively steady over the last few years.

There were steady increases in homeless program support and administration as well as administrative and operations funding for the State, the Counties, and the Hawai'i Public Housing Authority.

Multifamily housing support has also risen steadily since 2015 with a slight decrease in 2019. The most important funding level increase, however, has been for the FHA Mortgage Insurance Program. Total FHA-insured mortgage loans have increased from $202 million in 2015 to $4.7 billion in 2019, 22.4 times the 2015 level.

2. State Allocations

In all the states, most housing funds spent by local governments come from federal sources. In Hawai'i, State allocations to housing have been substantial throughout the last decade (Table 69).

Between 2010 and 2015, the total State allocation to housing amounted to about $90 million per year. Between 2015 and 2018, State allocations to housing rose from $81.1 million to $352.6 million, with a growth rate of about 335 percent. Much of the increase (60 to 80 percent) was in the form of very generous allocations to the Rental Housing Revolving Fund (RHRF) and the Dwelling Unit Revolving Fund (DURF). There were also greater allocations for rental assistance, rental services, homelessness, and administration.

In 2019, State allocations to housing support returned to the 2015 level ($ 96.8 million) and there were no major allocations to the revolving funds.

Table 69. State Legislative Funding for Affordable Housing, 2014 to 2019

	Affordable Housing Funds	Capital Improvement Projects	Administration	HPHA Administration	Total
2014	$29,764,536	$1,300,000	$6,874,086	$58,006,911	$95,945,533
2015	$51,510,777	$14,332,000	$7,197,377	$8,047,324	$81,087,478
2016	$73,056,877	$1,700,000	$9,842,662	$73,867,668	$158,467,207
2017	$99,600,000	$12,230,000	$11,039,417	$54,028,875	$176,898,292
2018	$298,000,000	$4,200,000	$11,747,671	$38,673,088	$352,620,759
2019	$38,000,000	$2,900,000	$10,930,425	$44,976,508	$96,806,933

Source: Budget, House and Senate approved allocations, 2014 - 2019.

Legislative allocations were of two types. First, the State issued general obligation bonds to fund specific projects. They were usually associated with Capital Improvement Project (CIP) appropriations for public housing and revolving funds (RHRF and DURF) that are used to finance housing development. Second, the State appropriated General Funds to support homeless shelters and homeless services, as well as public housing renovations and rent subsidies.

Recapping, HUD funding under the CDBG and HOME programs[158] can be used to produce or preserve units, for acquisition, or provide infrastructure. Those funds amount to about 9 percent of total HUD funding in 2015 and have been steady over the past five years.

In the past, State funding for housing has been lower than federal funding. It expanded in the middle of the current decade primarily due to

[158] In some years HOPWA and ONAP as well.

higher allocations to the RHRF, which provides equity gap financing[159] to support rental housing development or preservation. As of June 2016, equity gap financing from the RHRF assisted in construction or preservation of over 4,300 units. Between June 2016 and June 2019, RHRF funds were used to develop over 1,280 more units.[160]

There would be very few affordable housing units produced today without federal- and state-funding. It is not unusual for a rental project to be financed by tapping several funding sources, including LIHTC, HOME (or CDBG), and RHRF.

The increases in both federal and state funding are especially important because the costs of producing affordable housing are increasing. Construction costs have been rising and pushing funding gaps up with them.

B. GOVERNMENT-ASSISTED HOUSING

The State's list of government-assisted housing units was expanded this year.[161] It began as a list of units produced with the assistance of federal, state, and county resources. The list has been updated for each of the last three HHPS projects. This year the list includes more types of housing, including units under construction, planned for the near future, and preliminary units that may be constructed over the next ten or more years.

The list was initiated by HHFDC and has been updated periodically with the assistance of the County housing officers and administrators and some County Planning Departments. The data file uses the housing project as a unit of analysis and has one record per project. Projects may be of any size and include federal, state, or county funding or support for new construction as well as acquisition, redevelopment, and refurbishing.

A large and growing number of variables describe each project. Most important among those are the number of units associated with each project and a breakdown of those units according to tenure (owner/renter), type (single-family/multi-family).

The list includes units in housing projects developed using any federal, state, or county resources. Government-assisted units include those the government financed, developed, or required through the State Land Use Commission, county development plans, or zoning. The initial list included only "affordable" housing units. It now includes market-rate units built under inclusionary housing policies for which the affordable units received some government assistance.

The Government-Assisted Housing List is a work in progress. It continues to expand in terms of time, space, content, and unit types. This year the list was an important part of three sections of the HHPS 2019 report: (1) the Pipeline section, (2) the government resources section, and (3) the Housing Tracking Study (next section).

The current list contains data on 736 projects and 165,643 housing units constructed in Hawai'i with the help of public housing funds. Expansion and refinement have been sporadic but effective.

Some major improvements are scheduled for the future, including expanding the list to include sustainability or preservation. Those will be further discussed in the tracking study section.

Figure 16 presents a graphic representation of the units produced in each of Hawai'i's four counties by year in which the units were completed.

[159] Equity gap funding is intended to cover the difference between project costs and available sources of construction and permanent financing for affordable rental or mixed-use projects.

[160] HHFDC, internal records.

[161] Section 3, pp. 36-38.

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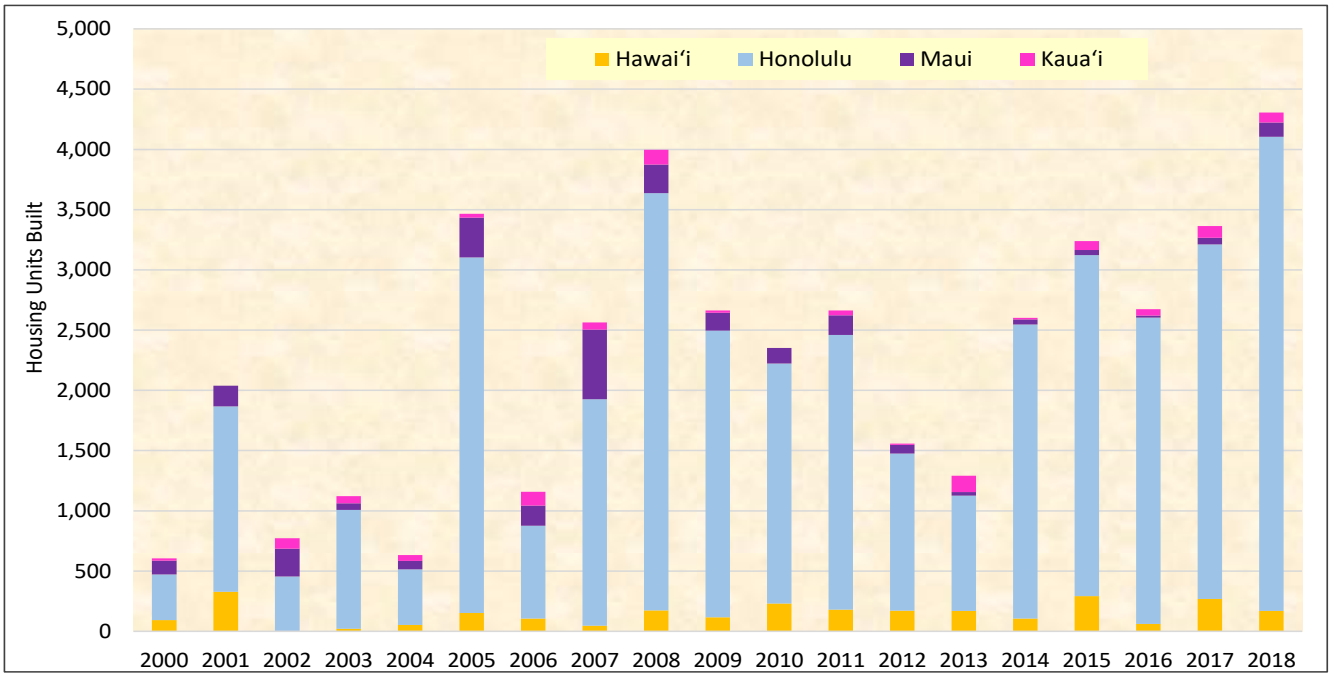
Figure 16. Government-Assisted Housing Units Constructed, 2000-2018



Source. Government-Assisted Housing List, SMS analysis.

Between 2000 and 2009, there were 10,907 government-assisted housing units constructed or preserved (through acquisition or rehabilitation) in the State of Hawai'i. That was 1,091 units per year. Between 2010 and 2019, state and county housing agencies added or preserved 14,322 housing units, or about 1,432 per year.

Production of government-assisted affordable housing rose from 2002 through 2009, then was stable from 2010 to 2013, and dropped in 2012 and 2013. Production has been rising since 2014.

Government-assisted units were predominantly multi-family and rental units. In Honolulu, half the affordable units were rentals and 68 percent were multi-family. In the other three counties, close to 90 percent of affordable units were multi-family and rental units.

The type of units produced has shifted somewhat since 2010. Maui County moved toward producing a greater number of multi-family units for rent. Honolulu and Hawai'i counties, on the other hand, produced more single-family units for ownership compared to the previous decade.

Table 70. State Legislative Funding for Affordable Housing, 2014 to 2019

		State	County			
			Hawai'i	Honolulu	Kaua'i	Maui
2000 to 2009	Total	10,907	1,258	7,234	562	1,853
	Percent Multi-family	64	68	72	46	40
	Percent Rentals	67	68	72	46	55
2010 to 2014	Total	9,933	4,071	198	381	5,283
	Percent Multi-family	78	42	94	69	21
	Percent Rentals	60	39	60	69	79
2015 to 2019	Total	4,389	592	3,382	177	238
	Percent Multi-family	71	100	66	100	79
	Percent Rentals	71	100	74	100	21

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VI. TRACKING AFFORDABLE HOUSING STOCK

A. BACKGROUND

Recent literature on affordable housing has repeatedly urged that efforts to provide affordable housing be accompanied by accurate data and rational analysis. In addition, virtually all Hawai'i's recent investigations into housing (State Plan, ten-year plan, etc.) have identified an affordable housing tracking system as a priority. Following this rationale, the 2019 HHPS RFP called for a study of ways to track affordable housing projects.

The list of government-assisted housing units discussed throughout this report might well provide the basis for such a tracking system. It now contains most, if not all, of the housing unit types that need to be tracked. In addition, it was improved with each successive HHPS project since 2011 and is familiar to all the housing offices in the State.

Building and maintaining an accurate, up-to-date database will require resources and patience, especially for the initial development phase. Having data to understand affordable housing, knowing what happens to affordable housing units over time, and having the ability to develop effective housing programs and evaluate them for continuous improvement will be worth the effort.

1. Objectives

The objective of this phase of the project was to provide guidelines to develop a data system for tracking production and inventory of affordable housing units in all four counties. For purposes of this project, affordable housing units are units produced specifically to be sold or rented at prices below market level. They are subsidized by government agencies in order to address the housing need among households in specified income groups. Those units may or may not enter the market at below-market prices or rents. When they do, they may or may not remain at an affordable price forever. Tracking is applied to determine the length of time those units remain affordable.

2. Methodology

The tracking system was covered in stakeholder interviews with State and County personnel. It also benefitted from our interaction with county housing, planning, and tax assessment personnel in the process of collecting data on affordable housing. We also met with Housing Directors, HHFDC, and State of Hawai'i Department of Business, Economic Development and Tourism, the Hawai'i Office of Planning, managers of the Homeless Management Information System, and GIS specialists to explore barriers and opportunities for development of an affordable housing tracking system.

B. DESIGN

It was decided early in the project to pattern the affordable housing tracking system after the Homeless Management Information System (HMIS). The HMIS was developed to address the information needs of homeless services providers and state agencies. It was necessary in order to understand how homelessness worked in Hawai'i and which programs and services were best suited to meeting the needs of homeless people. HMIS is funded by HUD, maintained by IT service providers, and managed by its users.

The HMIS is maintained centrally and its use is required of all homeless service providers who receive State or Federal funds. Providers use HMIS input formats for new clients and update case information on a regular basis. They can then generate a variety of reports that help them better understand their clients and evaluate the services they receive. For the 2019 HHPS, SMS used a de-identified dataset extracted from HMIS to develop this year's analysis of homeless persons' need for housing.

The structure that we would like to preserve for the affordable housing tracking system is that of an independent, transaction-based data system to serve the needs of affordable housing providers. All public and private affordable housing providers will contribute data on a continuing basis. The dataset will remain

accessible to all providers. Management of the dataset will be centralized and independent as it serves the continuous technical capacity of the system and the rigorous pursuit of accuracy of the data. Management will assure unfettered access to the data to all subscribers and will not define or hinder analysis by qualified users.

1. Major Features

Working from the HMIS concept, and with the advice of affordable housing stakeholders in Hawai'i, we have put together a set of features that will be central to the affordable housing tracking system for Hawai'i.

Phasing: Our interviews with public and private sector officials who may be involved with the development and use of the affordable housing tracking system suggest that the project will benefit for some phasing. The first phase would be planning, during which affordable housing providers and government agencies involved could be offered input to the system design. The second phase might include designing a follow-up method, security systems, and formulating an RFP for development. That process will describe the project elements that must be included. The third phase would be development – the coding and testing of the database system. The fourth phase would be data entry – the populating of the database, along with training for those who will input data, and opportunities to tweak the system to serve the needs of data providers. This phase can also include service to providers who need assistance with data access on their end. The last phase would be operations, or the continued management and improvement of the system to serve the needs of providers.

Content: The tracking system requires a set of data and an analysis method suitable for tracking the long-range affordability of units produced with governmental assistance and provided to owners or renters at below-market prices. In fact, housing officials in Hawai'i are considering a more comprehensive dataset that could be applied to housing issues other than affordable housing tracking. The content we will discuss here is already expanded to meet that objective.

Software: The software for creating and updating the database should be commercial database management and analysis software from an established vendor. It should be elementary enough to be used by non-specialists. Its primary functionality should be data input and updating. A good, non-proprietary database can be accessed by many kinds of analysis software programs. Our current recommendations are Microsoft Excel for data entry and Microsoft Power BI for analysis and display.

Geographical Interface: Nearly all housing issues are location-oriented. The system must bring together land use and tax map key information. Ideally, it should accommodate GIS information for mapping output and to interface with State and County GIS systems.

Input: Most of the database content items we describe here are already collected by affordable housing providers in Hawai'i. The exception may be the follow-up items we have described in the next paragraph. Data input should be in the hands of the providers, allowing them to control the transfer of their data to the centralized database. The initial data entry and periodic update of those items should provide for options. The providers should be able to physically enter data to the system, electronically transfer data across the database firewall, or submit data in hard copy.

Follow-Up: Tracking affordable housing involves periodic monitoring of the status of individual housing units. Affordable status is conveyed upon housing units that are developed or acquired using public sector funds or under the aegis of public programs. They remain in the affordable housing stock as long as they continue to be available at below-market prices. For any number of reasons, affordable housing units may revert to market prices in the years after they are first made available. To track affordable units will require that the project (with input from providers) develop a mechanism for monitoring or following up affordable units for several years after they are first sold or rented. To date, this has not been done on any comprehensive or consistent basis.

It is likely that systematic information on the fate of affordable units developed before 2020 can be recovered. We can only propose that tracking will begin as soon as possible as part of the project.

Output: There are many types of output from a good data tracking system and these are often developed as the system matures and the new utilities are discovered. Two types of output are usually programmed at the beginning. First, there is a need for a set of standard reports to serve the primary users. Second, there is an analysis function to provide simple analyses and data extracts as needed.

Management: The project will track affordable housing statewide and the database will be managed at the State level. Management functions include maintaining the statewide database, managing the data input and update functions, and distributing system products and outputs to users. The managing agency must have the appropriate resources and authority to carry out those tasks. It will be necessary to develop a data users' group with the collective power to make decisions about data access, membership, and future directions.

Access: Data output will be available to all system sponsors (initially, state and county housing and planning departments). Access to original data will be available to the contributing agencies and to a system management agency. Access to any system-wide data developed from the originally input data will be determined by the user's group. The access, maintenance, and management functions may or may not be delegated to a single agency.

Security: Standard system security measures required of all government data must always be in place . Special security procedures will be required once the tracking data that identifies new owners and renters is developed. Finally, the management agency must monitor the decisions of the users' group regarding access by one county to data input by another county.

2. Data Elements

Table 71 presents a preliminary a list of data fields to be considered for the database. The list is based on the items that were cited as useful to county stakeholders in our interviews. Items address the kinds of data they would need to effectively deal with the affordable housing sustainability issue.

Table 71. Fields for Affordable Housing Database

Section Name		
	Field Name	**Type of Entry**
Identifiers		
	Unique ID Number	
	Project Name; Phase	
	Street Address	
	City, District, Island	
	Zip Code	
	TMK Number	
	Parcel Number	
	GIS Coordinates	
	Zoning code	
Project Type		
	Type: Land use	Residential, Ag, C&I
	Type: Tenure	For sale, for rent, other
	Type: Groups served	Family, seniors, spec. need
	Type: Policy	Inclusionary, other, self-help
	Type: Transaction	vacant land, lots, turnkey
	Building Type	Single-family, multi-family
	Project Type	Rehab; New Construction
	Project Status	Planned, construction, complete, etc.
	Status change date	Date format
Unit Mix – Market Rate		
	Total	#
	For sale; rent, other	#
	SFD, MFD	#
Unit Mix – Affordable		
	Total	#
	For sale; rent, other	#
	SFD, MFD	#
Income Targets for Affordable Units		
	≤ 30 % of HUD AMI	#
	31 to 60% AMI	#
	61 to 80% AMI	#
	81 to 100% AMI	#
	101 to 120% AMI	#
	120 to 140% AMI	#
	>140% AMI	#
Number of Units by Bedrooms		
	Studio	#
	One Bedroom	#
	Two Bedroom	#
	3 or More Bedrooms	#
Project Dates		
	Start	Year
	Expected finish	Year
Development Data		
	Agency	name
	Funding Source	names
	Developer	name
Tracking data		
	Designed affordable	#
	Sold/rent affordable	#
	Deed restrictions	Specify, #
	Affordable after 1 yr.	#
	Affordable after 5 yrs.	#
Update Information		
	Most Recent Update	date
	Person that Updated	name

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Most of this information is already being collected. Much is included in the Government-Assisted Housing List developed for HHPS 2019. The new data are the items to record a change in status of affordable units.

C. RESOURCES REQUIRED

The Affordable Housing Tracking System will require allocation of resources at both the state and county levels. The state is expected to be the managing agent and would be responsible for the up-front development costs and the ongoing maintenance of the system.

At the state level, the initial expenditures will be for software, development, and training. The software cost is expected to be reasonable and some functionality may already be available in state government programs. The basic Microsoft 365 package, for instance, includes access to Excel and Power BI. Developing the database, input/output systems, and security systems is a one-time cost that could be substantial. We have not priced this aspect of the system. Once the system is developed, it will be necessary to train state and county employees to use it. All these costs can be expensed.

The ongoing resources for the management, maintenance, development of the system are primary personnel costs. They are both annual and long-range. The number of employees required for that task depends on the nature of the system, but the initial specifications presented here would probably require one person full-time. It is unlikely that the job description exists now at the state housing agency, and a new hire would be required.

At the county level, there would also be initial hard costs for software (if not currently part of the Microsoft programs), development, and training. These would be one-time costs and that will be considerably less than cost incurred at the state level. The county-level costs for long-term management, maintenance, and development would also be less. If data input and updating for housing data are being handled at the county level now, there may be no need for additional personnel. If new positions are needed, they may not require full-time attention to the task and would not require the same skills levels that are needed for project management at the state level.

Developing a tracking system for affordable housing in Hawai‘i is not technically difficult, time-consuming, or expensive. The most challenging aspects of the problem are developing a system with clear responsibilities and well-understood benefits for all parties concerned. It will also be necessary to establish a central management agency with the authority to enforce compliance, if needed, and a users’ group.

VII. APPENDIX

APPENDIX A: HHPS HOUSING TRENDS

Tables presented in Appendix A, referred to in prior years as the "A Tables" or "Trend Tables," provide detailed demographic and housing-related data for the State of Hawai'i and its counties. This data is taken from the Housing Demand Survey each year. The fundamental components of the Housing Demand Survey were designed to ensure compatibility with previous versions. These tables allow for the evaluation of trends in the Hawai'i housing market across the past 25 years.

Table A-1. Characteristics of Housing Units, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

County	Year	Total Households	Tenancy		Unit Size (Bedrooms)			
			Own	Rent	Studio or 1 Bedroom	2 Bedrooms	3 Bedrooms	4+ Bedrooms
Honolulu	1992	247,349	48%	52%	20%	32%	30%	19%
	1997	272,234	54%	46%	16%	27%	36%	21%
	2003	292,003	61%	39%	15%	25%	35%	25%
	2006	303,149	59%	41%	18%	25%	37%	20%
	2011	310,882	56%	44%	15%	21%	37%	26%
	2016	317,459	55%	45%	17%	26%	32%	25%
	2019	306,898	56%	44%	19%	24%	33%	24%
Maui	1992	34,266	61%	39%	14%	26%	46%	15%
	1997	39,252	65%	35%	12%	23%	46%	19%
	2003	43,687	61%	40%	13%	28%	42%	17%
	2006	49,484	60%	40%	15%	27%	43%	17%
	2011	54,132	54%	46%	17%	26%	37%	20%
	2016	55,059	57%	43%	16%	25%	38%	20%
	2019	55,842	59%	41%	16%	25%	38%	20%
Hawai`i	1992	39,789	68%	32%	7%	25%	53%	14%
	1997	46,271	72%	28%	8%	21%	54%	17%
	2003	54,644	70%	30%	12%	19%	50%	19%
	2006	61,213	69%	31%	11%	22%	49%	18%
	2011	67,096	67%	33%	13%	21%	47%	19%
	2016	66,989	66%	34%	12%	23%	46%	18%
	2019	70,662	67%	33%	17%	21%	42%	20%
Kaua`i	1992	16,981	60%	40%	12%	19%	53%	15%
	1997	18,817	67%	33%	8%	19%	57%	15%
	2003	20,460	66%	34%	11%	20%	53%	17%
	2006	21,971	66%	34%	10%	21%	51%	18%
	2011	23,201	59%	41%	12%	19%	51%	18%
	2016	23,369	63%	37%	13%	17%	50%	19%
	2019	22,023	63%	37%	14%	19%	49%	18%
State	1992	338,385	52%	48%	17%	30%	35%	18%
	1997	376,574	58%	42%	14%	25%	40%	20%
	2003	410,794	62%	38%	14%	24%	39%	23%
	2006	435,818	61%	39%	17%	24%	39%	20%
	2011	455,311	57%	43%	15%	22%	39%	24%
	2016	462,876	57%	43%	16%	25%	36%	23%
	2019	455,425	58%	42%	18%	24%	35%	23%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

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Table A-2. Household Income Data, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

County	Year	Total Households	Household Income						Median HH Income
			Less than $15,000	$15,000 to $24,999	$25,000 to $49,999	$50,000 to $74,999	$75,000 to $99,999	$100,000 or more	
Honolulu	1992	247,349	N/A	24%	29%	12%	6%	7%	$36,974
	1997	272,234	9%	9%	28%	15%	9%	6%	$42,234
	2003	292,003	8%	10%	36%	18%	11%	17%	$47,917
	2006	303,149	13%	7%	26%	22%	12%	20%	$58,385
	2011	310,882	12%	7%	25%	22%	9%	25%	$59,076
	2016	317,459	9%	6%	18%	21%	15%	31%	$73,824
	2019	311,451	8%	6%	16%	17%	14%	39%	$95,455
Maui	1992	34,266	N/A	20%	36%	11%	2%	3%	$35,843
	1997	39,252	10%	8%	33%	15%	7%	6%	$38,908
	2003	43,687	9%	13%	34%	19%	14%	11%	$44,297
	2006	49,484	11%	8%	29%	20%	15%	17%	$49,795
	2011	54,132	12%	10%	27%	19%	11%	21%	$58,424
	2016	55,059	11%	8%	23%	21%	12%	25%	$59,733
	2019	54,434	8%	7%	19%	18%	14%	34%	$74,451
Hawai`i	1992	39,789	N/A	24%	39%	11%	3%	4%	$34,063
	1997	46,271	14%	14%	30%	12%	4%	4%	$31,831
	2003	54,644	14%	12%	39%	17%	9%	9%	$36,905
	2006	61,213	13%	10%	29%	22%	10%	16%	$51,920
	2011	67,096	18%	13%	25%	17%	10%	17%	$44,696
	2016	66,989	16%	11%	28%	18%	11%	18%	$44,879
	2019	67,054	14%	10%	20%	18%	13%	24%	$59,503
Kaua`i	1992	16,981	N/A	20%	36%	10%	5%	3%	$36,966
	1997	18,817	11%	13%	30%	15%	5%	3%	$34,891
	2003	20,460	13%	12%	37%	18%	9%	12%	$42,205
	2006	21,971	10%	10%	27%	23%	11%	19%	$53,116
	2011	23,201	13%	11%	25%	19%	9%	19%	$49,730
	2016	23,369	11%	11%	26%	20%	11%	21%	$58,789
	2019	22,563	10%	6%	20%	16%	15%	34%	$74,527
State	1992	338,385	N/A	24%	31%	12%	5%	6%	$36,289
	1997	376,574	10%	10%	29%	15%	8%	6%	$39,883
	2003	410,794	10%	10%	36%	19%	10%	15%	$46,086
	2006	435,818	13%	7%	27%	21%	12%	20%	$58,393
	2011	455,311	13%	8%	26%	21%	10%	23%	$58,700
	2016	462,876	11%	7%	20%	21%	14%	28%	$72,821
	2019	455,502	9%	7%	17%	17%	14%	36%	$74,983

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

Table A-3. Households at HUD Income Guidelines by County, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

County	Year	Total Households	HUD Household Income Guidelines					
			30% or less	Over 30% to 50%	Over 50% to 80%	Over 80% to 120%	Over 120% to 140%	Over 140%
Honolulu	1992	247,349	N/A[a]	20%	19%	23%	10%	27%
	1997	272,234	8%	15%	21%	30%	7%	20%
	2003	292,003	5%	19%	22%	22%	7%	25%
	2006	303,149	14%	10%	20%	22%	9%	24%
	2011	310,882	19%	16%	25%	12%	7%	21%
	2016	317,459	15%	11%	22%	16%	15%	22%
	2019	311,451	16%	14%	20%	12%	9%	28%
Maui	1992	34,266	N/A[a]	20%	19%	24%	9%	28%
	1997	39,252	7%	11%	27%	24%	10%	21%
	2003	43,687	10%	17%	28%	18%	7%	21%
	2006	49,484	13%	11%	19%	21%	7%	28%
	2011	54,132	20%	19%	22%	9%	5%	25%
	2016	55,059	16%	14%	19%	14%	12%	25%
	2019	54,434	14%	9%	15%	7%	10%	45%
Hawai`i	1992	39,789	N/A[a]	20%	18%	24%	10%	29%
	1997	46,271	3%	19%	21%	23%	10%	24%
	2003	54,644	5%	14%	28%	22%	6%	25%
	2006	61,213	14%	11%	18%	20%	5%	31%
	2011	67,096	21%	16%	19%	13%	6%	24%
	2016	66,989	19%	12%	22%	10%	9%	28%
	2019	67,054	19%	13%	18%	13%	11%	26%
Kaua`i	1992	16,981	N/A[a]	21%	18%	21%	9%	30%
	1997	18,817	9%	18%	27%	25%	9%	12%
	2003	20,460	6%	23%	27%	20%	7%	18%
	2006	21,971	12%	11%	18%	21%	10%	28%
	2011	23,201	19%	18%	23%	13%	6%	22%
	2016	23,369	19%	19%	20%	7%	11%	23%
	2019	22,563	17%	11%	17%	6%	13%	36%
State	1992	338,385	N/A[a]	20%	19%	22%	11%	28%
	1997	376,574	7%	15%	22%	28%	7%	20%
	2003	410,794	9%	15%	20%	22%	8%	24%
	2006	435,818	14%	11%	20%	22%	8%	26%
	2011	455,311	20%	17%	24%	12%	7%	22%
	2016	462,876	16%	12%	21%	14%	13%	23%
	2019	455,502	17%	13%	19%	12%	10%	30%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019
Note: HUD household income guidelines of 30% or less was not available in the Housing Demand Survey 1992.

Table A-4a. Housing Unit Condition, Owned Units, 1992, 1997, 2003, 2006, 2011, and 2016

County	Year	Total Households	Owner Occupied			
			Excellent condition	Satisfactory condition	Fair condition	Poor condition
Honolulu	1992	247,349	47%	43%	9%	2%
	1997	272,234	31%	47%	18%	4%
	2003	292,003	42%	46%	11%	1%
	2006	303,149	39%	46%	12%	3%
	2011	310,882	40%	45%	12%	4%
	2016	317,459	N/A	N/A	N/A	N/A
Maui	1992	34,266	52%	38%	10%	1%
	1997	39,252	35%	48%	15%	3%
	2003	43,687	45%	42%	10%	3%
	2006	49,484	44%	43%	11%	2%
	2011	54,132	49%	37%	11%	2%
	2016	55,095	N/A	N/A	N/A	N/A
Hawai`i	1992	39,789	52%	41%	6%	1%
	1997	46,271	42%	42%	13%	4%
	2003	54,644	46%	44%	9%	2%
	2006	61,213	44%	44%	11%	1%
	2011	67,096	48%	38%	11%	3%
	2016	66,989	N/A	N/A	N/A	N/A
Kaua`i	1992	16,981	49%	42%	7%	2%
	1997	18,817	42%	42%	13%	3%
	2003	20,460	48%	42%	9%	2%
	2006	21,971	44%	43%	11%	2%
	2011	23,201	44%	39%	15%	2%
	2016	23,369	N/A	N/A	N/A	N/A
State	1992	338,385	49%	42%	8%	2%
	1997	376,574	34%	46%	17%	4%
	2003	410,794	43%	45%	10%	2%
	2006	435,818	41%	45%	12%	3%
	2011	455,311	43%	42%	12%	3%
	2016	462,876	N/A	N/A	N/A	N/A

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, and 2016
Note: This question was not asked in the Housing Demand Survey 2019

Table A-4b. Housing Unit Condition, Rented Units, 1992, 1997, 2003, 2006, 2011, 2016

County	Year	Total Households	Renter Occupied			
			Excellent condition	Satisfactory condition	Fair condition	Poor condition
Honolulu	1992	247,349	23%	52%	20%	6%
	1997	272,234	21%	46%	27%	6%
	2003	292,003	22%	52%	22%	4%
	2006	303,149	24%	42%	25%	10%
	2011	310,882	31%	46%	19%	5%
	2016	317,459	N/A	N/A	N/A	N/A
Maui	1992	34,266	27%	43%	24%	6%
	1997	39,252	25%	48%	22%	5%
	2003	43,687	28%	47%	20%	6%
	2006	49,484	31%	40%	22%	7%
	2011	54,132	35%	43%	16%	6%
	2016	55,095	N/A	N/A	N/A	N/A
Hawai`i	1992	39,789	29%	46%	16%	9%
	1997	46,271	26%	45%	20%	10%
	2003	54,644	27%	46%	23%	5%
	2006	61,213	22%	48%	20%	10%
	2011	67,096	37%	42%	15%	7%
	2016	66,989	N/A	N/A	N/A	N/A
Kaua`i	1992	16,981	25%	55%	15%	5%
	1997	18,817	27%	44%	22%	7%
	2003	20,460	30%	47%	18%	5%
	2006	21,971	24%	46%	25%	6%
	2011	23,201	26%	42%	27%	5%
	2016	23,369	N/A	N/A	N/A	N/A
State	1992	338,385	24%	51%	20%	6%
	1997	376,574	22%	46%	26%	6%
	2003	410,794	24%	51%	21%	4%
	2006	435,818	24%	43%	24%	9%
	2011	455,311	32%	45%	19%	5%
	2016	462,876	N/A	N/A	N/A	N/A

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, and 2016
Note: This question was not asked in the Housing Demand Survey 2019

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Table A-5. Average Monthly Housing Cost, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

County	Year	Total Households	Average Monthly Mortgage Payment			Average Monthly Rent	
			Total	Single-family	Multi-family	Total	2-bedroom apartment
Honolulu	1992	247,349	$821	$915	$832	$864	N/A
	1997	272,234	$1,430	$1,369	$1,335	$928	$923
	2003	292,003	$1,546	$1,650	$1,239	$1,014	$1,072
	2006	303,149	$1,142	$1,173	$1,029	$1,300	$1,393
	2011	310,882	$1,415	$1,393	$1,510	$1,502	$1,487
	2016	317,459	$2,140	$2,353	$1,753	$1,652	$1,688
	2019	311,451	$2,275	$2,395	$2,060	$1,818	$1,824
Maui	1992	34,266	$776	$831	$719	$730	N/A
	1997	39,252	$1,210	$1,664	$789	$850	$1,138
	2003	43,687	$1,310	$1,346	$1,104	$979	$1,072
	2006	49,484	$1,461	$1,451	$1,458	$1,256	$1,253
	2011	54,132	$1,461	$1,468	$1,411	$1,280	$1,303
	2016	55,059	$2,045	$2,100	$1,729	$1,444	$1,429
	2019	54,434	$2,063	$2,119	$1,856	$1,644	$1,689
Hawai`i	1992	39,789	$651	$691	$579	$556	N/A
	1997	46,271	$954	$1,069	$840	$697	$644
	2003	54,644	$1,072	$1,078	$919	$859	$843
	2006	61,213	$1,057	$1,039	$1,407	$1,146	$1,152
	2011	67,096	$1,106	$1,102	$1,389	$1,121	$986
	2016	66,989	$1,357	$1,379	$1,106	$1,164	$1,153
	2019	67,054	$1,483	$1,505	$1,292	$1,210	$1,274
Kaua`i	1992	16,981	$726	$773	$612	$807	N/A
	1997	18,817	$1,151	$1,290	$881	$830	$860
	2003	20,460	$1,284	$1,306	$1,014	$983	$885
	2006	21,971	$1,165	$1,178	$974	$1,230	$1,271
	2011	23,201	$1,273	$1,254	$983	$1,311	$1,292
	2016	23,369	$1,824	$1,841	$1,682	$1,256	$1,354
	2019	22,563	$2,134	$2,155	$1,946	$1,543	$1,673
State	1992	338,385	$800	$863	$813	$793	N/A
	1997	376,574	$1,319	$1,330	$1,286	$897	N/A
	2003	410,794	$1,433	$1,488	$1,213	$992	$1,037
	2006	435,818	$1,167	$1,183	$1,081	$1,274	$1,346
	2011	455,311	$1,355	$1,332	$1,495	$1,421	$1,398
	2016	462,876	$1,987	$2,081	$1,728	$1,554	$1,577
	2019	455,502	$2,108	$2,149	$2,016	$1,717	$1,750

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

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Table A-6. Mortgage Payments by Years in Unit, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

County	Year	Total Households	Average Monthly Mortgage by Years in Unit			
			Less than 1 year	1 to 5 years	6 to 10 years	More than 10 years
Honolulu	1992	247,349	$886	$879	$656	$564
	1997	272,234	$1,431	$1,668	$1,697	$1,241
	2003	292,003	$1,616	$1,729	$1,689	$1,414
	2006	303,149	$2,865	$1,865	$1,445	$824
	2011	310,882	$2,488	$2,255	$2,007	$1,088
	2016	317,459	$2,850	$2,378	$2,580	$1,905
	2019	311,451	$2,841	$2,686	$2,427	$2,091
Maui	1992	34,266	$824	$781	$755	$609
	1997	39,252	$1,497	$1,519	$1,339	$986
	2003	43,687	$1,972	$1,448	$1,436	$1,091
	2006	49,484	$2,245	$2,037	$1,565	$1,072
	2011	54,132	$1,671	$1,962	$1,720	$1,202
	2016	55,059	$2,516	$2,301	$2,134	$1,898
	2019	54,434	$2,065	$2,276	$2,090	$1,973
Hawai`i	1992	39,789	$752	$707	$455	$314
	1997	46,271	$1,030	$1,168	$1,122	$730
	2003	54,644	$1,455	$1,143	$1,174	$953
	2006	61,213	$1,700	$1,662	$987	$725
	2011	67,096	$1,591	$1,531	$1,403	$792
	2016	66,989	$1,985	$1,325	$1,384	$1,316
	2019	67,054	$1,845	$1,578	$1,635	$1,418
Kaua`i	1992	16,981	$888	$722	$559	$552
	1997	18,817	$1,448	$1,304	$1,167	$968
	2003	20,460	$1,673	$1,490	$1,373	$1,089
	2006	21,971	$2,666	$1,634	$1,442	$824
	2011	23,201	$2,285	$2,039	$1,587	$1,026
	2016	23,369	$2,518	$2,022	$2,221	$1,619
	2019	22,563	$3,113	$2,620	$2,182	$1,928
State	1992	338,385	$867	$853	$634	$553
	1997	376,574	$1,387	$1,548	$1,501	$1,135
	2003	410,794	$1,636	$1,559	$1,577	$1,299
	2006	435,818	$2,468	$1,837	$1,378	$835
	2011	455,311	$2,157	$2,013	$1,805	$1,049
	2016	462,876	$2,547	$2,186	$2,294	$1,798
	2019	455,502	$2,490	$2,437	$2,242	$1,956

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

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Table A-7. Household Composition, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

County	Year	Total Households	Household Type					
			Single member	Married, no children	Parent(s) & children	Unrelated roommates	Multiple Families / Other	Undetermined
Honolulu	1992	247,349	11.9%	24.4%	26.3%	1.7%	32.0%	3.7%
	1997	272,234	14.1%	25.6%	27.3%	4.2%	27.2%	1.6%
	2003	292,003	22.0%	28.9%	21.2%	3.2%	22.9%	1.8%
	2006	303,149	24.1%	21.8%	20.9%	3.3%	29.3%	0.5%
	2011	310,882	22.2%	19.6%	14.1%	5.0%	37.6%	1.4%
	2016	317,459	23.5%	20.2%	13.8%	5.5%	36.5%	0.1%
	2019	311,451	23.5%	20.4%	12.6%	5.9%	37.3%	0.2%
Maui	1992	34,266	12.6%	24.4%	32.9%	1.6%	25.9%	2.3%
	1997	39,252	14.1%	25.0%	27.9%	5.4%	24.8%	2.7%
	2003	43,687	21.9%	29.6%	25.4%	3.2%	17.6%	2.3%
	2006	49,484	21.5%	24.8%	24.0%	3.6%	25.8%	0.3%
	2011	54,132	24.7%	22.2%	12.8%	7.0%	30.7%	2.6%
	2016	55,059	23.9%	22.2%	13.9%	6.7%	32.4%	0.9%
	2019	54,434	23.9%	20.3%	12.9%	8.1%	34.5%	0.3%
Hawai`i	1992	39,789	9.6%	27.2%	32.3%	0.6%	26.0%	4.3%
	1997	46,271	14.8%	27.0%	28.4%	3.5%	24.3%	2.1%
	2003	54,644	22.3%	30.6%	24.4%	3.2%	18.1%	1.4%
	2006	61,213	19.5%	25.6%	22.6%	2.6%	28.7%	1.0%
	2011	67,096	24.6%	25.0%	13.5%	6.5%	29.0%	1.4%
	2016	66,989	26.5%	26.3%	13.5%	5.9%	27.5%	0.3%
	2019	67,054	25.9%	23.4%	13.0%	9.0%	27.8%	0.7%
Kaua`i	1992	16,981	12.7%	26.1%	31.0%	0.5%	26.3%	3.5%
	1997	18,817	13.2%	27.1%	30.0%	1.7%	25.4%	2.5%
	2003	20,460	20.9%	26.9%	26.8%	3.2%	20.5%	1.7%
	2006	21,971	19.8%	25.0%	23.3%	3.3%	28.2%	0.4%
	2011	23,201	22.5%	23.6%	14.8%	4.4%	32.5%	2.2%
	2016	23,369	22.9%	25.3%	15.3%	5.7%	30.3%	0.5%
	2019	22,563	23.3%	25.7%	13.1%	5.6%	32.1%	0.1%
State	1992	338,385	11.7%	24.9%	27.9%	1.5%	30.3%	3.6%
	1997	376,574	14.2%	25.8%	27.6%	4.1%	26.5%	1.9%
	2003	410,794	22.0%	29.1%	22.3%	3.2%	21.6%	1.8%
	2006	435,818	22.9%	22.8%	21.6%	3.2%	28.8%	0.6%
	2011	455,311	22.9%	21.0%	13.9%	5.5%	35.2%	1.6%
	2016	462,876	23.9%	21.6%	13.8%	5.7%	34.4%	0.2%
	2019	455,502	23.9%	21.1%	12.7%	6.6%	35.3%	0.3%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019
Note: [a] Other household types include a mixture of related and unrelated individuals.

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Table A-8. Household Crowding, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

County	Year		Crowding Indicators		
		Total Households	Crowded[a]	Doubled Up[b]	Crowded and/or Doubled Up[c]
Honolulu	1992	247,349	23.2%	N/A	32.0%
	1997	272,234	10.6%	N/A	27.2%
	2003	292,003	10.1%	10.0%	17.6%
	2006	303,149	8.1%	9.7%	15.2%
	2011	310,882	13.3%	13.8%	22.9%
	2016	317,459	11.4%	11.9%	21.0%
	2019	311,451	14.1%	13.3%	23.1%
Maui	1992	34,266	26.8%	N/A	25.9%
	1997	39,252	10.4%	N/A	24.8%
	2003	43,687	11.0%	8.7%	17.3%
	2006	49,484	7.7%	9.6%	15.3%
	2011	54,132	10.7%	13.0%	19.2%
	2016	55,059	9.8%	14.1%	21.4%
	2019	54,434	13.8%	14.1%	22.5%
Hawai`i	1992	39,789	18.7%	N/A	26.0%
	1997	46,271	7.9%	N/A	24.3%
	2003	54,644	7.0%	9.3%	14.4%
	2006	61,213	6.9%	11.2%	15.9%
	2011	67,096	8.4%	11.3%	17.2%
	2016	66,989	7.4%	11.1%	16.0%
	2019	67,054	11.5%	10.3%	18.0%
Kaua`i	1992	16,981	17.4%	N/A	26.3%
	1997	18,817	9.1%	N/A	25.4%
	2003	20,460	6.0%	12.5%	16.1%
	2006	21,971	6.6%	11.9%	15.5%
	2011	23,201	10.5%	11.7%	18.1%
	2016	23,369	8.9%	11.5%	19.2%
	2019	22,563	12.2%	14.5%	21.4%
State	1992	338,385	22.2%	N/A	30.3%
	1997	376,574	10.2%	N/A	26.5%
	2003	410,794	9.6%	10.0%	17.1%
	2006	435,818	7.8%	10.0%	15.3%
	2011	455,311	12.1%	13.2%	21.4%
	2016	462,876	10.5%	12.0%	20.2%
	2019	455,502	13.6%	13.0%	22.2%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

[a] Based on more than 2 persons per bedroom.

[b] More than one family group in a single housing unit (See Glossary).

[C] Percent of households crowded, doubled up, or both. Before 2003, HHPS measured crowding and "crowded or doubled up." After 2003, HHPS measured crowding and doubled up and the combination of both.

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Table A-9. Household Crowding by Tenancy, State and Counties of Hawai'i, 2019

	Current Owners				Current Renters			
	Total Households	Crowded[a]	Doubled Up[b]	Crowded and/or Doubled Up[c]	Total Households	Crowded[a]	Doubled Up[b]	Crowded and/or Doubled Up[c]
Honolulu	171,222	6.7%	15.2%	18.8%	140,229	23.9%	11.0%	28.3%
Maui	32,008	8.1%	14.8%	19.2%	22,426	22.3%	13.1%	27.2%
Hawai`i	44,735	7.8%	11.2%	16.0%	22,319	20.0%	8.5%	21.9%
Kaua`i	14,122	8.3%	16.4%	19.9%	8,441	19.3%	11.5%	23.9%
State	262,087	7.1%	14.5%	18.5%	193,415	23.1%	11.0%	27.2%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

[a] Based on more than 2 persons per bedroom.
[b] More than one family group in a single housing unit (See Glossary).
[C] Percent of households crowded, doubled up, or both. Before 2003, HHPS measured crowding and "crowded or doubled up." After 2003, HHPS measured crowding and doubled up and the combination of both.

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Table A-10. Shelter-to-Income Ratios, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

County	Year	Total Households	Monthly Shelter Payment as a Percent of Monthly				
			No Shelter Payment	Under 30 percent	30 to 40 percent	Over 40 percent	Not enough information
Honolulu	1992	247,349	55.7%		14.1%	20.2%	10.0%
	1997	272,234	55.1%		18.9%	18.4%	7.5%
	2003	292,003	16.4%	36.3%	17.9%	14.4%	15.0%
	2006	303,149	19.2%	35.7%	10.9%	22.0%	12.2%
	2011	310,882	14.6%	35.7%	10.1%	30.6%	9.0%
	2016	317,459	21.3%	37.1%	11.4%	24.4%	5.9%
	2019	306,898	17.0%	44.1%	9.7%	23.1%	6.1%
Maui	1992	34,266	59.3%		18.1%	15.8%	6.7%
	1997	39,252	47.9%		16.0%	19.8%	16.4%
	2003	43,687	12.0%	40.6%	17.5%	16.2%	13.6%
	2006	49,484	16.0%	33.1%	14.4%	27.1%	9.4%
	2011	54,132	16.2%	35.5%	12.0%	29.2%	7.1%
	2016	55,059	15.0%	35.2%	12.4%	31.4%	6.0%
	2019	55,842	14.5%	43.3%	10.5%	23.8%	7.8%
Hawai`i	1992	39,789	70.2%		12.4%	11.5%	5.9%
	1997	46,271	51.8%		18.1%	20.4%	9.7%
	2003	54,644	17.9%	38.7%	16.5%	14.4%	12.5%
	2006	61,213	15.9%	38.2%	10.9%	23.0%	12.1%
	2011	67,096	19.4%	34.1%	12.0%	26.8%	7.7%
	2016	66,989	27.0%	37.2%	10.3%	19.3%	6.2%
	2019	70,662	21.1%	41.0%	8.8%	21.8%	7.3%
Kaua`i	1992	16,981	60.3%		17.7%	13.7%	8.1%
	1997	18,817	44.9%		18.7%	24.7%	11.7%
	2003	20,460	17.3%	38.9%	14.8%	16.1%	12.9%
	2006	21,971	18.8%	38.7%	10.8%	21.6%	10.0%
	2011	23,201	18.6%	35.0%	12.2%	25.5%	8.6%
	2016	23,369	20.8%	36.8%	10.8%	26.3%	5.2%
	2019	22,023	17.2%	38.3%	10.5%	24.5%	9.4%
State	1992	338,385	58.0%		14.5%	18.4%	9.1%
	1997	376,574	53.5%		18.5%	19.1%	8.9%
	2003	410,794	16.1%	37.2%	17.5%	14.7%	14.4%
	2006	435,818	18.4%	35.9%	11.3%	22.7%	11.8%
	2011	455,311	15.7%	35.4%	10.7%	29.6%	8.6%
	2016	462,876	21.4%	36.8%	11.3%	24.6%	5.9%
	2019	455,425	17.3%	43.2%	9.7%	23.1%	6.7%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019
Note. Under 30 percent includes households with no shelter payment for 1992 and 1997.

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Table A-11. Shelter-to-Income Ratios by Years in Unit, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

County	Year	Total Households	Percent with shelter-to-income ratio of 30% or more					
			by Years in Unit				by Tenancy	
			Less than 1 year	1 to 5 years	6 to 10 years	More than 10 years	Rented or no cash	Owner occupied
Honolulu	1992	247,349	61.1%	43.7%	34.9%	12.7%	44.6%	23.0%
	1997	272,234	40.8%	43.2%	46.9%	35.1%	41.4%	39.2%
	2003	292,003	42.5%	49.6%	37.6%	24.9%	48.9%	28.0%
	2006	303,149	53.0%	43.1%	36.9%	22.1%	47.2%	22.7%
	2011	310,882	65.8%	55.7%	44.9%	25.9%	61.9%	24.5%
	2016	317,459	60.3%	48.8%	38.5%	21.7%	58.1%	23.2%
	2019	311,451	56.2%	40.8%	38.1%	20.6%	49.7%	20.3%
Maui	1992	34,266	47.3%	49.8%	30.6%	17.0%	43.8%	27.6%
	1997	39,252	41.4%	50.0%	47.3%	33.7%	38.6%	46.1%
	2003	43,687	52.2%	38.3%	26.5%	26.0%	40.5%	30.0%
	2006	49,484	66.3%	46.8%	44.8%	26.3%	54.6%	32.6%
	2011	54,132	60.2%	51.5%	40.6%	27.6%	52.7%	31.1%
	2016	55,059	65.5%	50.2%	48.4%	33.5%	66.3%	31.4%
	2019	54,434	54.2%	41.3%	37.0%	21.4%	51.2%	23.1%
Hawai`i	1992	39,789	51.5%	35.8%	18.5%	6.7%	37.8%	17.2%
	1997	46,271	49.6%	52.5%	42.6%	30.8%	52.0%	37.0%
	2003	54,644	42.4%	41.7%	31.2%	26.8%	49.0%	27.8%
	2006	61,213	60.8%	43.7%	27.5%	20.3%	48.3%	27.1%
	2011	67,096	66.4%	48.7%	38.4%	23.0%	57.3%	28.1%
	2016	66,989	38.7%	39.7%	33.3%	21.3%	61.9%	17.7%
	2019	67,054	54.2%	41.3%	37.0%	21.4%	53.4%	19.8%
Kaua`i	1992	16,981	46.3%	31.1%	18.5%	15.6%	36.9%	28.1%
	1997	18,817	61.2%	56.5%	41.4%	39.6%	53.4%	46.1%
	2003	20,460	43.2%	43.2%	31.4%	26.0%	44.4%	29.7%
	2006	21,971	51.6%	45.2%	37.1%	18.8%	47.7%	24.3%
	2011	23,201	65.8%	53.9%	42.9%	29.3%	56.0%	31.7%
	2016	23,369	64.5%	50.6%	39.7%	26.3%	58.9%	28.0%
	2019	22,563	54.2%	41.3%	37.0%	21.4%	51.4%	25.7%
State	1992	338,385	57.8%	43.3%	31.1%	12.6%	43.7%	23.0%
	1997	376,574	42.2%	45.6%	46.0%	34.7%	40.1%	40.1%
	2003	410,794	43.6%	46.2%	35.3%	25.3%	28.3%	28.3%
	2006	435,818	56.4%	43.8%	36.7%	22.1%	48.2%	24.6%
	2011	455,311	65.0%	53.9%	43.2%	25.8%	59.8%	26.3%
	2016	462,876	58.2%	47.8%	39.2%	23.2%	59.6%	23.5%
	2019	455,502	54.2%	41.3%	37.0%	21.4%	50.4%	20.9%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

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Table A-12. Intention to Move, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

Total Households	Intention to Move		Raw Demand-Total Will Move*	When Household Will Move				
	Probably Will Not Move	Will Move to a New Unit		In 1 Year	In 2 Years	3 to 5 Years	More Than 5 Years	Not Sure When
247,349	42.6%	57.4%	142,090	29.2%	21.5%	19.0%	10.2%	20.1%
272,234	44.8%	55.2%	150,194	23.5%	20.9%	16.2%	10.9%	28.5%
292,003	56.3%	43.7%	127,683	27.9%	20.5%	19.3%	10.3%	22.0%
303,149	61.2%	38.8%	117,597	24.5%	22.9%	15.5%	8.2%	29.0%
310,882	45.4%	54.6%	168,946	21.5%	21.4%	20.1%	15.6%	21.5%
317,459	40.0%	60.0%	190,377	19.8%	18.3%	20.0%	15.8%	26.1%
311,451	34.7%	65.3%	203,426	18.4%	19.3%	15.9%	13.0%	33.4%
34,266	56.8%	43.2%	14,793	28.6%	24.7%	17.1%	9.2%	20.4%
39,252	51.9%	48.1%	18,894	23.1%	17.2%	13.4%	18.2%	28.1%
43,687	51.9%	48.1%	18,205	22.1%	20.6%	18.6%	10.0%	28.7%
49,484	54.9%	45.1%	22,318	19.6%	26.9%	15.0%	14.0%	24.5%
54,132	52.9%	47.1%	25,282	24.8%	19.4%	17.6%	16.1%	22.2%
55,059	47.7%	52.3%	28,784	20.6%	19.9%	19.9%	17.1%	22.5%
54,434	49.0%	51.0%	27,740	21.2%	16.1%	16.8%	20.8%	25.2%
39,789	55.6%	44.4%	17,685	28.8%	20.8%	17.8%	14.0%	18.6%
46,271	60.0%	40.0%	18,491	22.3%	18.1%	15.5%	15.9%	28.2%
54,644	55.6%	44.4%	21,252	21.4%	19.2%	15.9%	17.3%	26.2%
61,213	57.9%	42.1%	25,769	22.4%	19.3%	19.4%	11.2%	27.7%
67,096	58.4%	41.6%	28,223	20.9%	12.9%	24.9%	20.8%	20.6%
66,989	50.2%	49.8%	33,336	21.7%	17.9%	17.4%	18.9%	24.1%
67,054	51.0%	49.0%	32,879	21.8%	16.5%	17.0%	19.4%	25.3%
16,981	56.8%	43.2%	7,337	32.8%	17.4%	21.4%	6.4%	22.0%
18,817	58.0%	42.0%	7,907	17.1%	13.9%	16.3%	15.3%	37.4%
20,460	63.5%	36.5%	7,468	22.1%	22.4%	15.6%	12.1%	27.9%
21,971	64.4%	35.6%	7,826	23.4%	17.5%	13.6%	17.1%	28.4%
23,201	57.2%	42.8%	9,628	30.3%	15.5%	15.1%	18.3%	20.8%
23,369	55.7%	44.3%	10,355	21.1%	21.6%	19.9%	19.9%	17.6%
22,563	57.5%	42.5%	9,588	18.8%	11.9%	18.8%	16.0%	34.5%
338,385	46.2%	53.8%	181,905	29.2%	21.5%	18.8%	10.4%	20.1%
376,574	48.1%	51.9%	195,486	23.1%	20.0%	15.9%	12.3%	28.8%
410,794	57.5%	42.5%	174,608	26.3%	20.5%	18.6%	11.2%	23.5%
435,818	60.2%	39.8%	173,510	23.5%	22.6%	15.9%	9.8%	28.2%
455,311	49.2%	50.8%	232,079	22.1%	19.8%	20.2%	16.4%	21.4%
462,876	43.2%	56.8%	262,852	20.1%	18.6%	19.6%	16.5%	25.1%
455,502	39.9%	60.1%	273,632	19.3%	18.4%	16.2%	14.7%	31.6%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019
Base for intention to Move is all respondent households
Base for When Households Will Move is 262,852 households who provided a time frame or said not sure (excludes probably never move)

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Table A-13. Preferred Location for Next Move, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

County	Year	Total Households	Final Demand - Total Will Move[a]	Preferred Location for Next Move			
				Same Island	Different Island	Not Sure	Out-of-State
Honolulu	1992	247,349	142,090	62.2%	5.3%	6.3%	26.1%
	1997	272,234	150,194	52.5%	4.3%	11.0%	32.2%
	2003	292,003	127,683	65.7%	2.8%	11.6%	19.8%
	2006	303,149	117,597	66.1%	4.5%	8.9%	20.5%
	2011	310,882	132,696	63.4%	4.3%	5.6%	26.6%
	2016	317,459	139,823	59.3%	3.4%	14.2%	23.1%
	2019	311,451	135,492	61.1%	4.9%	8.0%	26.0%
Maui	1992	34,266	14,793	71.7%	13.3%	5.7%	9.4%
	1997	39,252	18,894	72.5%	2.7%	13.0%	11.8%
	2003	43,687	18,205	68.3%	6.9%	10.8%	14.0%
	2006	49,484	22,318	71.5%	9.5%	6.7%	12.3%
	2011	54,132	19,774	58.5%	5.4%	24.9%	11.2%
	2016	55,059	21,877	65.9%	6.6%	8.9%	18.7%
	2019	54,434	20,729	61.4%	8.9%	9.9%	19.8%
Hawai`i	1992	39,789	17,685	80.9%	4.2%	4.4%	10.6%
	1997	46,271	18,491	74.3%	4.0%	7.7%	14.0%
	2003	54,644	21,252	73.4%	5.4%	12.1%	9.1%
	2006	61,213	25,769	73.0%	6.0%	9.4%	11.5%
	2011	67,096	22,327	61.9%	7.8%	8.3%	22.1%
	2016	66,989	24,746	61.4%	7.2%	13.9%	17.5%
	2019	67,054	24,479	68.3%	5.4%	8.0%	18.3%
Kaua`i	1992	16,981	7,337	76.7%	6.2%	6.0%	11.1%
	1997	18,817	7,907	69.8%	5.7%	10.1%	14.3%
	2003	20,460	7,468	71.8%	9.7%	9.0%	9.5%
	2006	21,971	7,826	64.8%	7.4%	9.1%	18.7%
	2011	23,201	7,586	62.8%	7.0%	11.1%	19.2%
	2016	23,369	8,211	65.7%	5.2%	7.6%	21.5%
	2019	22,563	6,278	63.9%	6.8%	8.2%	21.2%
State	1992	338,385	181,904	65.4%	5.9%	6.1%	22.6%
	1997	376,574	195,485	57.2%	4.2%	10.9%	27.8%
	2003	410,794	174,607	67.2%	3.9%	11.5%	17.5%
	2006	435,818	173,511	67.8%	5.5%	8.7%	18.0%
	2011	455,311	182,384	62.6%	5.0%	8.7%	23.8%
	2016	462,876	194,656	60.5%	4.2%	13.4%	21.9%
	2019	455,502	186,978	62.2%	5.5%	8.2%	24.2%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

[a] The total number of Final Demand households differs from the Raw Demand number in Table A-12 because households who didn't know or refused to report when they might move are excluded from the final demand counts.

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Table A-14. Tenancy Preference of Current Owners & Renters, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

County	Year	Effective Demand-Total Will Move[a]	Current Owners			Current Renters		
			Total	Planned Next Tenancy		Total[c]	Planned Next Tenancy	
				Buy	Rent[b]		Buy	Rent[b]
Honolulu	1992	127,810	33,243	89.7%	10.3%	94,567	32.7%	67.3%
	1997	128,791	44,335	89.1%	10.9%	84,456	44.0%	56.0%
	2003	113,638	41,616	85.5%	14.5%	72,022	55.4%	44.6%
	2006	100,545	30,973	86.8%	13.2%	69,572	55.4%	44.6%
	2011	97,429	32,688	74.2%	25.8%	64,621	25.1%	68.3%
	2016	136,933	58,933	75.2%	24.8%	78,000	31.0%	70.3%
	2019	100,203	43,447	78.5%	21.5%	56,755	31.1%	68.9%
Maui	1992	13,284	4,600	87.6%	12.4%	8,684	49.5%	50.5%
	1997	16,239	6,450	84.8%	15.2%	9,789	46.8%	53.2%
	2003	15,593	5,657	95.1%	4.9%	9,936	52.4%	47.6%
	2006	19,584	7,083	92.0%	8.0%	12,501	52.3%	47.7%
	2011	16,937	5,370	72.0%	28.0%	11,396	29.4%	70.6%
	2016	19,434	7,431	73.5%	26.5%	11,877	35.4%	64.6%
	2019	16,624	6,588	77.6%	22.4%	10,036	38.2%	61.8%
Hawai`i	1992	16,004	7,132	93.7%	6.3%	8,872	64.9%	35.1%
	1997	15,884	7,694	87.5%	12.5%	8,190	49.6%	50.4%
	2003	18,471	8,679	90.0%	10.0%	9,792	57.1%	42.9%
	2006	22,200	10,264	93.8%	6.2%	11,936	54.7%	45.3%
	2011	17,412	6,838	70.1%	29.9%	10,540	37.2%	62.8%
	2016	24,570	12,856	67.4%	32.6%	11,568	37.3%	62.7%
	2019	19,992	8,823	77.1%	22.9%	11,169	37.8%	62.2%
Kaua`i	1992	6,530	2,264	95.9%	4.1%	4,266	54.9%	45.1%
	1997	6,428	2,054	92.9%	7.1%	4,374	48.2%	51.8%
	2003	6,426	2,737	90.5%	9.5%	3,689	51.6%	48.4%
	2006	6,715	2,614	87.6%	12.4%	4,101	39.3%	60.7%
	2011	6,339	1,700	61.3%	38.7%	4,521	20.9%	79.1%
	2016	6,750	2,670	70.1%	29.9%	4,077	35.2%	64.8%
	2019	4,946	2,088	75.4%	24.6%	2,858	31.7%	68.3%
State	1992	163,664	47,239	90.4%	9.6%	116,425	37.2%	62.8%
	1997	167,343	60,533	88.6%	11.4%	106,810	44.9%	55.1%
	2003	154,129	58,689	87.6%	12.4%	95,440	55.1%	44.9%
	2006	149,044	50,934	89.0%	11.0%	98,110	54.3%	45.7%
	2011	138,116	46,595	72.9%	27.1%	91,079	26.8%	73.2%
	2016	187,687	81,889	73.8%	26.2%	103,997	31.4%	68.6%
	2019	141,765	60,947	78.1%	21.9%	80,818	33.0%	67.0%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

Base for Effective Demand is households who plan to move, have some idea when they will move, and plan to stay in the State of Hawai'i when they move

Base for Current Owners is 60,947 households included in 141,765 Total Will Move households that own their current residence.

Base for Current Renters is 80,818 households included in 141,765 Total Will Move households that currently rent their unit or occupy without paying cash rent.

[a] The total number of mover households differs from Table A-12 because those who plan to move out of state are excluded from effective demand counts. Total Current Owners and Total Current Renters do not sum to Total Will Move because those households that refused to provide their current tenancy were excluded from the analysis.

[b] Includes households that plan to rent or are not sure about their next tenancy.

[C] Includes households that currently rent or occupy without payment of cash rent.

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Table A-15. Preferred Unit Type, Buyers, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

	County	Year	Total Will Move Buyers[a]	Preferred Unit Type					
				Single Family	Townhouse	Condo	Apartment	Other	No Preference
PLAN TO BUY	Honolulu	1992	60,724	73.9%	14.3%	8.7%	1.1%	0.0%	2.0%
		1997	76,663	78.7%	4.2%	12.7%	0.2%	1.3%	2.9%
		2003	75,482	78.6%	5.1%	6.8%	1.8%	1.3%	6.4%
		2006	65,495	69.7%	7.5%	12.7%	1.0%	1.3%	8.6%
		2011	40,483	61.0%	7.2%	26.7%	0.0%	2.0%	3.1%
		2016	64,168	57.9%	6.2%	21.9%	6.1%	0.2%	7.6%
		2019	47,643	55.9%	6.7%	23.8%	5.3%	1.0%	7.2%
	Maui	1992	8,328	89.7%	2.5%	5.3%	0.6%	1.9%	0.0%
		1997	10,051	87.1%	2.2%	8.0%	0.8%	0.0%	1.9%
		2003	10,586	85.0%	1.2%	7.4%	1.6%	0.1%	4.7%
		2006	12,539	85.6%	2.7%	7.6%	0.0%	0.4%	3.7%
		2011	7,156	83.0%	5.7%	9.7%	0.0%	0.4%	1.2%
		2016	9,172	80.1%	3.6%	9.7%	1.2%	1.9%	3.3%
		2019	8,417	84.6%	2.5%	9.4%	0.6%	1.1%	1.9%
	Hawai`i	1992	12,441	91.8%	3.3%	2.2%	1.0%	0.8%	0.9%
		1997	10,794	91.7%	1.9%	4.8%	0.2%	0.2%	1.1%
		2003	13,402	91.4%	1.8%	2.1%	0.5%	0.2%	4.0%
		2006	15,940	84.2%	4.4%	4.9%	0.0%	2.1%	4.4%
		2011	8,711	87.3%	4.0%	5.9%	0.0%	1.0%	1.8%
		2016	11,407	80.3%	0.3%	8.0%	0.3%	1.1%	10.0%
		2019	9,986	83.4%	2.6%	8.4%	0.6%	1.3%	3.6%
	Kaua`i	1992	4,513	95.1%	1.1%	2.9%	0.0%	0.0%	0.9%
		1997	4,016	91.0%	4.1%	4.9%	0.0%	0.0%	0.0%
		2003	4,381	86.9%	3.8%	5.8%	0.0%	1.7%	1.8%
		2006	3,879	79.0%	5.3%	8.2%	0.0%	1.3%	6.1%
		2011	2,046	81.8%	4.4%	8.3%	0.0%	2.8%	2.6%
		2016	3,040	86.7%	1.7%	7.5%	3.4%	0.7%	
		2019	2,253	78.1%	6.0%	7.5%	0.7%	2.7%	5.0%
	State	1992	86,006	79.2%	10.9%	7.1%	1.0%	0.1%	1.7%
		1997	101,524	81.4%	3.8%	11.0%	0.3%	1.0%	2.5%
		2003	103,851	81.3%	4.3%	6.2%	1.5%	1.0%	5.7%
		2006	97,853	74.5%	6.3%	10.6%	1.0%	1.3%	7.2%
		2011	58,395	68.3%	6.5%	20.9%	0.0%	1.7%	2.6%
		2016	87,787	64.1%	5.0%	18.3%	4.8%	0.5%	7.2%
		2019	68,300	64.2%	5.6%	19.2%	3.9%	1.1%	6.0%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

[a] Total Will Move is effective demand households (plan to move, have some idea when they will move, and plan to stay in the State when they move) that want to buy their next unit rather than rent.

Note. Sum of county figures may not equal the State total due to rounding.

[b] Single-family is a single-family detached dwelling unit.

[c] Townhouse is a side by side housing unit that does not meet the definition of single-family.

[d] Condo is an apartment building with five units or more in which each owner owns a unit and holds a joint ownership in common areas with other owners in the building.

[e] Apartment contains residential suites in which each individual unit is leased to different occupants.

[f] Other includes type of units that are not Single-family, Townhouse, Condo, and apartment

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Table A-16. Preferred Unit Type, Renters, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

	County	Year	Total Will Move Renters[a]	Preferred Unit Type					
				Single Family	Townhouse	Condo	Apartment	Other	No Preference
PLAN TO RENT	Honolulu	1992	67,086	64.3%	3.9%	12.5%	13.6%	0.6%	5.1%
		1997	52,128	50.8%	8.3%	11.4%	19.3%	1.1%	9.1%
		2003	38,156	56.0%	9.1%	4.1%	21.1%	2.9%	6.8%
		2006	40,585	41.3%	10.7%	8.3%	28.8%	2.8%	8.2%
		2011	46,396	34.5%	4.3%	13.8%	44.2%	2.0%	1.2%
		2016	67,065	26.3%	4.7%	12.4%	30.9%	0.9%	24.8%
		2019	50,218	39.1%	6.7%	14.4%	16.6%	3.1%	20.0%
	Maui	1992	4,956	82.1%	3.8%	6.3%	4.1%	3.7%	0.0%
		1997	6,188	60.3%	3.9%	14.0%	17.6%	2.0%	2.2%
		2003	5,007	77.9%	6.7%	4.7%	7.2%	1.8%	1.7%
		2006	7,265	65.1%	0.8%	11.4%	14.1%	0.5%	8.0%
		2011	7,751	57.3%	7.8%	5.0%	14.8%	5.4%	9.7%
		2016	9,178	52.4%	3.3%	6.8%	18.1%	5.1%	14.3%
		2019	7,963	60.3%	3.3%	10.7%	7.8%	4.6%	13.2%
	Hawai`i	1992	3,563	80.1%	5.4%	4.7%	4.7%	0.0%	5.1%
		1997	5,090	65.3%	4.1%	4.7%	16.4%	3.4%	6.1%
		2003	5,069	69.9%	1.3%	5.0%	18.1%	3.4%	2.3%
		2006	7,659	61.6%	4.5%	7.7%	15.8%	5.4%	5.0%
		2011	6,294	74.1%	4.8%	2.8%	11.7%	1.8%	4.8%
		2016	10,410	48.8%	0.9%	5.0%	16.6%	6.8%	21.8%
		2019	11,402	65.2%	3.2%	4.4%	10.7%	3.3%	13.1%
	Kaua`i	1992	2,017	84.4%	3.6%	8.1%	0.8%	3.2%	0.0%
		1997	2,412	79.3%	2.3%	1.1%	5.3%	2.3%	9.7%
		2003	2,045	77.3%	0.0%	1.7%	12.9%	0.0%	8.1%
		2006	3,177	64.4%	2.0%	9.8%	10.9%	5.7%	7.1%
		2011	3,525	66.5%	1.8%	11.9%	10.6%	3.9%	5.3%
		2016	3,179	65.1%	1.5%	4.4%	15.6%	0.9%	12.4%
		2019	2,305	62.5%	3.7%	4.3%	10.0%	3.5%	15.9%
	State	1992	77,622	66.7%	4.0%	11.6%	12.3%	0.8%	4.6%
		1997	65,818	53.9%	7.3%	10.8%	18.4%	1.4%	8.2%
		2003	50,277	60.4%	7.7%	10.8%	19.1%	2.7%	5.9%
		2006	58,686	48.1%	8.2%	10.8%	24.3%	3.0%	7.7%
		2011	63,697	42.9%	4.6%	11.6%	35.6%	2.5%	2.8%
		2016	89,832	33.0%	4.0%	10.7%	27.4%	2.0%	23.0%
		2019	71,888	45.5%	5.8%	12.4%	14.7%	3.3%	18.3%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

[a] Total Will Move is effective demand households (plan to move, have some idea when they will move, and plan to stay in the State when they move) that want to rent their next unit rather than buy.

Note. Sum of county figures may not equal the State total due to rounding.

[b] Single-family is a single-family detached dwelling unit.

[c] Townhouse is a side by side housing unit that does not meet the definition of single-family.

[d] Condo is an apartment building with five units or more in which each owner owns a unit and holds a joint ownership in common areas with other owners in the building.

[e] Apartment contains residential suites in which each individual unit is leased to different occupants.

[f] Other includes type of units that are not Single-family, Townhouse, Condo, and apartment.

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Table A-17. Preferred Number of Bedrooms, Buyers, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

	County	Year	Total Will Move Buyers[a]	Preferred Number of Bedrooms				
				Studio or One	Two	Three	Four or More	No Preference
PLAN TO BUY	Honolulu	1992	60,724	2.9%	30.5%	43.3%	23.3%	0.0%
		1997	76,663	1.4%	17.6%	49.1%	31.0%	0.8%
		2003	75,482	3.9%	22.3%	46.7%	25.5%	1.6%
		2006	65,495	0.1%	15.1%	41.6%	39.0%	4.2%
		2011	40,483	4.5%	23.6%	37.8%	34.1%	0.0%
		2016	64,168	3.0%	33.4%	41.0%	22.5%	0.1%
		2019	47,643	5.3%	26.7%	43.4%	24.5%	0.4%
	Maui	1992	8,328	0.4%	27.5%	56.9%	15.2%	0.0%
		1997	10,051	6.4%	19.7%	44.5%	28.1%	1.2%
		2003	10,586	4.1%	21.8%	37.7%	36.0%	0.4%
		2006	12,539	1.7%	19.9%	46.0%	31.7%	0.7%
		2011	7,156	1.1%	20.2%	49.1%	29.3%	0.4%
		2016	9,172	1.3%	18.1%	56.1%	23.6%	0.9%
		2019	8,417	1.4%	22.6%	45.8%	29.0%	1.2%
	Hawai`i	1992	12,441	1.1%	25.4%	55.9%	17.3%	0.3%
		1997	10,794	6.2%	22.7%	40.3%	29.0%	1.7%
		2003	13,402	4.0%	18.4%	45.9%	31.7%	0.0%
		2006	15,940	3.1%	17.1%	41.2%	35.4%	3.3%
		2011	8,711	9.5%	29.7%	34.5%	25.3%	1.1%
		2016	11,407	1.3%	22.8%	61.6%	14.3%	0.0%
		2019	9,986	6.0%	24.2%	51.6%	18.2%	0.0%
	Kaua`i	1992	4,513	0.7%	29.3%	48.3%	21.7%	0.0%
		1997	4,016	1.6%	21.9%	51.6%	24.9%	0.0%
		2003	4,381	5.0%	19.5%	37.6%	37.5%	0.4%
		2006	3,879	0.8%	18.5%	46.3%	34.1%	0.3%
		2011	2,046	1.2%	16.5%	49.1%	33.2%	0.0%
		2016	3,040	5.1%	20.5%	53.7%	20.7%	0.0%
		2019	2,253	8.0%	25.4%	47.6%	19.0%	0.0%
	State	1992	86,006	2.3%	29.4%	46.7%	21.6%	0.1%
		1997	101,524	2.5%	18.5%	47.8%	30.3%	0.9%
		2003	103,851	4.0%	21.6%	45.2%	28.0%	1.2%
		2006	97,853	0.8%	16.2%	42.3%	37.3%	3.5%
		2011	58,395	4.7%	23.8%	39.1%	32.1%	0.2%
		2016	87,787	2.7%	30.0%	45.7%	21.5%	0.1%
		2019	68,300	5.0%	25.8%	45.0%	24.0%	0.1%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

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Table A-18. Preferred Number of Bedrooms, Renters, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

	County	Year	Total Will Move Renters[a]	Preferred Number of Bedrooms				
				Studio or One	Two	Three	Four or More	No Preference
PLAN TO RENT	Honolulu	1992	67,086	15.2%	40.0%	35.3%	9.5%	0.0%
		1997	52,128	7.3%	40.2%	32.4%	19.7%	0.4%
		2003	38,156	17.7%	40.6%	28.0%	12.4%	1.3%
		2006	40,585	11.8%	35.1%	33.4%	16.3%	3.5%
		2011	46,396	21.2%	42.8%	29.9%	5.7%	0.4%
		2016	67,065	17.4%	35.9%	34.9%	11.4%	0.4%
		2019	50,218	20.4%	40.8%	25.3%	13.0%	0.4%
	Maui	1992	4,956	6.4%	41.0%	49.0%	1.0%	2.6%
		1997	6,188	17.9%	34.3%	34.8%	12.7%	0.2%
		2003	5,007	9.1%	37.4%	34.0%	18.1%	1.4%
		2006	7,265	7.5%	43.7%	35.9%	11.9%	1.0%
		2011	7,751	11.6%	47.3%	34.8%	6.3%	0.0%
		2016	9,178	11.2%	41.9%	36.9%	8.9%	1.2%
		2019	7,963	11.2%	43.8%	30.5%	13.4%	1.1%
	Hawai`i	1992	3,563	5.1%	43.9%	38.7%	12.3%	0.0%
		1997	5,090	10.7%	31.7%	40.1%	16.8%	0.6%
		2003	5,069	18.0%	35.9%	37.5%	8.6%	0.0%
		2006	7,659	9.3%	31.6%	41.2%	16.6%	1.3%
		2011	6,294	7.6%	37.6%	34.7%	20.1%	0.0%
		2016	10,410	13.3%	37.5%	35.0%	14.3%	0.0%
		2019	11,402	22.0%	40.4%	27.8%	8.7%	1.1%
	Kaua`i	1992	2,017	0.8%	38.1%	47.8%	13.3%	0.0%
		1997	2,412	4.6%	14.7%	63.8%	14.3%	2.6%
		2003	2,045	17.8%	23.7%	44.3%	11.7%	2.5%
		2006	3,177	7.3%	33.3%	41.7%	17.1%	0.5%
		2011	3,525	12.9%	44.6%	31.9%	8.6%	2.1%
		2016	3,179	14.5%	34.7%	39.8%	10.1%	0.9%
		2019	2,305	3.7%	37.7%	41.4%	17.2%	0.0%
	State	1992	77,622	13.8%	40.2%	36.6%	9.2%	0.2%
		1997	65,818	8.5%	38.0%	34.4%	18.6%	0.5%
		2003	50,277	17.7%	40.6%	28.0%	12.4%	1.3%
		2006	58,686	10.7%	35.6%	35.1%	15.8%	2.7%
		2011	63,697	18.3%	42.9%	31.0%	7.4%	0.4%
		2016	89,832	16.2%	36.7%	35.3%	11.4%	0.4%
		2019	71,888	19.0%	41.0%	26.9%	12.6%	0.5%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016, and 2019

Table A-19. Affordable Housing Cost for New Units, Buyers, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

	County	Year	Total Will Move Buyers[b]	Affordable Monthly Housing Cost[a]								
				Less than $200	$200 to $499	$500 to $799	$800 to $1,099	$1,100 to $1,399	$1,400 to $1,699	$1,700 to $1,999	$2,000 to $3,000	More than $3,000
Plan to Buy	Honolulu	1992	60,724	0.9%	1.1%	14.7%	29.9%	10.7%	22.0%	7.7%	5.9%	7.2%
		1997	76,663	0.0%	0.6%	9.3%	21.7%	18.4%	20.7%	11.6%	14.2%	3.4%
		2003	75,482	2.4%	1.3%	4.5%	14.1%	15.5%	17.3%	19.4%	19.1%	6.5%
		2006	65,495	1.8%	3.9%	6.7%	9.3%	9.2%	12.0%	6.0%	21.5%	13.3%
		2011	40,483	0.1%	0.8%	3.1%	7.0%	9.0%	4.3%	8.8%	27.4%	39.5%
		2016	64,168	1.5%	2.5%	5.1%	9.8%	13.5%	14.9%	31.5%	13.0%	8.2%
		2019	47,643	1.8%	3.8%	4.9%	7.1%	10.4%	10.4%	27.1%	19.1%	15.5%
	Maui	1992	8,328	3.1%	5.5%	36.5%	23.6%	12.7%	8.4%	4.7%	4.0%	1.5%
		1997	10,051	1.1%	6.2%	20.5%	30.8%	13.5%	14.6%	5.4%	6.3%	1.6%
		2003	10,586	1.8%	5.9%	11.9%	26.8%	13.4%	12.7%	9.6%	12.1%	5.8%
		2006	12,539	2.0%	2.5%	4.3%	7.9%	9.3%	13.8%	8.7%	28.8%	12.4%
		2011	7,156	0.0%	0.2%	0.6%	7.7%	5.8%	19.1%	5.3%	32.7%	28.8%
		2016	9,172	1.6%	3.0%	5.2%	9.7%	17.9%	8.3%	31.5%	14.0%	8.8%
		2019	8,417	2.7%	2.1%	3.1%	4.5%	9.2%	9.8%	39.4%	17.2%	12.1%
	Hawai`i	1992	12,441	0.9%	3.4%	17.6%	31.0%	22.8%	11.3%	4.9%	5.0%	3.2%
		1997	10,794	0.9%	3.1%	9.6%	25.0%	12.6%	26.0%	9.6%	10.7%	2.5%
		2003	13,402	1.3%	1.7%	7.2%	16.9%	15.2%	15.6%	20.5%	13.8%	7.9%
		2006	15,940	1.4%	3.2%	6.3%	17.8%	8.2%	12.8%	2.3%	18.6%	10.7%
		2011	8,711	1.7%	1.6%	6.8%	10.5%	11.2%	18.3%	6.0%	22.2%	21.6%
		2016	11,407	5.4%	13.9%	9.1%	17.2%	16.7%	7.5%	21.7%	5.2%	3.2%
		2019	9,986	4.1%	15.1%	11.5%	13.3%	18.1%	8.6%	18.9%	7.2%	3.3%
	Kaua`i	1992	4,513	0.0%	1.6%	14.5%	31.3%	23.6%	14.7%	8.5%	4.6%	1.2%
		1997	4,016	1.0%	4.5%	13.1%	28.0%	17.2%	16.6%	9.6%	7.5%	2.4%
		2003	4,381	1.5%	1.2%	5.7%	21.3%	15.8%	22.3%	14.4%	12.6%	5.2%
		2006	3,879	1.4%	2.4%	3.6%	12.9%	12.4%	12.9%	5.4%	20.1%	13.5%
		2011	2,046	2.3%	6.3%	2.1%	11.7%	4.8%	14.7%	9.4%	24.0%	24.8%
		2016	3,040	4.9%	3.6%	9.3%	11.6%	14.5%	10.0%	34.6%	4.6%	6.9%
		2019	2,253	7.4%	7.6%	2.6%	7.1%	10.5%	11.2%	31.2%	18.3%	4.0%
	State	1992	86,006	1.0%	1.9%	17.2%	29.5%	13.4%	18.7%	7.0%	5.5%	5.7%
		1997	101,524	0.3%	1.6%	10.6%	23.2%	17.3%	20.5%	10.7%	12.8%	3.1%
		2003	103,851	2.1%	1.8%	5.6%	16.0%	15.3%	16.8%	18.3%	17.4%	6.5%
		2006	97,853	1.8%	3.5%	6.2%	10.5%	9.2%	12.4%	5.8%	21.9%	12.8%
		2011	58,395	0.4%	1.0%	3.3%	7.8%	8.8%	8.7%	7.9%	27.1%	34.9%
		2016	87,787	2.1%	4.1%	5.8%	10.9%	14.4%	13.0%	30.3%	11.7%	7.6%
		2019	68,300	2.5%	5.3%	5.6%	7.7%	11.3%	10.1%	27.5%	17.1%	13.0%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016, and 2019

[a] Based on self-report from respondents regarding the level of monthly payment they would be able to afford.

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Table A-20. Affordable Housing Cost for New Units, Renters, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

	County	Year	Total Will Move Renters[a]	Affordable Monthly Housing Cost[a]								
				Less than $200	$200 to $499	$500 to $799	$800 to $1,099	$1,100 to $1,399	$1,400 to $1,699	$1,700 to $1,999	$2,000 to $3,000	More than $3,000
Plan to Rent	Honolulu	1992	67,086	1.5%	2.8%	29.6%	35.1%	16.3%	9.6%	2.8%	2.3%	0.0%
		1997	52,128	2.0%	7.5%	26.1%	31.6%	16.7%	10.6%	3.1%	2.4%	0.0%
		2003	38,156	4.4%	10.2%	19.0%	24.9%	11.4%	11.4%	10.3%	5.2%	3.2%
		2006	40,585	0.0%	7.8%	13.6%	21.1%	13.3%	9.5%	8.8%	6.7%	5.0%
		2011	46,396	0.0%	2.2%	14.6%	22.5%	18.7%	12.2%	6.6%	18.5%	4.7%
		2016	67,065	3.3%	5.0%	8.7%	21.9%	12.2%	13.2%	8.9%	20.2%	6.7%
		2019	50,218	6.2%	4.0%	10.5%	16.8%	12.4%	15.7%	14.0%	16.3%	4.1%
	Maui	1992	4,956	0.9%	7.6%	53.2%	29.2%	6.8%	2.2%	0.2%	0.0%	0.0%
		1997	6,188	4.6%	18.7%	41.7%	21.8%	5.1%	4.5%	1.8%	1.9%	0.0%
		2003	5,007	8.0%	11.0%	38.6%	22.2%	9.0%	8.0%	0.0%	1.7%	1.5%
		2006	7,265	0.0%	10.2%	12.9%	19.9%	12.5%	17.3%	5.2%	9.1%	3.6%
		2011	7,751	3.1%	5.2%	8.1%	30.8%	14.3%	18.9%	8.6%	7.2%	3.9%
		2016	9,178	4.3%	4.6%	13.7%	16.0%	17.3%	17.7%	6.3%	16.9%	3.3%
		2019	7,963	4.0%	5.4%	5.9%	10.1%	21.5%	21.1%	9.1%	18.0%	4.9%
	Hawai`i	1992	3,563	0.1%	6.6%	23.8%	32.4%	25.2%	9.7%	1.0%	1.0%	0.0%
		1997	5,090	6.0%	15.5%	26.5%	31.6%	15.3%	2.9%	0.6%	1.7%	0.0%
		2003	5,069	7.8%	5.3%	17.7%	33.2%	10.0%	11.2%	3.8%	11.0%	0.0%
		2006	7,659	0.0%	18.3%	16.5%	19.1%	10.7%	9.9%	5.8%	8.6%	1.6%
		2011	6,294	4.8%	10.5%	21.0%	22.9%	8.1%	8.8%	12.5%	7.6%	3.8%
		2016	10,410	12.3%	8.5%	22.1%	24.4%	5.4%	8.1%	6.0%	10.3%	2.8%
		2019	11,402	8.7%	10.4%	15.7%	25.8%	15.2%	10.5%	3.9%	8.8%	1.1%
	Kaua`i	1992	2,017	1.0%	8.2%	30.3%	21.4%	22.2%	17.0%	0.0%	0.0%	0.0%
		1997	2,412	6.7%	16.2%	43.0%	24.3%	4.4%	3.7%	1.8%	0.0%	0.0%
		2003	2,045	4.2%	2.2%	13.8%	34.9%	15.7%	15.0%	2.5%	11.7%	0.0%
		2006	3,177	0.0%	9.1%	5.2%	17.7%	15.3%	25.0%	4.5%	7.1%	4.9%
		2011	3,525	3.4%	5.3%	8.1%	14.9%	15.7%	16.7%	7.1%	25.9%	2.9%
		2016	3,179	6.6%	2.4%	10.9%	20.9%	12.2%	17.6%	9.2%	11.3%	8.9%
		2019	2,305	0.9%	5.5%	1.4%	16.6%	14.3%	28.3%	6.8%	11.6%	14.7%
	State	1992	77,622	1.4%	3.4%	30.8%	34.2%	16.3%	9.3%	2.5%	2.0%	0.0%
		1997	65,818	2.7%	9.5%	28.2%	30.4%	15.0%	9.2%	2.7%	2.2%	0.0%
		2003	50,277	5.1%	9.5%	20.6%	25.9%	11.2%	11.2%	8.3%	5.7%	2.6%
		2006	58,686	0.0%	9.5%	13.4%	20.5%	13.0%	11.4%	7.8%	7.2%	4.4%
		2011	63,697	1.3%	3.8%	14.1%	23.2%	16.6%	13.0%	7.6%	16.1%	4.3%
		2016	89,832	4.6%	5.3%	10.9%	21.4%	12.0%	13.4%	8.3%	18.3%	5.9%
		2019	71,888	6.1%	5.1%	10.3%	17.2%	14.0%	16.1%	11.8%	15.3%	4.2%

Source: Housing Demand Survey, 1992, 1997, 2003, 2006, 2011, 2016 and 2019

[a] Based on self-report from respondents regarding the level of monthly payment they would be able to afford.

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Table A-21. Preferred Location of New Housing Unit, 2019

Preferred Next Location	County of Residence									
	Honolulu		Maui		Hawaii		Kauai		State	
	Count	Pct.	Count	Pct.	Count	Pct.	Count	Pct.	Count	Pct.
HONOLULU										
PUC	34,449	44.4%	305	2.1%	846	5.1%	117	3.2%	35,717	29.1%
Central O'ahu	15,593	20.1%	195	1.4%	166	1.0%			15,954	13.0%
East Honolulu	6,901	8.9%	64	0.5%					6,965	5.7%
Leeward O'ahu	9,402	12.1%	369	2.6%	401	2.4%	13	0.4%	10,185	8.3%
Windward O'ahu	7,964	10.3%	46	0.3%	208	1.3%			8,218	6.7%
O'ahu , any	147	0.2%	82	0.6%					229	0.2%
HAWAI'I										
South Kona-Ka'ū	25	0.0%	141	1.0%	318	1.9%	48	1.3%	532	0.4%
Puna	367	0.5%	40	0.3%	1,206	7.2%			1,613	1.3%
North & South Hilo	453	0.6%	327	2.3%	5,226	31.4%	33	0.9%	6,039	4.9%
North Hawai'i	107	0.1%			2,780	16.7%			2,887	2.4%
North Kona	921	1.2%			4,844	29.1%	148	4.1%	5,913	4.8%
Waimea (Hawai'i Island)									0	0.0%
Hawai'i Island, any					201	1.2%			201	0.2%
MAUI										
Hana	31	0.0%	115	0.8%			599	16.4%	745	0.6%
Makawao-Pukalani-Kula	365	0.5%	3,564	25.1%					3,929	3.2%
Wailuku-Kahului	83	0.1%	3,179	22.4%	69	0.4%	15	0.4%	3,346	2.7%
Paia-Haiku	134		484	3.4%	59	0.4%			677	0.6%
Kihei-Makena	207	0.3%	2,467	17.4%	65	0.4%	231	6.3%	2,970	2.4%
West Maui			1,975	13.9%			214	5.9%	2,189	1.8%
Molokai	50		120	0.8%					170	0.1%
Lanai			22	0.2%					22	0.0%
Maui, any	122	0.2%	716	5.0%	45	0.3%			883	0.7%
KAUA'I										
Waimea (Kaua'i)							38	1.0%	38	0.0%
Koloa					71	0.4%	428	11.7%	499	0.4%
Lihue	196	0.3%					665	18.2%	861	0.7%
Kawaihau					115	0.7%	449	12.3%	564	0.5%
Hanalei							492	13.5%	492	0.4%
Kaua'i, any					19	0.1%	156	4.3%	175	0.1%
Total	*77,518*	*78.8%*	*14,212*	*81.6%*	*16,639*	*77.8%*	*3,647*	*78.3%*	*122,663*	*83.4%*
Total No Preference	20,807	21.2%	3,196	18.4%	4,745	22.2%	1,008	21.7%	24,500	16.6%
Total Effective Demand Movers	98,325	100.0%	17,408	100.0%	21,384	100.0%	4,655	100.0%	147,163	100.0%

Source: Housing Demand Survey, 2019

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APPENDIX B: DETAILED DATA WORKSHEETS

Table B-1. Home Ownership Rates, 1990-2017

	County				
	Hawai'i	Honolulu	Kaua'i	Maui	State
1990	61.1	52.6	58.6	57.5	53.9
1992	61.4	52.7	59.7	57.4	54.5
1997	63.8	54.2	61.2	57.4	56.1
1999	64.2	54.5	61.3	57.4	56.4
2000	64.5	54.6	61.4	57.4	56.5
2003	66.1	54.9	62.0	58.3	57.2
2004	66.9	57.2	62.9	58.5	59.0
2005	67.2	57.6	64.0	58.6	59.4
2006	67.2	58.9	65.2	61.4	60.7
2007	66.0	56.9	66.6	58.6	58.9
2008	64.8	57.5	63.7	57.8	58.9
2009	65.7	56.0	65.0	58.1	58.1
2010	66.2	57.6	65.0	58.8	59.3
2011	65.9	56.9	63.6	58.3	58.7
2012	65.1	56.4	62.9	58.1	58.2
2013	65.7	55.5	62.6	58.1	57.6
2014	65.8	54.9	62.7	57.3	57.1
2015	66.4	54.4	61.6	57.7	56.9
2016	66.6	55.0	63.3	58.3	57.5
2017	67.0	55.6	63.0	59.3	58.1

Sources: 1990 and 2000, U.S. Census; Honolulu 2003, 2004, ACS; Honolulu, Hawai'i, and Maui Counties from ACS, 2005; ACS 2007-2008 (3-yr Estimate), ACS 2009-2017 (5-yr Estimate) Table B25003; all other estimated by SMS

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Table B-2. Vacancy Rates, by State: 1986 to 2018

	Rental Rate		Homeowner Rate	
	U.S.	Hawai'i	U.S.	Hawai'i
1986	7.7	5.7	1.6	0.8
1987	7.7	6.5	1.7	1.1
1988	7.7	6.3	1.6	0.4
1989	7.4	6.6	1.8	1
1990	7.2	6.6	1.7	0.8
1991	7.4	5.8	1.7	1.4
1992	7.4	5.8	1.5	2.5
1993	7.3	6.8	1.4	3
1994	7.4	7.4	1.5	2
1995	7.6	6.3	1.5	2
1996	7.8	6	1.6	1.4
1997	7.7	7.1	1.6	1.6
1998	7.9	6.9	1.7	1.3
1999	8.1	7.6	1.7	1.8
2000	8	5.3	1.6	0.9
2001	8.4	8.2	1.8	0.8
2002	8.9	7.3	1.7	0.9
2003	9.8	8.9	1.8	1.2
2004	10.2	9.7	1.7	1.3
2005	9.8	5.1	1.9	0.6
2006	9.7	5.5	2.4	1
2007	9.7	6.3	2.7	1.7
2008	10	7.2	2.8	1.7
2009	10.6	9.2	2.6	1.9
2010	10.2	8.1	2.6	1.9
2011	9.5	9.4	2.5	2.2
2012	8.7	10.2	2	2.3
2013	8.3	10.1	2	1.8
2014	7.6	8.3	1.9	1.6
2015	7.1	8.7	1.8	1.5
2016	6.9	10.6	1.7	1.4
2017	7.2	8.7	1.6	1.3
2018	6.9	8.5	1.5	1.7

Source: Homeownership and Vacancy Rate Survey, 1986-2018

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Table B-3. Vacancy Categories, 2009 - 2017

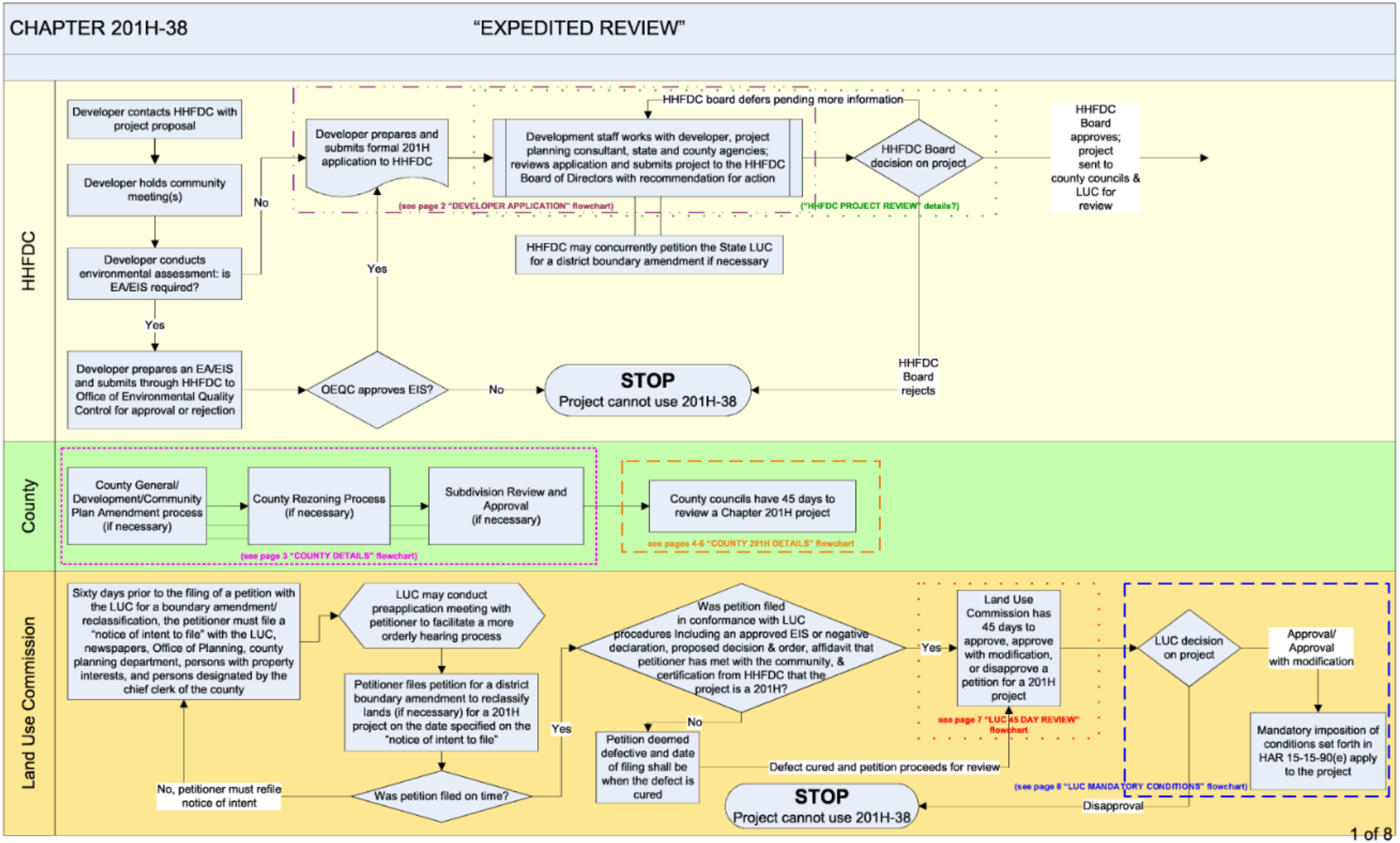
Statewide	Total Housing Units	Occupied Housing Units	Vacant Housing Units	Vacant and Available Units	Total Available Units (Housing Stock)	Current Residence Elsewhere	Seasonal
2009	505,087	437,976	67,111	23,496	461,472	12,633	29,786
2010	512,157	442,267	69,890	26,240	468,507	12,526	29,955
2011	516,394	445,513	70,881	28,163	473,676	11,582	29,564
2012	519,811	447,453	72,358	28,193	475,646	11,310	30,624
2013	522,164	449,771	72,393	27,155	476,926	11,350	31,854
2014	524,852	450,299	74,553	27,221	477,520	11,160	33,054
2015	527,388	450,572	76,816	27,606	478,178	11,526	33,538
2016	530,289	452,030	78,259	27,832	479,862	12,230	34,088
2017	532,880	455,502	77,378	26,458	481,960	11,600	34,148
% chg. from 2014-2017	1.5%	1.2%	3.8%	-2.8%	0.9%	3.9%	3.3%

Source: ACS 2009 – 2017, 5-year estimates, Tables DP04, B25005, B25007

Table B-3 summarizes the current housing vacancy status for the State of Hawai‘i over the years of 2009-2017. The total housing units shows us how many total housing units there are in the State of Hawai‘i, regardless of whether they are occupied or vacant. In 2017, there were 532,880 housing units, versus 524,852 housing units in 2014. This was an increase of 1.5 percent. Of the 532,880 housing units, 455,502 (85.5%) of them are occupied by households and the remaining 77,378 (14.5%) units are vacant. Not all the vacant units are available for sale or rent to the housing market. Vacant and available units excluded vacant units that are not available to residents. In 2017, vacant and available units account for only 34.2 percent of the total vacant housing units in contrast to 36.5 percent in 2014. Summing the vacant and available units with the occupied housing units define the total housing stock. Similar to the finding for 2014, the number of vacant and available housing units in 2017 accounted for about 5.5 percent of the total housing stock.

APPENDIX C: REFERENCED MATERIALS

Table C-1. 201H Process Flowchart



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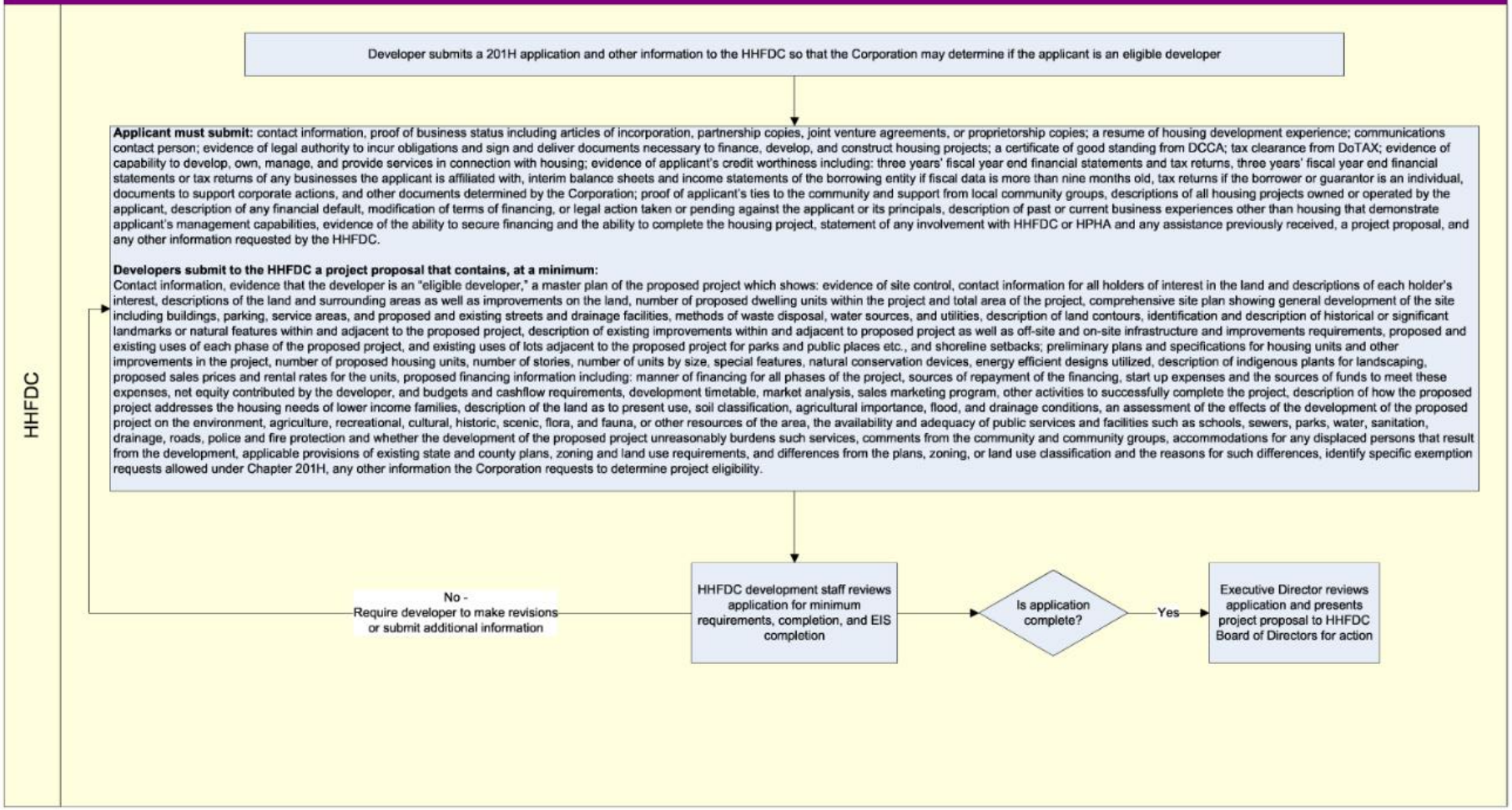
DEVELOPER APPLICATION – ELIGIBLE DEVELOPER, INFORMATION REQUIRED, PROJECT PROPOSAL REQUIREMENTS



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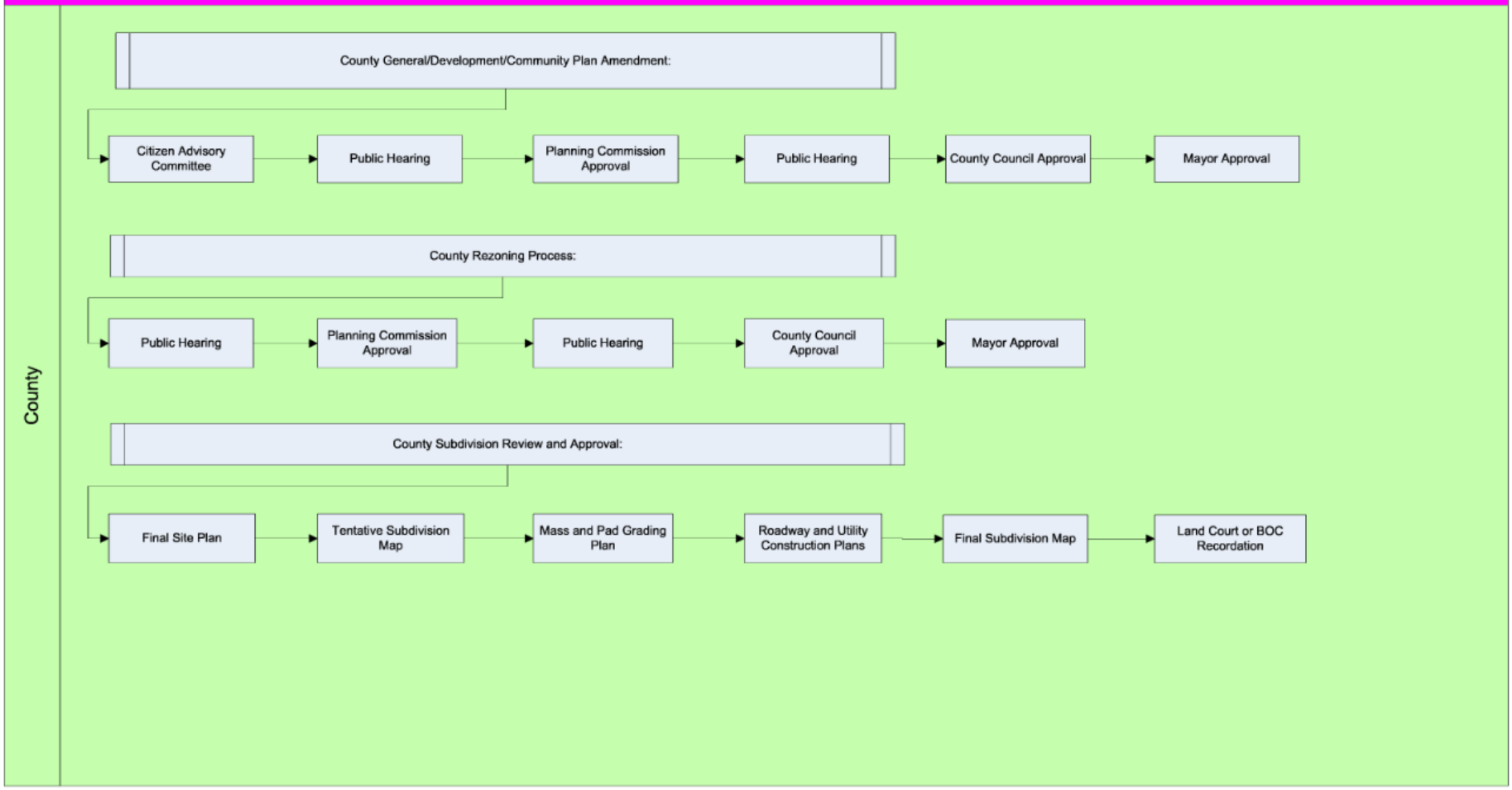
COUNTY DETAILS



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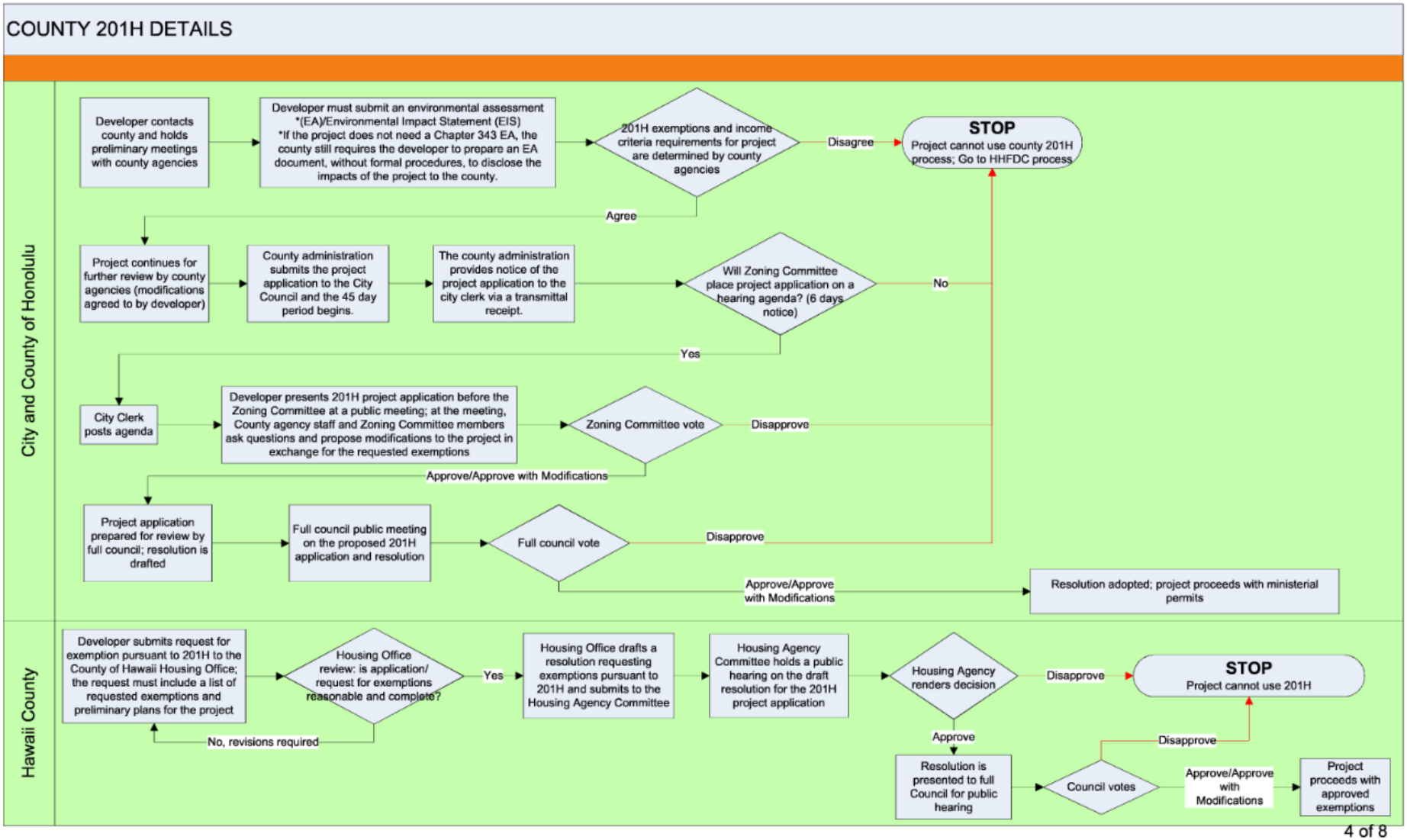
COUNTY 201H DETAILS
City and County of Honolulu
Developer contacts county and holds preliminary meetings with county agencies
Developer must submit an environmental assessment *(EA)/Environmental Impact Statement (EIS) *If the project does not need a Chapter 343 EA, the county still requires the developer to prepare an EA document, without formal procedures, to disclose the impacts of the project to the county.
201H exemptions and income criteria requirements for project are determined by county agencies
Disagree
STOP
Project cannot use county 201H process; Go to HHFDC process
Agree
Project continues for further review by county agencies (modifications agreed to by developer)
County administration submits the project application to the City Council and the 45 day period begins.
The county administration provides notice of the project application to the city clerk via a transmittal receipt.
Will Zoning Committee place project application on a hearing agenda? (6 days notice)
No
Yes
City Clerk posts agenda
Developer presents 201H project application before the Zoning Committee at a public meeting; at the meeting, County agency staff and Zoning Committee members ask questions and propose modifications to the project in exchange for the requested exemptions
Zoning Committee vote
Disapprove
Approve/Approve with Modifications
Project application prepared for review by full council; resolution is drafted
Full council public meeting on the proposed 201H application and resolution
Full council vote
Disapprove
Approve/Approve with Modifications
Resolution adopted; project proceeds with ministerial permits
Hawaii County
Developer submits request for exemption pursuant to 201H to the County of Hawaii Housing Office; the request must include a list of requested exemptions and preliminary plans for the project
Housing Office review: is application/ request for exemptions reasonable and complete?
Yes
No, revisions required
Housing Office drafts a resolution requesting exemptions pursuant to 201H and submits to the Housing Agency Committee
Housing Agency Committee holds a public hearing on the draft resolution for the 201H project application
Housing Agency renders decision
Disapprove
STOP
Project cannot use 201H
Approve
Resolution is presented to full Council for public hearing
Council votes
Disapprove
Approve/Approve with Modifications
Project proceeds with approved exemptions

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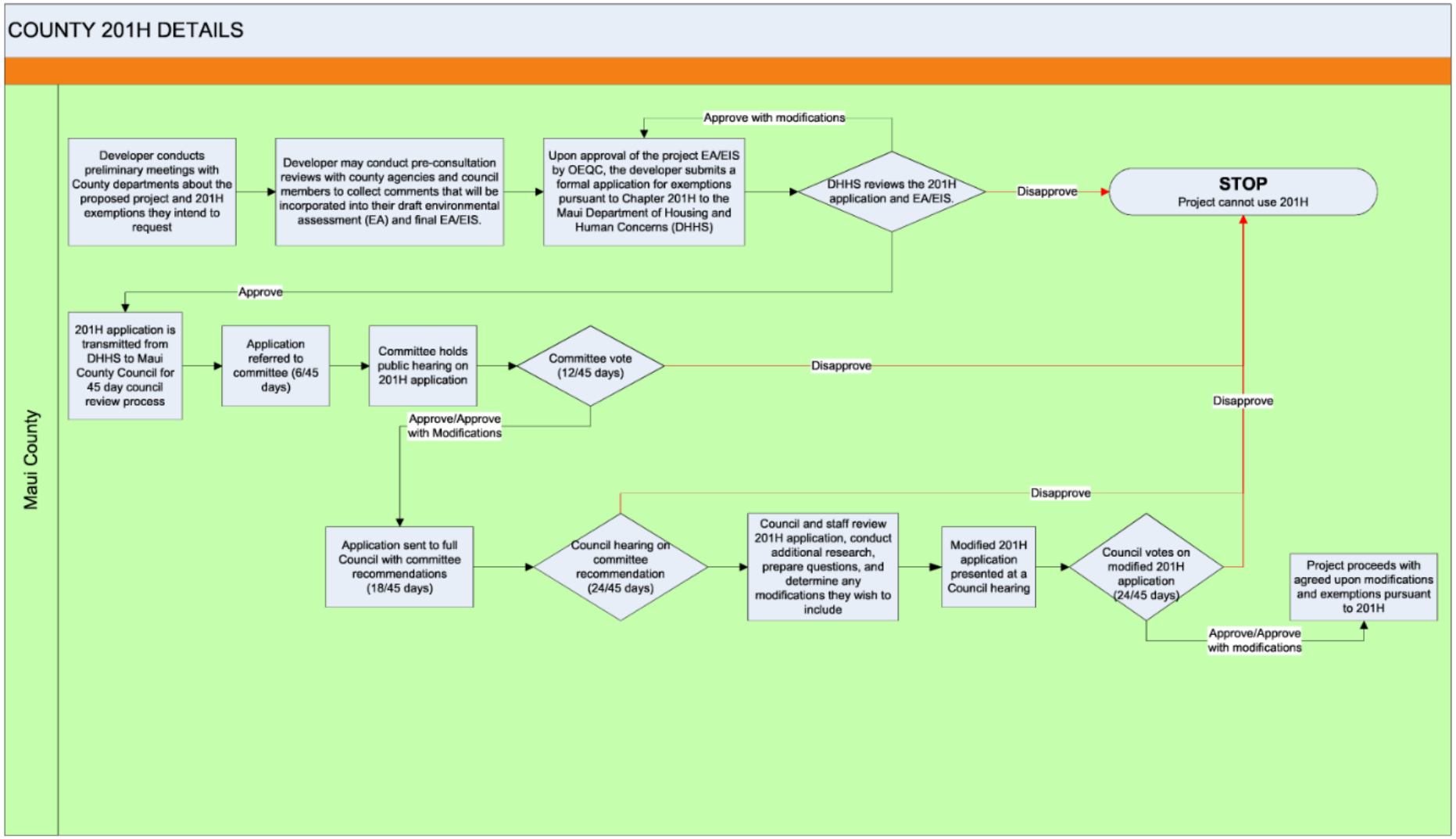
COUNTY 201H DETAILS



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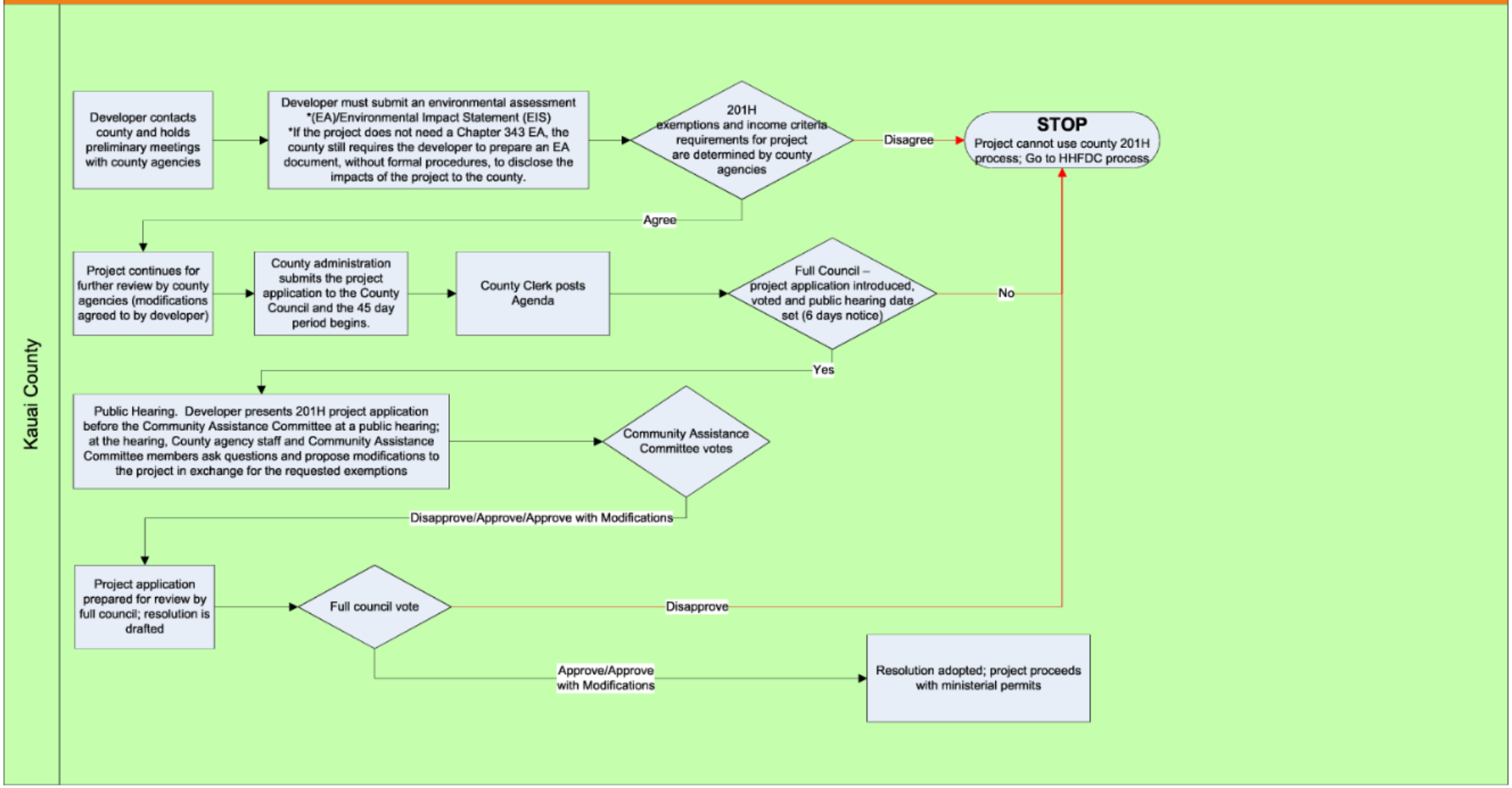
COUNTY 201H DETAILS



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LUC MANDATORY CONDITIONS IMPOSED ON APPROVED 201H PROJECTS

Land Use Commission

If a 201H project is approved or approved with modification by the LUC on the 46th day, the following mandatory conditions apply to the project:

1. Petitioner must develop the reclassified area in substantial compliance with the representations made to the commission; failure to do so may result in a reversal of the decision or reclassification of the land
2. Petitioner is required to provide notice to the commission of any intent to sell, lease, assign, pace in trust or otherwise voluntarily alter the ownership interests in the reclassified area prior to development of the area
3. Petitioner must provide annual reports to the commission updating the status of the project
4. Petitioner must record with Bureau of Conveyances a statement of the required conditions imposed by the LUC and provide a copy of the recorded statement to the commission
5. Petitioner must provide affordable housing opportunities for low, low-moderate, and moderate income residents to the satisfaction of the county in which the reclassified land is located
6. If proposed use of land includes residential, the petitioner shall contribute to the development, funding, and construction of public school facilities as determined by the DOE
7. Petitioner shall participate in funding and construction of adequate wastewater transmission and disposal facilities, on a fair-share basis as determined by the county and HI-DOH
8. Petitioner shall prepare a traffic analysis report to identify traffic impacts and mitigation measures; report to be reviewed by HI-DOT and county transportation departments; petitioner may be required to fund or contribute to transportation improvements
9. Petitioner shall fund and construct on a fair-share basis adequate civil defense measures as determined by State Civil Defense
10. Petitioner shall have a professional archaeologist conduct an archeological inventory survey with significance evaluations and mitigation commitments acceptable to the State Historic Preservation Division (SHPD)
11. Petitioner shall submit and execute a detailed historic preservation mitigation plan to the SHPD to verify in writing that the plan has been successfully executed
12. Petitioner shall stop work if significant archaeological sites are found and may resume when mitigative measures have been implemented to the satisfaction of SHPD
13. Petitioner shall monitor air quality as specified by the HI-DOH
14. Petitioner shall mitigate noise pollution
15. If the approved boundary amendment involves conversion of prime agricultural land, the petitioner shall contribute to the protection of an equivalent amount of prime agricultural lands and related infrastructure via long-term agricultural conservation easements or other ag-related assets as determined by and to the satisfaction of the HI-DOA.
16. Petitioner shall notify all prospective buyers of property of the potential odor, noise, and dust pollution if there are agricultural district lands surrounding the reclassified area
17. Petitioner shall notify all prospective buyers of property of the Hawaii Right to Farm Act limitations on "nuisance" determinations
18. Petitioner shall fund the design and construction of drainage improvements to the satisfaction of State and county agencies
19. Petitioner shall address and provide for solid waste management in cooperation with HI-DOH and county agencies in accordance with a schedule/timeframe satisfactory to HI-DOH
20. To the extent required by the HI-DOH, petitioner shall ensure that nearshore, offshore, and deep ocean waters remain in pristine condition
21. Petitioner shall participate in the funding and construction of adequate water source, storage, and transmission facilities and improvements to accommodate the proposed uses, as coordinated by State and county agencies
22. Petitioner shall protect and preserve existing native Hawaiian gathering rights

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Table C-2. Projecting Housing Supply in Hawai‘i, 2020 through 2050

Projection Model for Housing Supply, State of Hawai‘i, 1990 through 2030

Regression with ARMA Errors

Series: StateHU[, "TotalHU"]

IV: Resident Civilian Population

Regression with ARIMA(1,0,2) errors

Coefficients:

	arf1	ma1	ma2	xreg
Coef.	0.9546	0.8729	0.6656	0.3699
s.e.	0.0526	0.1669	0.1872	0.0132

sigma^2 estimated as 6935269: log likelihood=-270.25

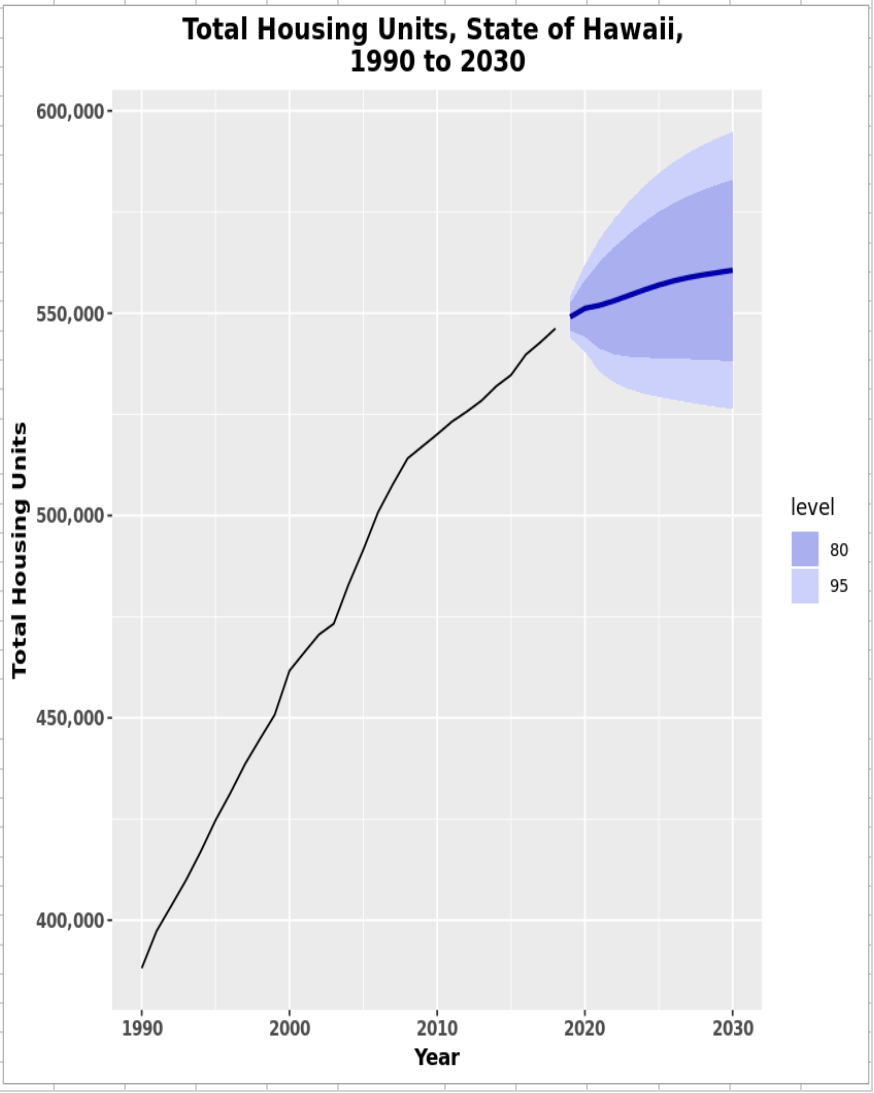
AIC=550.5 AICc=553.11 BIC=557.34

z test of coefficients:

	Est. Std. err.	Estimate	Standard Error	z value	Pr(>|z|)
ar1	0.954632	0.052588	18.1531	<2.2e-16	***
ma1	0.872886	0.166920	5.2294	1.7013-07	***
ma2	0.665565	0.187228	3.5548	0.0003782	***
xreg	0.398690	0.013200	28.0209	<2.2e-16	***

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

	Point Forecast	Lo 80	Hi 80	Lo 95	Hi 95
2019	549,062	545,687	552,437	543,900	554,224
2020	551,197	544,166	558,228	540,445	561,950
2021	551,957	541,205	562,709	535,514	568,400
2022	553,096	539,834	566,359	532,813	573,380
2023	554,417	539,223	569,610	531,180	577,653
2024	555,745	538,984	572,506	530,112	581,379
2025	556,955	538,884	575,026	529,318	584,592
2026	557,980	538,792	577,167	528,635	587,324
2027	558,809	538,658	578,959	527,991	589,627
2028	559,478	538,488	580,469	527,376	591,580
2029	560,054	538,326	581,781	526,825	593,283
2030	560,610	538,233	582,988	526,386	594,834



APPENDIX D: HOUSING AFFORDABILITY ESTIMATES AND RENTS

Table D-1. Housing Affordability Estimates, 2019

	State of Hawai'i	Counties			
		Hawai'i	Honolulu	Kaua'i	Maui
Housing Wage (for 2-bedroom FMR)	$36.82	$25.88	$39.75	$29.44	$32.21
Housing Costs					
2-bedroom fair market rent	$1,914	$1,346	$2,067	$1,531	$1,675
Annual income needed to afford 2BR FMR	$76,577	$53,840	$82,680	$61,240	$67,000
FT jobs at mini wage needed to afford 2BR	3.6	2.6	3.9	2.9	3.2
Area Median Income (AMI)					
Annual AMI	$92,483	$7,010	$99,000	$90,000	$83,800
Monthly rent affordable at AMI	$1,406	$999	$1,483	$1,345	$1,355
30% of AMI	$27,745	$21,030	$29,700	$27,000	$25,140
Monthly rent affordable at 30% of AMI	$694	$526	$743	$675	$629
Renter Households					
Renter households (2010-2014)	190,880	22,112	138,209	8,350	22,158
% of total households (2010-2014)	42%	33%	44%	37%	41%
Estimated hourly mean renter wage (2016)	$16.68	$13.24	$17.65	$14.79	$14.99
Rent affordable with full-time job at mean renter wage	$868	$689	$918	$769	$780
Hours per week at mean renter wage needed to afford 2BR	88	78	90	80	86

Source. National Low-Income Housing Coalition "Out of Reach Report, 2019" Hawai'i data.

Table D-2. Median Rent for SFD and MFD by Number of Bedrooms, State of Hawai'i, 2009-2015

	Single Family Dwellings						Condominiums					Apartments				
Date	1BR	2BR	3BR	4BR	5BR	All SFDs	1BR	2BR	3BR	4BR	All Condos	1BR	2BR	3BR	4BR	All Apts.
Y2009	$1,187	$1,454	$1,933	$2,290	$2,564	$1,885	$1,197	$1,476	$1,950	$2,268	$1,723	$1,135	$1,424	$1,888	$2,241	$1,672
Y2010	$1,186	$1,460	$1,921	$2,307	$2,568	$1,888	$1,161	$1,453	$1,897	$2,264	$1,694	$1,097	$1,397	$1,850	$2,238	$1,646
Y2011	$1,204	$1,488	$1,937	$2,325	$2,585	$1,908	$1,175	$1,468	$1,914	$2,301	$1,714	$1,107	$1,412	$1,868	$2,265	$1,663
Y2012	$1,201	$1,508	$1,954	$2,348	$2,604	$1,923	$1,183	$1,499	$1,939	$2,353	$1,743	$1,130	$1,443	$1,893	$2,323	$1,697
Y2013	$1,183	$1,496	$1,951	$2,356	$2,617	$1,920	$1,194	$1,549	$1,987	$2,384	$1,778	$1,152	$1,489	$1,951	$2,384	$1,744
Y2014	$1,180	$1,521	$1,970	$2,398	$2,651	$1,944	$1,221	$1,602	$2,063	$2,436	$1,831	$1,175	$1,531	$2,029	$2,457	$1,798
Y2015	$1,209	$1,566	$2,056	$2,527	$2,762	$2,024	$1,246	$1,679	$2,156	$2,546	$1,907	$1,183	$1,595	$2,089	$2,539	$1,852
Y2016	$1,271	$1,634	$2,175	$2,664	$2,913	$2,132	$1,316	$1,766	$2,268	$2,665	$2,004	$1,240	$1,684	$2,209	$2,644	$1,945
Y2017	$1,334	$1,709	$2,252	$2,748	$3,030	$2,214	$1,387	$1,815	$2,282	$2,715	$2,050	$1,303	$1,725	$2,236	$2,688	$1,988
Y2018	$1,292	$1,729	$2,295	$2,742	$3,000	$2,212	$1,380	$1,868	$2,268	$2,663	$2,045	$1,276	$1,727	$2,206	$2,631	$1,960
Y2019	$1,282	$1,715	$2,308	$2,790	$3,004	$2,220	$1,367	$1,805	$2,287	$2,637	$2,024	$1,286	$1,730	$2,242	$2,633	$1,973
% change 2011-2016	5.6%	9.8%	12.3%	14.6%	12.7%	11.7%	12.0%	20.3%	18.5%	15.8%	16.9%	12.0%	19.3%	18.3%	16.7%	16.9%
% change 2016-2019	0.9%	5.0%	6.1%	4.7%	3.1%	4.1%	3.8%	2.2%	0.8%	-1.1%	1.0%	3.7%	2.7%	1.5%	-0.4%	1.5%

Source: RentRange®, 2009-2019

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Table D-3. Median Rent for SFD and MFD by Number of Bedrooms, City and County of Honolulu, 2009-2019

	Single Family Dwellings						Condominiums					Apartments				
Date	1BR	2BR	3BR	4BR	5BR	All SFDs	1BR	2BR	3BR	4BR	All Condos	1BR	2BR	3BR	4BR	All Apts.
Y2009	$1,358	$1,726	$2,324	$2,759	$3,038	$2,241	$1,263	$1,671	$2,176	$2,630	$1,935	$1,212	$1,610	$2,120	$2,591	$1,883
Y2010	$1,313	$1,698	$2,295	$2,748	$3,011	$2,213	$1,128	$1,578	$2,001	$2,517	$1,806	$1,088	$1,513	$1,953	$2,488	$1,761
Y2011	$1,329	$1,698	$2,326	$2,794	$3,059	$2,241	$1,237	$1,663	$2,132	$2,623	$1,914	$1,172	$1,598	$2,059	$2,578	$1,852
Y2012	$1,350	$1,730	$2,347	$2,850	$3,155	$2,286	$1,315	$1,713	$2,274	$2,755	$2,014	$1,256	$1,668	$2,218	$2,718	$1,965
Y2013	$1,333	$1,736	$2,356	$2,847	$3,206	$2,296	$1,328	$1,768	$2,323	$2,793	$2,053	$1,286	$1,696	$2,278	$2,781	$2,010
Y2014	$1,340	$1,795	$2,438	$2,960	$3,261	$2,359	$1,384	$1,807	$2,419	$2,852	$2,115	$1,320	$1,739	$2,378	$2,830	$2,067
Y2015	$1,400	$1,885	$2,584	$3,149	$3,399	$2,483	$1,433	$1,931	$2,525	$2,992	$2,220	$1,357	$1,842	$2,453	$2,949	$2,150
Y2016	$1,464	$1,957	$2,683	$3,228	$3,542	$2,575	$1,483	$2,005	$2,564	$3,046	$2,274	$1,396	$1,927	$2,520	$2,967	$2,203
Y2017	$1,535	$2,000	$2,704	$3,268	$3,637	$2,629	$1,522	$1,999	$2,559	$3,061	$2,285	$1,442	$1,927	$2,541	$2,985	$2,224
Y2018	$1,519	$2,013	$2,660	$3,141	$3,522	$2,571	$1,553	$2,018	$2,572	$2,907	$2,262	$1,443	$1,903	$2,507	$2,893	$2,186
Y2019	$1,503	$1,989	$2,673	$3,240	$3,563	$2,593	$1,599	$2,004	$2,638	$2,954	$2,298	$1,456	$1,906	$2,565	$2,929	$2,214
% change 2011-2016	10.2%	15.3%	15.4%	15.5%	15.8%	14.9%	19.8%	20.5%	20.3%	16.1%	18.8%	19.1%	20.6%	22.4%	15.1%	18.9%
% change 2016-2019	2.6%	1.6%	-0.4%	0.4%	0.6%	0.7%	7.8%	0.0%	2.9%	-3.0%	1.1%	4.3%	-1.1%	1.8%	-1.3%	0.5%

Source: RentRange®, 2009-2019.

Table D-4. Median Rent for SFD and MFD by Number of Bedrooms, County of Maui, 2009-2019

	Single Family Dwellings						Condominiums					Apartments				
Date	1BR	2BR	3BR	4BR	5BR	All SFDs	1BR	2BR	3BR	4BR	All Condos	1BR	2BR	3BR	4BR	All Apts.
Y2009	$1,278	$1,525	$2,119	$2,480	$2,796	$2,039	$1,333	$1,590	$2,181	$2,460	$1,891	$1,258	$1,538	$2,123	$2,438	$1,839
Y2010	$1,264	$1,527	$2,088	$2,514	$2,824	$2,043	$1,292	$1,549	$2,138	$2,494	$1,868	$1,221	$1,499	$2,120	$2,468	$1,827
Y2011	$1,290	$1,575	$2,080	$2,480	$2,767	$2,038	$1,248	$1,520	$2,116	$2,463	$1,837	$1,186	$1,474	$2,104	$2,424	$1,797
Y2012	$1,235	$1,550	$2,053	$2,366	$2,620	$1,965	$1,221	$1,545	$2,088	$2,359	$1,803	$1,183	$1,490	$2,057	$2,333	$1,766
Y2013	$1,193	$1,517	$2,002	$2,288	$2,542	$1,908	$1,237	$1,612	$2,128	$2,318	$1,824	$1,205	$1,570	$2,121	$2,351	$1,812
Y2014	$1,202	$1,530	$1,993	$2,295	$2,565	$1,917	$1,263	$1,658	$2,213	$2,365	$1,875	$1,226	$1,596	$2,210	$2,480	$1,878
Y2015	$1,228	$1,552	$2,139	$2,471	$2,720	$2,022	$1,290	$1,752	$2,351	$2,533	$1,981	$1,232	$1,662	$2,307	$2,605	$1,951
Y2016	$1,287	$1,642	$2,323	$2,741	$2,986	$2,196	$1,373	$1,882	$2,509	$2,787	$2,138	$1,306	$1,785	$2,454	$2,801	$2,087
Y2017	$1,364	$1,758	$2,488	$2,920	$3,200	$2,346	$1,479	$1,990	$2,568	$2,903	$2,235	$1,371	$1,842	$2,483	$2,890	$2,146
Y2018	$1,368	$1,797	$2,677	$3,090	$3,395	$2,465	$1,590	$2,081	$2,630	$3,031	$2,333	$1,397	$1,910	$2,520	$2,894	$2,180
Y2019	$1,364	$1,824	$2,708	$3,190	$3,405	$2,498	$1,543	$1,994	$2,685	$2,981	$2,301	$1,454	$1,921	$2,539	$2,869	$2,196
% change 2011-2016	-0.2%	4.2%	11.7%	10.6%	7.9%	7.7%	10.0%	23.8%	18.5%	13.2%	16.4%	10.2%	21.1%	16.7%	15.6%	16.1%
% change 2016-2019	6.0%	11.1%	16.6%	16.4%	14.0%	13.8%	12.4%	5.9%	7.0%	7.0%	7.6%	11.3%	7.6%	3.4%	2.4%	5.2%

Source: RentRange®, 2009-2019.

Table D-5. Median Rent for SFD and MFD by Number of Bedrooms, County of Hawai'i, 2009-2019

	Single Family Dwellings						Condominiums					Apartments				
Date	1BR	2BR	3BR	4BR	5BR	All SFDs	1BR	2BR	3BR	4BR	All Condos	1BR	2BR	3BR	4BR	All Apts.
2009	$1,017	$1,155	$1,594	$1,811	$2,053	$1,526	$1,070	$1,234	$1,642	$1,880	$1,456	$1,003	$1,173	$1,606	$1,819	$1,400
2010	$1,031	$1,183	$1,597	$1,846	$2,085	$1,549	$1,068	$1,254	$1,631	$1,921	$1,469	$992	$1,189	$1,607	$1,852	$1,410
2011	$1,033	$1,208	$1,578	$1,888	$2,135	$1,569	$1,038	$1,242	$1,583	$1,964	$1,456	$962	$1,173	$1,551	$1,887	$1,393
2012	$1,005	$1,192	$1,540	$1,920	$2,178	$1,567	$998	$1,226	$1,499	$1,997	$1,430	$937	$1,154	$1,452	$1,922	$1,366
2013	$967	$1,173	$1,494	$1,946	$2,195	$1,555	$994	$1,257	$1,513	$2,021	$1,446	$944	$1,166	$1,484	$1,961	$1,389
2014	$992	$1,219	$1,527	$2,033	$2,287	$1,612	$1,024	$1,366	$1,608	$2,156	$1,539	$989	$1,245	$1,563	$2,078	$1,469
2015	$1,045	$1,292	$1,599	$2,172	$2,434	$1,708	$1,041	$1,455	$1,694	$2,312	$1,625	$971	$1,332	$1,605	$2,205	$1,528
2016	$1,077	$1,342	$1,697	$2,241	$2,509	$1,773	$1,104	$1,549	$1,860	$2,402	$1,729	$1,017	$1,429	$1,797	$2,312	$1,639
2017	$1,115	$1,448	$1,739	$2,260	$2,556	$1,824	$1,179	$1,579	$1,817	$2,388	$1,741	$1,080	$1,451	$1,805	$2,270	$1,652
2018	$1,000	$1,465	$1,685	$2,155	$2,351	$1,731	$1,085	$1,648	$1,635	$2,249	$1,654	$1,030	$1,419	$1,651	$2,133	$1,558
2019	$1,003	$1,420	$1,701	$2,140	$2,299	$1,713	$1,031	$1,551	$1,570	$2,161	$1,578	$1,034	$1,385	$1,655	$2,113	$1,547
% change 2011-2016	4.2%	11.0%	7.5%	18.7%	17.5%	13.0%	6.4%	24.8%	17.5%	22.3%	18.7%	5.7%	21.8%	15.9%	22.5%	17.6%
% change 2016-2019	-6.9%	5.8%	0.3%	-4.5%	-8.4%	-3.4%	-6.6%	0.1%	-15.6%	-10.0%	-8.7%	1.7%	-3.1%	-7.9%	-8.6%	-5.6%

Source: RentRange®, 2009-2019.

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Table D-6. Median Rent for SFD and MFD by Number of Bedrooms, County of Kaua'i, 2009-2019

	Single Family Dwellings						Condominiums					Apartments				
Date	1BR	2BR	3BR	4BR	5BR	All SFDs	1BR	2BR	3BR	4BR	All Condos	1BR	2BR	3BR	4BR	All Apts.
2009	$1,094	$1,408	$1,697	$2,110	$2,369	$1,735	$1,122	$1,410	$1,800	$2,103	$1,608	$1,066	$1,377	$1,702	$2,116	$1,565
2010	$1,136	$1,433	$1,705	$2,118	$2,350	$1,749	$1,154	$1,430	$1,819	$2,125	$1,632	$1,088	$1,386	$1,722	$2,143	$1,585
2011	$1,164	$1,472	$1,763	$2,138	$2,378	$1,783	$1,177	$1,446	$1,825	$2,155	$1,651	$1,109	$1,402	$1,760	$2,172	$1,611
2012	$1,214	$1,561	$1,875	$2,253	$2,465	$1,874	$1,198	$1,510	$1,894	$2,302	$1,726	$1,145	$1,460	$1,843	$2,320	$1,692
2013	$1,236	$1,560	$1,951	$2,342	$2,524	$1,923	$1,218	$1,558	$1,986	$2,403	$1,791	$1,174	$1,524	$1,920	$2,445	$1,766
2014	$1,185	$1,541	$1,920	$2,305	$2,491	$1,888	$1,215	$1,577	$2,010	$2,373	$1,794	$1,167	$1,542	$1,966	$2,440	$1,779
2015	$1,164	$1,537	$1,900	$2,315	$2,494	$1,882	$1,222	$1,580	$2,052	$2,347	$1,800	$1,173	$1,543	$1,991	$2,398	$1,776
2016	$1,257	$1,596	$1,999	$2,447	$2,616	$1,983	$1,305	$1,629	$2,140	$2,427	$1,875	$1,242	$1,595	$2,067	$2,497	$1,850
2017	$1,320	$1,629	$2,078	$2,542	$2,726	$2,059	$1,368	$1,693	$2,182	$2,508	$1,938	$1,320	$1,682	$2,114	$2,606	$1,930
2018	$1,282	$1,642	$2,158	$2,582	$2,732	$2,079	$1,294	$1,724	$2,235	$2,465	$1,929	$1,236	$1,675	$2,147	$2,604	$1,915
2019	$1,260	$1,629	$2,150	$2,590	$2,750	$2,076	$1,294	$1,673	$2,254	$2,453	$1,918	$1,200	$1,708	$2,208	$2,624	$1,935
% change 2011-2016	7.9%	8.4%	13.4%	14.5%	10.0%	11.2%	10.9%	12.7%	17.3%	12.6%	13.6%	12.0%	13.8%	17.5%	15.0%	14.9%
% change 2016-2019	0.3%	2.1%	7.5%	5.9%	5.1%	4.7%	-0.9%	2.7%	5.3%	1.1%	2.3%	-3.4%	7.1%	6.8%	5.1%	4.6%

Source: RentRange®, 2009-2019.

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Table D-7. Median Sales Price for Single-Family and Condominium Dwellings by County, 2001-2018

	State of Hawai'i	Counties			
		Honolulu	Hawai'i	Kaua'i	Maui
SINGLE FAMILY					
2001	$268,950	$300,000	$187,750	$287,000	$297,500
2002	$310,000	$335,000	$193,500	$327,750	$375,000
2003	$360,000	$385,000	$235,000	$366,375	$440,000
2004	$440,000	$465,000	$290,000	$498,925	$560,000
2005	$560,000	$590,000	$385,000	$639,000	$678,000
2006	$599,133	$630,000	$421,250	$675,000	$690,000
2007	$595,000	$645,000	$395,000	$650,000	$630,137
2008	$560,000	$625,000	$345,000	$615,000	$575,000
2009	$497,750	$580,000	$278,800	$470,000	$498,106
2010	$487,000	$599,950	$260,000	$497,500	$460,000
2011	$470,000	$579,500	$246,450	$455,000	$432,000
2012	$500,000	$625,000	$260,000	$458,750	$470,000
2013	$545,000	$650,000	$295,000	$529,000	$530,000
2014	$575,000	$673,500	$315,000	$533,000	$570,000
2015	$600,000	$700,000	$328,750	$613,500	$580,000
2016	$632,500	$735,000	$330,000	$625,500	$639,000
2017	$660,000	$760,000	$350,000	$660,000	$695,000
2018	$689,000	$790,000	$360,000	$699,500	$710,000
CONDOMINIUM					
2001	$145,000	$132,000	$139,500	$162,500	$197,000
2002	$165,000	$153,000	$165,500	$210,000	$207,000
2003	$185,000	$175,000	$185,000	$287,000	$241,000
2004	$230,000	$208,125	$275,000	$375,000	$310,000
2005	$299,000	$269,000	$369,500	$435,000	$385,000
2006	$339,000	$310,000	$426,498	$405,000	$510,000
2007	$350,000	$325,000	$394,900	$565,000	$550,000
2008	$347,750	$325,000	$370,000	$545,000	$549,500
2009	$319,000	$305,000	$276,550	$330,000	$450,000
2010	$310,000	$305,000	$260,000	$270,000	$377,500
2011	$290,000	$300,000	$212,500	$237,000	$310,000
2012	$317,500	$315,000	$257,750	$290,000	$358,000
2013	$333,000	$332,000	$250,000	$310,000	$374,000
2014	$351,000	$350,000	$280,000	$346,000	$415,000
2015	$363,000	$360,000	$275,000	$360,000	$410,000
2016	$390,000	$390,000	$300,000	$399,000	$415,000
2017	$409,000	$410,000	$312,000	$435,000	$445,000
2018	$430,000	$421,000	$350,000	$461,000	$500,000

Source: The State of Hawai'i Data Book Time Series, Table 21.36

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APPENDIX E: CONSOLIDATED PLAN

Table E-1. Comparison of HHPS 2016 and DBEDT Housing Demand 2015-2025

	Support	Build/Rehab	Financial Assistance	Other Assistance
Hawai'i, Kaua'i and Maui County[162]	Home Ownership	Construct/rehab for-sale housing (1 housing unit) Self-help affordable housing (62 housing units)	Financial assistance to homebuyer (1 household)	
	Low-Income Rentals	Construct new rental units (11 housing units) Rehab rental unit (1 housing unit)	Tenant-based Rental Assistance (TBRA) (100 Households)	
	Homeless		Rapid Rehousing financial assistance (275 households) Prevent homelessness financial assistance (150 persons)	Emergency shelter operations (8,800 persons assisted) Transitioning homeless to permanent housing (1,830 persons) Rapid Rehousing relocation & stabilization services (400 households) Prevent homelessness services (150 persons)
	Special Needs Housing	Construct new special needs rental units (25 housing units) Rehab special needs rental units (3 housing units) Rehab transitional housing units (33 housing units)	HOPWA tenant rental assistance (75 households)	Emergency shelter operations to house victims of DV (3,100 persons assisted) HOPWA supportive services (2,400 persons assisted)
C&C Honolulu[163]	Home Ownership		Financial assistance to homebuyers (50 households) Housing rehab assistance (50 housing units)	
	Low-Income Rentals	Housing development (400 households)		LMI services (50 persons)
	Homeless	Housing First Housing (250 households) Renovate homeless shelters (5 shelters)	Homeless prevention financial assistance (30 persons)	Housing First Services (250 households) Homeless Services (3,750 persons)
	Special Needs Housing			Senior Services (50 persons) Youth Services (50 persons) Domestic Violence Services (50 persons)
Statewide	Home Ownership	1 Affordable for-sale unit 62 self-help affordable housing units	51 financial assistance to homebuyers 50 housing rehab assistance	
	Low-Income Rentals	12 rental housing units 400 Housing development	100 Tenant-based Rental Assistance (TBRA) Households	50 persons LMI services
	Homeless	250 households Housing First 5 homeless shelters renovated	275 Rapid Rehousing households 180 Prevent homeless households	11,900 persons Emergency shelter operations 3,750 Homeless services 1,830 persons and 650 households Transitioning to permanent housing services
	Special Needs Housing		75 HOPWA TBRA households	2,550 persons Other services

[162] Based on State of Hawai'i Consolidated Plan for Program Years 2015 through 2019 (primarily focus on Hawai'i, Kaua'i and Maui Counties)
[163] Based on City & County of Honolulu Consolidated Plan for Program Years 2015 through 2019

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Table E-2. State and Counties Consolidated Plan 2015 Annual Goals

	Support	Build/Rehab	Financial Assistance	Other Assistance
Hawai'i, Kaua'i and Maui County[164]	Home Ownership	Construct new or acquire/rehab of existing affordable for-sale housing (6 housing units) Self-help housing (8 housing units)	Down payment/closing cost assistance and gap loans through homebuyer loan program (1 household)	
	Low-Income Rentals	Construct/rehab affordable rental housing (10 housing units)	Tenant- based rental assistance (20 households)	
	Homeless	Construct/rehab new transitional housing for homeless (32 housing units)	Rapid Rehousing – financial assistance (580 persons) Homeless Prevention – financial assistance to persons/families at risk of homelessness (30 persons)	ES Operations (1,655 persons) Transitioning Homeless to PH (580 persons) Rapid Rehousing – Housing relocation & stabilization services (78 Households)
	Special Needs Housing	Construct/rehab affordable rentals for special needs population – (36 housing units)	HOPWA – financial assistance through tenant-based rental assistance (15 households)	DV ES Operations (620 persons) HOPWA Supportive Services (516 persons)
C&C Honolulu[165]	Home Ownership		Financial assistance to LMI homebuyers (10 housing units) Loan assistance for rehab existing homes (17 housing units)	
	Low-Income Rentals	Construct/rehab affordable and special needs rental housing (52 housing units)	Services to at-risk of homelessness (1,333 persons) Tenant-Based Rental Assistance homeless prevention (497 persons)	Services to benefit LMI (185 persons)
	Homeless	Acquire/rehab building or units to support Housing First	Housing First Tenant-Based Rental Assistance (50 households)	Homeless Services (2,348 persons)
	Special Needs Housing		Tenant-Based Rental Assistance (155 households)	
Statewide	Home Ownership	6 affordable houses 8 self-help	1 housing unit down payment/closing cost assistance 10 housing units financial assistance to LMI 17 housing units loan assistance to rehab existing homes.	
	Low Income Rentals	88 affordable rentals	517 persons tenant based rental assistance	Services (185 persons)
	Homeless	32 transitional housing	835 persons Housing First/Rapid Rehousing Rental financial assistance 3,006 persons Transition services to permanent housing including Rapid Rehousing	4,613 persons and 78 households Homeless Services
	Special Needs Housing	36 affordable rentals 32 transitional housing		DV ES Operations (620 persons) HOPWA Supportive Services (516 persons)

[164] Based on the State of Hawai'i Consolidated Plan for Program Years 2015 through 2019 (primarily focusing on Hawai'i, Kaua'i and Maui Counties)

[165] Based on City & County of Honolulu Consolidated Plan for Program Years 2015 through 2019

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APPENDIX F: MISCELLANEOUS DATA

Table F-1. Federal Funding, 2015-2019

HUD Funding for Hawai'i, 2015 - 2019					
State of Hawai'i	2015	2016	2017	2018	2019
Rental Assistance Programs	$ 187,275,780	$ 195,637,885	$ 207,123,724	$ 217,122,500	$ 215,655,241
Funding suited to construction	$ 32,942,494	$ 24,476,070	$ 26,592,407	$ 32,297,804	$ 31,746,827
Funding For Homeless Programs	$ 15,771,537	$ 13,972,758	$ 19,208,128	$ 20,499,109	$ 21,485,112
Training and Assistance	$ 1,185,523	$ 714,961	$ 1,100,299	$ 1,031,118	$ 723,728
Operations & Administration	$ 41,276,971	$ 41,807,662	$ 43,513,671	$ 49,497,389	$ 48,724,982
Total	$ 278,452,305	$ 276,609,336	$ 297,538,229	$ 320,447,920	$ 318,335,890
HHFDC	2015	2016	2017	2018	2019
Rental Assistance Programs	$ 26,314,996	$ 28,319,433	$ 31,219,086	$ 36,327,591	$ 35,027,814
Funding suited to construction	$ 11,908,628	$ 3,231,395	$ 5,254,034	$ 8,266,908	$ 8,271,969
Funding For Homeless Programs	$ 2,546,255	$ 2,540,284	$ 6,419,805	$ 6,682,776	$ 7,620,529
Training and Assistance	$ 362,505	$ 132,031	$ 378,031	$ 318,000	$ 72,000
Operations & Administration	$ 35,536,034	$ 35,704,725	$ 36,924,771	$ 42,237,598	$ 41,055,764
Total	$ 76,668,418	$ 69,927,868	$ 80,195,727	$ 93,832,873	$ 92,048,076
City and County of Honolulu	2015	2016	2017	2018	2019
Rental Assistance Programs	$ 74,266,345	$ 76,386,876	$ 80,361,961	$ 85,065,454	$ 86,735,713
Funding suited to construction	$ 9,923,929	$ 10,015,754	$ 9,973,579	$ 11,744,572	$ 11,489,541
Funding For Homeless Programs	$ 11,445,806	$ 9,921,468	$ 10,968,985	$ 11,504,436	$ 11,539,867
Training and Assistance	$ 403,680	$ 189,008	$ 189,008	$ 144,000	$ 144,000
Operations & Administration	$ -	$ -	$ -	$ -	$ -
Total	$ 96,039,760	$ 96,513,106	$ 101,493,533	$ 108,458,462	$ 109,909,121
County of Hawai'i	2015	2016	2017	2018	2019
Rental Assistance Programs	$ 18,210,429	$ 21,756,896	$ 22,059,684	$ 23,696,508	$ 24,237,850
Funding suited to construction	$ 2,465,271	$ 2,491,306	$ 2,524,362	$ 2,694,402	$ 2,646,713
Funding For Homeless Programs	$ -	$ -	$ -	$ 189,368	$ 192,961
Training and Assistance	$ 65,652	$ 66,204	$ 66,204	$ 66,937	$ 66,937
Operations & Administration	$ -	$ -	$ -	$ -	$ -
Total	$ 20,741,352	$ 24,314,406	$ 24,650,250	$ 26,647,215	$ 27,144,461
County of Maui	2015	2016	2017	2018	2019
Rental Assistance Programs	$ 23,089,994	$ 24,133,589	$ 28,364,705	$ 28,329,400	$ 28,360,041
Funding suited to construction	$ 1,711,591	$ 1,731,191	$ 1,803,099	$ 1,900,669	$ 1,830,988
Funding For Homeless Programs	$ -	$ -	$ -	$ 152,264	$ 156,876
Training and Assistance	$ 164,442	$ 69,000	$ 24,732	$ 60,973	$ 26,957
Operations & Administration	$ 608,895	$ 635,920	$ 635,920	$ 159,140	$ 159,140
Total	$ 25,574,922	$ 26,569,700	$ 30,828,456	$ 30,602,446	$ 30,534,002
County of Kaua'i	2015	2016	2017	2018	2019
Rental Assistance Programs	$ 7,708,624	$ 7,507,845	$ 8,270,337	$ 8,061,985	$ 8,378,137
Funding suited to construction	$ 705,416	$ 696,697	$ 709,098	$ 708,964	$ 695,071
Funding For Homeless Programs	$ -	$ -	$ -	$ 135,148	$ 66,264
Training and Assistance	$ 133,000	$ 133,000	$ 133,000	$ 132,002	$ 132,002
Operations & Administration	$ -	$ -	$ -	$ -	$ -
Total	$ 8,547,040	$ 8,337,542	$ 9,112,435	$ 9,038,099	$ 9,271,474

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Table F-2. Homeless PIT Counts, State and Counties of Hawai'i, 2009-2019

	Year											Pct. Chg. 2016-2019
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Sheltered	3,268	3,535	3,632	3,726	3,745	3,813	3,666	3,613	3,420	3,055	2,810	-22.2%
O'ahu	2,445	2,797	2,912	3,035	3,091	3,079	2,964	2,767	2,635	2,350	2,052	-25.8%
Hawai'i	321	286	229	170	160	211	220	271	275	200	243	-10.3%
Maui	422	392	394	420	421	445	505	484	395	399	420	-13.2%
Kaua'i	80	60	97	101	73	78	88	91	115	106	95	4.4%
Unsheltered	2,514	2,299	2,556	2,520	2,590	3,105	3,843	4,308	3,800	3,475	3,638	-15.6%
O'ahu	1,193	1,374	1,322	1,318	1,465	1,633	2,162	2,173	2,324	2,145	2,401	10.5%
Hawai'i	615	313	337	447	397	658	1,021	1,123	678	669	447	-60.2%
Maui	581	399	658	454	455	514	632	661	501	474	442	-33.1%
Kaua'i	125	213	239	301	273	300	251	351	297	187	348	-0.9%
Total	5,782	5,834	6,188	6,246	6,335	6,918	7,509	7,921	7,220	6,530	6,448	-18.6%
O'ahu	3,638	4,171	4,234	4,353	4,556	4,712	5,126	4,940	4,959	4,495	4,453	-9.9%
Hawai'i	936	599	566	617	557	869	1,241	1,394	953	869	690	-50.5%
Maui	1,003	791	1,052	874	876	959	1,137	1,145	896	873	862	-24.7%
Kaua'i	205	273	336	402	346	378	339	442	412	293	443	0.2%

Source: State of Hawai'i PIT Counts, 2009-2019.

Table F-3. Homeless Service Clients by County, FY 2008-2017

	Year										Pct. Chg. 2015-2017
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Shelter Programs	6,733	7,501	7,649	8,299	8,507	8,699	8,574	8,844	7,313	8,343	-5.7%
O'ahu	5,075	5,311	5,678	6,211	6,305	6,234	6,039	6,364	5,180	5,731	-9.9%
Hawai'i	420	679	623	622	574	565	746	783	612	688	-12.1%
Maui	1,189	1,116	1,017	1,154	1,297	1,557	1,488	1,345	1,191	1,606	19.4%
Kaua'i	49	395	331	312	331	343	341	352	330	318	-9.7%
Unsheltered	6,777	7,506	7,997	8,266	7,804	7,415	7,608	8,030	6,702	7,284	-9.3%
O'ahu	4,167	4,987	5,368	5,225	4,949	4,837	4,391	4,755	3,950	4,981	4.8%
Hawai'i	763	846	1,092	1,098	1,063	832	1,401	1,514	1,078	756	-50.1%
Maui	1,446	1,293	1,163	1,580	1,407	1,328	1,488	1,384	1,511	1,211	-12.5%
Kaua'i	401	380	374	363	385	418	328	377	163	336	-10.9%
Total	12,445	13,717	14,653	14,200	13,980	13,853	14,282	14,954	14,015	15,627	4.5%
O'ahu	8,412	9,422	10432	9,781	9,650	9,693	9,548	10,257	9,130	10,712	4.4%
Hawai'i	1,204	1,421	1,555	1,422	1,336	1,184	1,770	1,829	1,690	1,444	-21.0%
Maui	2,201	2,204	2,069	2,492	2,358	2,277	2,332	2,206	2,702	2,817	27.7%
Kaua'i	618	670	597	595	636	699	632	662	493	654	-1.2%

Source: HMIS, Homeless Service Utilization Report, 2008-2017.

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APPENDIX G: GLOSSARY

Adequately Housed: Households that are not classified as at-risk for homelessness or hidden homeless.

50% Hawaiian: An individual is 50 percent Hawaiian if they claimed that status in the Housing Demand Survey. Only Respondents were asked to self-report ethnic status. A household is classified as 50 percent Hawaiian if the household includes at least one adult member who is 50 percent or more Hawaiian. Respondents were asked if there were other members of the household who were 50 percent or more Hawaiian. 50 percent Hawaiian households may or may not be DHHL beneficiaries (lessees or applicants).

ADLs: Activities of Daily Living, which include assistance with eating, bathing, getting dressed, getting in or out of bed, or getting to the toilet.

Acceptable Bathrooms: The number of bathrooms that are absolutely required in a new unit. Typically, an acceptable bathroom is a more accurate measure of housing characteristic for planning than first-choice preferred bedrooms.

Acceptable Bedrooms: The number of bedrooms that are absolutely required in a new unit. Typically, an acceptable bedroom is a more accurate measure of housing characteristic for planning than first-choice preferred bedrooms.

Affordable Housing: refers to the generalized concept of housing that residents have enough income and financial resources to be able to purchase or rent.

In the U.S., commonly accepted guideline for housing affordability is a housing cost that does not exceed 30% of a household's gross income. Housing costs considered in this guideline generally include taxes and insurance for owners, and usually include utility costs. When the monthly carrying costs of a home exceed 30–35 percent of household income, then the housing is considered unaffordable for that household.

Affordable Housing Cost: The average dollar amount that a respondent reported they would be able to pay per month for a new housing unit.

Apartment: Refers to apartment building that contains residential suites in which each individual unit is leased to different occupants.

Applicant Only: Households in which at least one adult member has applied for, but has not yet been awarded, land from the Department of Hawaiian Home Lands.

At-Risk for Homelessness: Households in which members would become homeless is less than three months if they suddenly lost their primary source of income. Also called “precariously housed,” these people are three monthly paychecks away from homelessness.

Available Down Payment: The amount of money available to be used as a cash down payment for new housing.

Churn Rate: For any given period, the number of participants who discontinue their use of a service divided by the average number of total participants. Churn rate provides insight into the growth or decline of the subscriber base, as well as the average length of participation in the service.

COL %: Represents the percentage of the column total for an individual cell in a table [Also referred to as **Count Percent** or vertical percent].

Condominium/Condo: An apartment building with five units or more in which each owner owns a unit and holds a joint ownership in common areas with other owners in the building.

Contract Type: Refers to the two major ownership contracts: leasehold and fee simple.

Count Percent: [See **Col %**].

Crowding Ratio: The average number of household members per bedroom per household.

Crowding Ratio by Bedrooms: Number of persons per bedroom. Does not include any rooms other than bedrooms. Households with more than 1.01 persons per bedroom are considered overcrowded [See also **Overcrowded**].

Crowding Ratio by Rooms: Number of persons per room. Includes all rooms other than closets, hallways, utility rooms, foyers, and lanais.

DHHL: Department of Hawaiian Home Lands. This state agency has been responsible for administering the land trust that, in 1921, established about 200,000 acres of land for homesteading by Native Hawaiians. For more information visit: http://www.Hawai'i.gov/dhhl/.

Doubled-up: Housing units that are occupied by two or more families or groups of persons who are not related by birth, marriage, or adoption.

Elderly: A person 62 years of age or older.

Elderly Alone: Single-member households, member is 62 years of age or older.

Elderly Couple: Two-member households, male and female, at least one of which is 62 years of age or older.

Emancipated foster youth: Youth who are aging out of the foster care system.

Equity Gap Funding: The amount of money needed to cover development costs for new or existing affordable rental or mixed-use project or projects for economic development activities directly related to affordable housing. These funds are intended to cover the difference between the projected

Exiting offender: Inmates released from the prison system.

Fee Simple: A fee simple estate is the least limited interest and the most complete and absolute ownership option. It is of indefinite duration, freely transferable and inheritable. The phrase "fee simple absolute" came about because the estate is of potentially infinite duration (thus "fee"); there are no limitations on its inheritability (thus "simple"); and it is indefeasible and cannot be divested (thus "absolute").

Frail elderly: Elderly afflicted with physical or mental disabilities that may interfere with the ability to perform activities of daily living independently (i.e., bathing, dressing, toileting, and meal preparation).

Group quarters: A place where people live or stay, in a group living arrangement, that is owned or managed by an entity or organization providing housing and/or services for the residents. This is not a typical household-type living arrangement. Services may include custodial or medical care as well as other types of assistance, and residency is commonly restricted to those receiving these services. People living in group quarters are usually not related to each other. Group quarters include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, and workers' dormitories.

Guamanian or Chamorro: Ethnicity of persons from Guam or the Mariana Islands region.

HH: Household, person residing in a housing unit for five or more months of the year.

Hidden Homeless: Households in which more than one family share accommodations. These households include families that are doubled up (two or more families or groups of persons who are related by birth, marriage or adoption) and those that are sharing (two or more families or groups whose members are not related by birth, marriage, or adoption).

Homestead Land: Land entrusted by the Hawaiian Homes Commission Act for homesteading by Native Hawaiians. This trust is current administered by the Department of Hawaiian Homelands

Honolulu PUC: Honolulu Primary Urban Center, census tracts 4.01 thru 72, 75.02, and 75.06. For information on Census Tracts visit: http://factfinder.census.gov/home/saff/main.html?_lang=en.

Housing Stock: The total housing stock includes all occupied housing units plus vacant housing units available for sale or rent. The stock excludes vacant units held for use for seasonal use, migratory workers, and "other" vacant units.

HUD: U.S. Department of Housing and Urban Development. HUD's mission is to increase homeownership, support community development, and increase access to affordable housing free from discrimination. To fulfill this mission, HUD will embrace high standards of ethics, management and accountability and forge new partnerships -- particularly with faith-based and community organizations that leverage resources and improve HUD's ability to be effective on the community level. For more information visit: http://www.hud.gov/

HUD Income Guidelines: [See **HUD Income Limits**]

HUD Income Limits: Calculates income as percentage of the HUD median income for a household of a given size in each geographic area. For information on the HUD median income and HUD income limits visit: http://www.huduser.org/datasets/il/il06/BRIEFING-MATERIALs.pdf

HUD Median Income: The median income for a household of a given size in a specific geographic area. For detailed information on the HUD median income and HUD income limits visit: http://www.huduser.org/datasets/il/il06/BRIEFING-MATERIALs.pdf

IADLs: Instrumental Activities for Daily Living which include preparing meals, taking medications, making phone calls, or managing money.

Imputation: A method of replacing missing values for specific variables in survey work. SMS uses a multivariate regression technique to replace missing values with the best estimate of the value for each case, based on reported values of several other related variables. For the Housing Demand Survey, imputation was applied to age and household income.

In-migration: The number of persons who move to Hawai'i from other areas in the United States.

Income: Self-reported household income for all sources, for all employed persons in the household, estimated before taxes, for the calendar year preceding the survey (2005). [See also **Imputation**].

Income as a % of HUD Median: [See **HUD Income Limits**].

Income Per Household Member: Household income divided by the number of persons living in the household.

Intention to Move: The desire to seek a new housing unit at some time in the future. Includes the desire to seek a new ownership unit and the desire to seek a new rental unit.

Leasehold: A less than freehold estate by which a tenant possesses real property. In a lease situation, the tenant possesses a leasehold and the landlord possesses the reversion estate; i.e., when the lease terminates, the property will revert to the landlord.

Lessee and Applicant: A classification of households used in the Native Hawaiian tabulations and reports referring to a household in which at least one member is a DHHL lessee and at least one is an applicant for a land award from DHHL.

Lessee Only: A households occupied by virtue of a Department of Hawaiian Home Lands lease, and having no adult member who is on a DHHL awards applicant list.

Military Housing Privatization Initiative:

In order to house active duty military personnel and their families, the Department of Defense (DoD) has traditionally relied on two methods. In locations where the local housing supply was adequate, the DoD provided military members with a stipend, the Basic Allowance for Housing (BAH), to defray the cost of residential housing near military installations. For those locations where local housing was extremely expensive or unavailable, quarters were built within the military installations to house military personnel and their dependents.

In 1996, a third option was created through the Military Housing Privatization Initiative (MHPI). Because many of the military family housing properties built during the 1950s and 1960s were old and deteriorating, the DoD partnered with private developers to take on the projects since they had the experience and expertise to do the job faster, cheaper, and better. Under the MHPI, private developers renovate or replace old, substandard military housing and, in some instances, build additional units. The developers then become the owners and managers of those properties and the landlords for the military families in those homes. Most important, military families get updated, repaired, or newly constructed homes that will be maintained for the next fifty years.

The MHPI program has made on-base privatized housing part of the local competitive housing market. Privatized housing operates similarly to any other private rental property business and the resulting competition can impact the local rental market and housing demand.

MFD: Multi-Family Dwelling. This includes townhouses, apartments, duplexes, and multiplexes.

Multi-Generation Household with Elderly Members: Households with at least two generations present and at least one member 62 years of age or older.

Non-Hawaiian: A non-Hawaiian individual is a person that reports no Hawaiian ancestry.
O'ahu SF Ads: The number of advertisements for single-family homes in the City & County of Honolulu.

O'ahu SF Rents: The number of advertisements for single-family homes for rent in the City & County of Honolulu.

Occupy without Payment: A type of tenancy in which the respondent occupies a housing unit without payment of cash rent. Includes persons living in rent-free public units, those living in private sector, family-owned units, property managers occupying units in exchange for services, clerics living in church owner units, military dependents in on-base units, etc. Does not include individuals who have paid off their mortgage.

Other Vacant: This category includes units held for settlement of an estate, units held for occupancy by a caretaker or janitor, and units held for personal reasons of the owner.

Out-migration: The number of Hawai'i residents who move to other locations within the United States.

Overcrowded: A household with more than 1.01 persons per room.

Permanent Supportive Housing: Housing with indefinite leasing or rental with appropriate services for persons with higher acuity.

Persons with Alcohol or Other Drug Addictions: Persons whose impairment or disability is due to alcoholism or drug addiction.

Persons with Developmental Disability: Persons with a severe, chronic disability that: (1) is attributable to a mental or physical impairment or combination of mental and physical impairments; (2) is manifested before the individual attains age 22; (3) is likely to continue indefinitely; (4) results in substantial functional limitations in three or more of the following areas of major life activity: self-care; receptive and expressive language; learning; mobility; self-direction; capacity for independent living; economic self-sufficiency; and (5) reflects the individual's need for a combination and sequence of special interdisciplinary, or generic services, individualized supports, or other forms of assistance that are of lifelong or extended duration and are individually planned and coordinated. An individual from birth to age nine, inclusive, who has a substantial developmental delay or specific congenital or acquired condition, may be considered to have a developmental disability without meeting three or more of the criteria described above, if the individual, without services and supports, has a high probability of meeting those criteria later in life.

Persons with Disabilities: Any person who has a physical or mental impairment that substantially limits one or more major life activities; has a record of such impairment; or is regarded as having such impairment. In general, a physical or mental impairment includes hearing, mobility and visual impairments, chronic alcoholism, chronic mental illness, AIDS, AIDS Related Complex, and mental retardation that substantially limit one or more major life activities. Major life activities include walking, talking, hearing, seeing, breathing, learning, performing manual tasks, and caring for oneself.

Persons with HIV/AIDS: A person with the disease of acquired immunodeficiency syndrome or related diseases, or any conditions arising from the etiologic agent for acquired immunodeficiency syndrome, including infection with the human immunodeficiency virus (HIV).

Persons with severe mental illness: Persons with a severe and persistent mental or emotional impairment that seriously limits his or her ability to live independently, and which impairment could be improved by more suitable housing conditions.

PLANNED HOUSING UNITS: Planned housing units are those that are registered or on record at government agencies as being scheduled for completion by a specified date. The official list of such units usually includes permitted or confirmed units, public and private sector. A major interest in planned units relates to their value in estimating future housing supply, often but not always including its relationship to housing demand.

Potential Movers: Households in which the Housing Demand Survey respondent reported an interested in moving to a new unit in the future.

Potential Owners: Households in which the Housing Demand Survey respondent reported intent to own their next home.

Potential Renters: Households in which the Housing Demand Survey respondent reported intent to rent their next unit.

Private Activity Bond: Private activity bonds (PAB) are tax-exempt bonds issued by or on behalf of a local or state government for the purpose of providing special financing benefits for qualified projects. The financing is most often for projects of a private user, and the government generally does not pledge its credit. Private activity bonds are sometimes referred to as conduit bonds.

Precariously Housed: [See **At Risk for Homelessness**]

Preferred Bathrooms: The number of bathrooms desired in a new unit.

Preferred Bedrooms: The number of bedrooms desired in a new unit.

RentRange: RentRange® is a premier provider of rentals data for the United States. We chose this provider because they provide data for 2019, it has been judged superior in provider comparison studies, they have recently updated their data and software models (June 2019), and they were willing to share their historical data file. See comparative evaluation at https://accidentalrental.com/5-best-rent-estimate-tools/.

Seniors: See **Elderly**

Shelter to Income Ratio: The percentage of total monthly household income that is used to pay for shelter costs (rent or mortgage payments). In this study, a shelter-to-income ratio in excess of .30 is considered to indicate some level of financial disadvantages. A shelter-to-income ratio in excess of .40 indicates severe financial disadvantage.

Short-term Rental: A rental period for a residential unit lasting 30 days or less; also called transient rentals.

Single-family Dwelling (SFD): A single-family detached dwelling unit

Sustainable Housing: Housing that designed to be affordable in perpetuity. Affordability is defined as having a sales or rental price below market values – usually at or below the price affordable to a

family with a household income at the median or at specific HUD income qualification levels. Perpetuity is accomplished through limited-equity arrangements incorporated in the deed or lease agreement. [See also: **Sustainable Lease**]

Sustainable Lease: A housing contract that does not include ownership of the land. The perpetuity is accomplished through a lease agreement. Sustainable lease contracts may be used to eliminate high down payments, can allow property to be passed on to heirs, require no ground rent, and typically have a lease term greater than 60 years. [See also **Leasehold** and **Fee Simple**]
Tenancy: There are three types of tenancy: own, rent, and occupy without payment

Townhouse: Side by side housing units that do not meet the definition of single-family dwellings

Unit Condition: Self-reported assessment of the overall condition of the current unit, rated on a scale from excellent to poor.

Unit Type: There several different types of units reported in the Housing Demand Survey including: single-family detached units, duplexes, multiplexes, townhouses, condominiums, and apartments. We note that condominium in an ownership regime and not a unit type. Since nearly all condominiums in Hawai‘i are multifamily units, this classification allows a distinction between condominium apartments and standard apartments in multi-family buildings.

Victims of Domestic Violence: Victims of felony or misdemeanor crimes of violence committed by a current or former spouse of the victim, by a person with whom the victim shares a child in common, by a person who is cohabitating with or has cohabitated with the victim as a spouse, by a person similarly situated to a spouse of the victim under the domestic or family violence laws of the jurisdiction receiving grant monies, or by any other person against an adult or youth victim who is protected from that person's acts under the domestic, violence or family violence laws of the jurisdiction.

APPENDIX H: BIBLIOGRAPHY

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APPENDIX I: COUNTY AND DISTRICTS TABLES – CITY AND COUNTY OF HONOLULU

The tables presented in Appendix I, referred to in prior iterations of the HHPS as the "B Tables" or "County Districts Tables", provide detailed demographic and housing-related data for the County and its districts. This data is taken from the Housing Demand Survey 2016.

Table I-1. Unit Descriptions, County and Districts of Honolulu, 2019

	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
TOTAL HOUSEHOLDS	151,191	47,257	24,318	28,532	41,417	16,348	2,388	311,451
TENANCY								
Own	46.9%	58.1%	79.8%	60.7%	67.4%	59.6%	48.3%	55.8%
Rent	49.9%	37.2%	19.4%	35.3%	31.1%	38.9%	51.7%	41.2%
Other	3.2%	4.7%	.8%	3.9%	1.5%	1.5%	0.0%	3.0%
UNIT TYPE								
Single-family house	38.0%	57.1%	74.0%	60.0%	72.5%	56.7%	59.8%	51.5%
Townhouse	5.9%	14.9%	5.5%	21.5%	7.1%	8.2%	16.0%	9.0%
Condominium	21.1%	5.3%	7.0%	5.9%	6.1%	6.9%	0.0%	13.3%
Duplex/multiplex	4.6%	8.1%	2.4%	6.1%	4.2%	11.5%	0.0%	5.4%
Apartment	26.8%	12.8%	10.4%	6.6%	7.4%	12.6%	14.5%	18.1%
Co-op	.7%	.1%	0.0%	0.0%	.2%	.3%	0.0%	.4%
Other	2.9%	1.7%	.7%	0.0%	2.5%	3.8%	9.8%	2.3%
NUMBER OF BEDROOMS								
Studio or One	28.4%	10.7%	8.3%	8.7%	5.2%	19.6%	22.3%	18.8%
Two	29.8%	23.6%	17.2%	18.0%	18.5%	10.5%	27.3%	24.3%
Three	24.0%	42.4%	40.2%	37.0%	42.9%	37.3%	30.4%	32.5%
Four plus	17.8%	23.2%	34.3%	36.3%	33.4%	32.6%	20.0%	24.5%
NUMBER OF BATHROOMS								
One	45.9%	26.3%	7.3%	15.0%	17.3%	34.1%	30.8%	32.5%
One and one-half	7.8%	10.3%	2.5%	5.9%	5.5%	5.4%	11.4%	7.2%
Two	27.6%	33.5%	53.0%	33.6%	48.7%	32.8%	53.7%	34.3%
Two and one-half	7.1%	18.8%	14.1%	20.0%	9.2%	8.6%	0.0%	10.9%
Three	6.4%	8.6%	12.7%	20.9%	14.0%	9.7%	4.2%	9.7%
Three and one-half	1.7%	.5%	2.4%	1.8%	1.8%	3.7%	0.0%	1.7%
Four or more	3.6%	2.0%	7.9%	2.7%	3.5%	5.7%	0.0%	3.7%

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Table I-2. Households Demographics, County and Districts of Honolulu, 2019

	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
TOTAL HOUSEHOLDS	151,191	47,257	24,318	28,532	41,417	16,348	2,388	311,451
YEARS IN CURRENT UNIT								
Less than 1 year	7.8%	6.8%	2.6%	4.3%	3.9%	6.9%	9.8%	6.3%
1 to 5 years	31.2%	31.8%	24.9%	44.7%	28.9%	40.8%	52.5%	32.4%
6 to 10 years	17.8%	15.0%	13.3%	11.5%	8.8%	10.0%	0.0%	14.7%
More than 10 years	43.2%	46.5%	59.2%	39.4%	58.4%	42.3%	37.7%	46.6%
HOUSEHOLD TYPES								
Single Member	28.6%	15.2%	29.9%	13.5%	16.4%	25.4%	23.9%	23.5%
Married couple, no children	19.0%	20.4%	23.6%	15.7%	30.8%	14.5%	0.0%	20.4%
Parent(s) & children	11.1%	19.7%	7.9%	13.7%	10.9%	16.4%	8.6%	12.6%
Unrelated Roommates	6.8%	5.6%	4.0%	6.0%	3.4%	4.8%	28.2%	5.9%
Multiple Families	34.4%	38.9%	33.4%	50.2%	38.5%	39.0%	39.3%	37.3%
Parent(s) and Adult Child(ren)	0.0%	.2%	0.0%	0.0%	.1%	0.0%	0.0%	.0%
Undetermined	.1%	0.0%	1.3%	.9%	0.0%	0.0%	0.0%	.2%
KIDS IN HOUSEHOLD								
No children	76.3%	64.8%	77.6%	65.6%	73.0%	64.7%	74.2%	72.6%
At least 1 child	23.7%	35.2%	22.4%	34.4%	27.0%	35.3%	25.8%	27.4%
SENIORS IN HOUSEHOLD								
Single Person HH 60+	12.9%	5.8%	20.9%	1.9%	9.3%	11.6%	0.0%	10.8%
2+ HH Members, All 60+	13.0%	10.8%	24.4%	10.0%	19.4%	12.2%	16.3%	14.1%
2+ HH Members, Only Some 60+	23.1%	23.9%	26.0%	25.6%	28.4%	25.4%	20.8%	24.5%
No HH Members 60+	51.0%	59.5%	28.7%	62.5%	42.9%	50.9%	63.0%	50.6%

Source: Housing Demand Survey, 2019.

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Table I-3. Financial Characteristics, County and Districts of Honolulu, 2019

	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
TOTAL HOUSEHOLDS	151,191	47,257	24,318	28,532	41,417	16,348	2,388	311,451
HOUSEHOLD INCOME								
Less than $15,000	9.3%	10.8%	3.2%	4.1%	2.9%	16.7%	32.6%	8.3%
$15,000 to $24,999	6.2%	5.5%	.2%	5.2%	6.3%	6.3%	3.3%	5.5%
$25,000 to $49,999	19.1%	19.6%	8.3%	16.4%	11.5%	20.4%	19.4%	17.1%
$50,000 to $74,999	17.3%	17.2%	16.0%	21.8%	13.3%	18.1%	9.6%	17.1%
$75,000 to $99,999	14.4%	12.5%	16.4%	15.4%	13.6%	13.9%	0.0%	14.2%
More than $100,000	33.8%	34.3%	55.8%	37.1%	52.3%	24.6%	35.1%	37.9%
HUD INCOME LEVELS								
30% or less	17.7%	22.1%	4.3%	11.5%	10.4%	29.9%	23.3%	16.5%
30-50%	15.4%	15.4%	8.5%	13.9%	9.0%	16.9%	12.5%	13.9%
50-80%	19.6%	19.2%	19.4%	25.7%	16.8%	21.6%	14.8%	19.8%
80-120%	13.9%	9.9%	7.6%	14.8%	14.6%	5.1%	6.5%	12.5%
120-140%	9.2%	6.7%	10.5%	6.8%	11.3%	13.1%	0.0%	9.1%
Over 140%	24.2%	26.6%	49.7%	27.2%	37.9%	13.3%	42.9%	28.2%
SHELTER-TO-INCOME RATIO								
No shelter cost	15.6%	21.6%	32.2%	11.4%	12.5%	15.2%	22.7%	17.0%
Under 30%	45.4%	32.9%	44.9%	46.0%	50.6%	41.1%	56.7%	44.1%
30-40%	10.4%	8.6%	7.9%	9.8%	8.9%	11.8%	3.8%	9.7%
Over 40%	23.8%	28.2%	10.3%	26.0%	19.5%	28.2%	0.0%	23.1%
Not enough info	4.8%	8.7%	4.7%	6.8%	8.5%	3.7%	16.7%	6.1%

Source: Housing Demand Survey, 2019.

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Table I-4. Doubling Up, Crowding, and Hidden Homeless, County and Districts of Honolulu, 2019

	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
TOTAL HOUSEHOLDS	151,191	47,257	24,318	28,532	41,417	16,348	2,388	311,451
HH THAT ARE DOUBLED UP								
No	88.4%	88.7%	82.4%	80.6%	86.2%	83.7%	89.3%	86.7%
Yes	11.6%	11.3%	17.6%	19.4%	13.8%	16.3%	10.7%	13.3%
PERSON PER BEDROOM								
Less than 2 persons per bedroom	82.0%	87.4%	96.8%	87.2%	91.5%	83.6%	86.3%	85.9%
More than 2 or more persons per bedroom	18.0%	12.6%	3.2%	12.8%	8.5%	16.4%	13.7%	14.1%
HH THAT ARE CROWDED, DOUBLED UP, OR BOTH								
None of these	75.4%	80.6%	80.7%	71.2%	80.3%	73.7%	89.3%	76.9%
Crowded, Doubled Up, or Both	24.6%	19.4%	19.3%	28.8%	19.7%	26.3%	10.7%	23.1%
HIDDEN HOMELESS AND AT RISK OF HOMELESSNESS								
At Risk for Homelessness	9.6%	9.5%	3.7%	5.7%	3.8%	13.0%	23.3%	8.3%
Hidden Homeless	16.1%	20.2%	19.8%	20.4%	20.5%	27.3%	0.0%	18.4%
At Risk and Includes Hidden Homeless	2.6%	5.3%	0.0%	2.5%	2.0%	8.8%	0.0%	3.0%
Has Adequate Housing	71.7%	65.0%	76.5%	71.4%	73.8%	51.0%	76.7%	70.3%

Source: Housing Demand Survey, 2019.

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Table I-5. Intention to Move, County and Districts of Honolulu, 2019

	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
TOTAL HOUSEHOLDS	151,191	47,257	24,318	28,532	41,417	16,348	2,388	311,451
WANT TO MOVE								
Yes	44.3%	50.3%	28.6%	48.7%	41.1%	37.6%	31.1%	43.5%
No	55.7%	49.7%	71.4%	51.3%	58.9%	62.4%	68.9%	56.5%
FINAL DEMAND MOVERS	66,959	23,749	6,952	13,903	17,042	6,144	742	135
SOONEST WILL MOVE								
in one year	26.7%	38.2%	16.7%	28.3%	18.6%	37.0%	0.0%	27.7%
in two years	31.6%	24.7%	11.3%	25.4%	32.8%	30.1%	59.2%	29.0%
3 to 5 years	25.2%	16.6%	32.5%	28.7%	23.2%	18.6%	20.0%	23.8%
more than 5 years	16.5%	20.4%	39.5%	17.7%	25.5%	14.3%	20.8%	19.5%
Not sure when	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PLANNED NEXT LOCATION								
Moving in Hawai'i or Not Sure	76.5%	70.9%	80.5%	65.2%	74.5%	71.3%	51.4%	73.9%
Moving Out-of-State	23.5%	29.1%	19.5%	34.8%	25.5%	28.7%	48.6%	26.1%
EFFECTIVE DEMAND MOVERS	51,239	16,840	5,593	9,067	12,703	4,379	382	100,203

Source: Housing Demand Survey, 2019

[a] Final Demand Movers are those who will move and have an idea about the time frame of their move.

[b] Effective Demand Movers are those who will move, have an idea about the time frame of their move, and plan to remain in the State of Hawai'i when they move.

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Table I-6. Mover Tenancy Preferences, County and Districts of Honolulu, 2019

	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
EFFECTIVE DEMAND MOVERS	51,239	16,840	5,593	9,067	12,703	4,379	382	100,203
PLANNED NEXT TENANCY								
Own	35.8%	44.4%	83.8%	42.2%	58.5%	54.6%	32.8%	44.0%
Rent	64.2%	55.6%	16.2%	57.8%	41.5%	45.4%	67.2%	56.0%
CERTAIN TO BUY								
certain to Buy	66.2%	85.5%	85.7%	86.1%	54.8%	87.3%	100.0%	71.4%
Might Have to Rent	23.5%	9.3%	14.3%	10.3%	31.5%	12.7%	0.0%	20.2%
Not Sure	10.3%	5.2%	0.0%	3.6%	13.7%	0.0%	0.0%	8.3%
WOULD BUY IF AFFORDABLE								
Yes	77.4%	75.3%	60.1%	44.3%	51.9%	63.8%	0.0%	69.5%
No	15.9%	13.2%	39.9%	36.5%	43.2%	32.7%	0.0%	21.9%
Not Sure	6.8%	11.5%	0.0%	19.2%	4.9%	3.5%	100.0%	8.6%

Source: Hawai'i Demand Survey, 2019
Base for Preferred Next Tenancy is all effective demand households.
Base for Certain to Buy is all effective demand households that prefer to purchase their next home.
Base for Would Buy If Affordable is all effective demand households that prefer to rent their next home.

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Table I-7. Buyer Unit Preferences, County and Districts of Honolulu, 2019

	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
TOTAL BUYER HOUSEHOLDS	31,070	8,586	4,864	7,431	9,667	2,522	700	64,840
PREFERRED UNIT TYPE								
SFD	46.8%	63.0%	67.6%	79.3%	58.1%	59.8%	100.0%	57.0%
Townhouse	7.3%	4.7%	.9%	8.5%	5.3%	7.8%	0.0%	6.3%
Condo	30.1%	16.8%	21.1%	4.1%	17.9%	18.3%	0.0%	22.1%
Apt	6.5%	5.6%	3.4%	0.0%	10.6%	7.8%	0.0%	6.0%
Other	0.0%	4.5%	0.0%	0.0%	0.0%	3.7%	0.0%	.7%
DK	9.2%	5.4%	6.9%	8.2%	8.1%	2.6%	0.0%	7.9%
PREFERRED NUMBER OF BEDROOMS								
0 - None - studio	.5%	0.0%	4.0%	0.0%	0.0%	0.0%	0.0%	.5%
1 - One	5.5%	4.1%	2.7%	1.0%	7.4%	0.0%	0.0%	4.6%
2 - Two	35.9%	19.8%	2.9%	15.1%	25.2%	38.9%	93.1%	28.0%
3 - Three	37.0%	41.7%	66.3%	48.0%	44.4%	15.5%	6.9%	41.1%
4 - Four	15.6%	24.4%	17.1%	30.7%	15.7%	31.6%	0.0%	19.1%
5 - Five or more	5.5%	10.0%	7.1%	5.1%	7.2%	14.1%	0.0%	6.7%
MINIMUM ACCEPTABLE BEDROOMS								
0 - None - studio	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.9%
1 - One	4.4%	13.6%	5.9%	4.8%	4.5%	0.0%	0.0%	5.8%
2 - Two	53.2%	45.6%	65.6%	47.2%	57.7%	37.9%	100.0%	52.6%
3 - Three	31.3%	33.3%	21.8%	42.2%	30.4%	40.5%	0.0%	32.3%
4 - Four	8.8%	7.5%	6.8%	5.8%	7.4%	18.7%	0.0%	8.1%
5 - Five or more	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	.1%
PREFERRED NUMBER OF BATHROOMS								
1 - One	6.6%	6.0%	2.9%	.8%	7.4%	18.3%	0.0%	6.1%
2 - One and one-half	13.5%	6.3%	2.7%	8.8%	4.2%	3.4%	0.0%	9.3%
3 - Two	41.4%	48.5%	46.7%	33.4%	46.2%	51.6%	93.1%	43.5%
4 - Two and one-half	20.8%	19.7%	21.2%	30.0%	21.4%	22.3%	6.9%	21.7%
5 - Three	12.0%	16.7%	19.9%	23.5%	11.2%	2.9%	0.0%	13.9%
6 - Three and one-half	4.0%	1.8%	2.8%	1.3%	5.1%	0.0%	0.0%	3.3%
7 - Four or more	1.7%	1.1%	3.7%	2.3%	4.4%	1.4%	0.0%	2.2%
MINIMUM ACCEPTABLE BATHROOMS								
1 - One	25.6%	27.0%	32.9%	10.8%	22.9%	9.8%	29.8%	23.6%
2 - One and one-half	25.4%	25.7%	14.4%	26.3%	18.8%	37.3%	0.0%	23.7%
3 - Two	37.5%	32.4%	45.8%	44.8%	48.9%	41.1%	70.2%	40.7%
4 - Two and one-half	7.0%	9.7%	6.8%	16.4%	6.2%	1.8%	0.0%	8.1%
5 - Three	3.8%	3.4%	0.0%	0.0%	3.1%	9.9%	0.0%	3.0%
6 - Three and one-half	.7%	1.8%	0.0%	.8%	0.0%	0.0%	0.0%	.7%
7 - Four or more	0.0%	0.0%	0.0%	.8%	0.0%	0.0%	0.0%	.1%

Source: Hawai'i Demand Survey, 2019

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Table I-8. Renter Unit Preferences, County and Districts of Honolulu, 2019

	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
TOTAL RENTER HOUSEHOLDS	27,370	7,539	2,697	4,452	5,624	1,935	324	49,941
PREFERRED UNIT TYPE								
SFD	19.8%	39.3%	1.5%	26.8%	23.2%	39.9%	0.0%	23.4%
Townhouse	6.2%	20.4%	35.9%	19.8%	2.9%	13.6%	0.0%	11.0%
Condo	14.5%	2.1%	6.8%	9.6%	7.2%	0.0%	0.0%	10.3%
Apt	34.5%	30.5%	40.4%	33.2%	15.5%	36.9%	100.0%	32.5%
Other	3.1%	1.3%	0.0%	0.0%	28.9%	0.0%	0.0%	5.1%
DK	21.9%	6.4%	15.4%	10.5%	22.3%	9.6%	0.0%	17.6%
PREFERRED NUMBER OF BEDROOMS								
0 - None - studio	.9%	2.1%	0.0%	7.8%	0.0%	9.2%	0.0%	1.9%
1 - One	23.7%	15.9%	10.2%	3.9%	32.4%	10.5%	72.0%	20.8%
2 - Two	44.1%	40.3%	63.9%	38.9%	34.3%	28.6%	0.0%	42.2%
3 - Three	20.8%	27.4%	21.2%	38.6%	18.7%	39.7%	28.0%	23.9%
4 - Four	8.2%	10.1%	4.7%	6.3%	13.0%	6.3%	0.0%	8.5%
5 - Five or more	2.3%	4.2%	0.0%	4.6%	1.6%	5.7%	0.0%	2.7%
MINIMUM ACCEPTABLE BEDROOMS								
0 - None - studio	3.3%	1.9%	0.0%	0.0%	1.6%	0.0%	100.0%	2.6%
1 - One	17.6%	2.2%	0.0%	7.6%	2.9%	27.1%	0.0%	11.8%
2 - Two	50.9%	77.7%	58.4%	77.8%	64.9%	55.3%	0.0%	60.8%
3 - Three	22.0%	13.8%	41.6%	14.6%	30.6%	10.2%	0.0%	20.5%
4 - Four	6.2%	4.5%	0.0%	0.0%	0.0%	7.4%	0.0%	4.2%
5 - Five or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PREFERRED NUMBER OF BATHROOMS								
1 - One	28.6%	25.2%	10.2%	10.1%	33.0%	13.3%	72.0%	25.6%
2 - One and one-half	20.4%	16.7%	9.9%	28.1%	32.7%	45.7%	0.0%	22.2%
3 - Two	39.6%	39.8%	71.0%	44.4%	25.9%	21.8%	0.0%	39.3%
4 - Two and one-half	8.7%	10.6%	8.9%	4.2%	6.2%	12.7%	28.0%	8.6%
5 - Three	2.1%	5.3%	0.0%	7.9%	1.3%	4.9%	0.0%	3.0%
6 - Three and one-half	.4%	2.4%	0.0%	4.1%	0.0%	0.0%	0.0%	1.0%
7 - Four or more	.1%	0.0%	0.0%	1.3%	.9%	1.6%	0.0%	.4%
MINIMUM ACCEPTABLE BATHROOMS								
1 - One	45.3%	51.3%	8.5%	37.0%	38.2%	22.7%	100.0%	41.4%
2 - One and one-half	35.1%	22.1%	5.8%	18.3%	32.6%	29.7%	0.0%	28.3%
3 - Two	18.9%	23.4%	85.6%	28.9%	29.1%	43.0%	0.0%	27.6%
4 - Two and one-half	.3%	0.0%	0.0%	15.7%	0.0%	4.6%	0.0%	2.0%
5 - Three	.4%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	.8%
6 - Three and one-half	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7 - Four or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Hawai'i Demand Survey, 2019

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Base for Total Renter Households are effective demand households who plan to rent.

Table I-9. Preferred Next Location, BUYERS, County and Districts of Honolulu, 2019

	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
PREFERRED LOCATION OF NEXT UNIT - BUYERS								
Not in designated districts	0.4%	4.5%	0.0%	9.5%	.0%	0.0%	0.0%	2.2%
Primary Urban Center	41.8%	15.9%	37.9%	20.9%	27.3%	63.1%	100.0%	33.8%
Central O'ahu	15.3%	10.1%	35.2%	7.1%	5.3%	16.4%	0.0%	13.1%
East Honolulu	9.1%	7.0%	0.0%	8.1%	2.8%	0.0%	0.0%	6.7%
Ewa	19.4%	9.9%	28.7%	5.7%	2.3%	0.0%	0.0%	13.2%
Koolauloa-Koolaupoko	13.7%	11.4%	16.5%	11.9%	6.1%	0.0%	0.0%	11.6%
Rural Oahu	1.2%	7.0%	9.6%	0.0%	0.9%	0.0%	0.0%	2.3%
Oahu-district unknown	6.0%	6.8%	0.0%	0.0%	0.0%	.0%	0.0%	3.6%
South Kona to Ka'u	2.3%	0.0%	0.0%	.0%	2.5%	4.7%	0.0%	1.6%
Puna	1.7%	5.5%	0.0%	1.0%	4.4%	.0%	0.0%	2.4%
North & South Hilo	3.3%	17.1%	2.8%	14.4%	6.8%	12.1%	0.0%	7.6%
North Hawai'i	7.2%	5.7%	1.7%	0.0%	3.8%	6.1%	0.0%	4.9%
North Kona	2.9%	11.9%	9.8%	0.0%	15.0%	32.1%	0.0%	7.1%
Hawaii-district unknown	1.7%	5.7%	7.0%	0.0%	4.3%	6.1%	0.0%	2.9%
Hana	3.6%	0.0%	0.0%	1.2%	3.2%	0.0%	0.0%	2.3%
Makawao-Pukalani-Kula	4.8%	8.7%	0.0%	17.1%	8.5%	0.0%	0.0%	7.2%
Wailuku-Kahului	7.5%	7.7%	26.0%	32.7%	9.5%	0.0%	0.0%	12.5%
Pa'ia-Haiku	0.4%	3.6%	0.0%	7.6%	13.0%	.0%	0.0%	3.8%
Kihei-Makena	0.3%	6.6%	4.3%	8.8%	6.9%	0.0%	0.0%	3.7%
West Maui	5.0%	3.8%	0.0%	6.5%	13.3%	0.0%	0.0%	5.8%
Moloka'i	4.4%	.0%	0.0%	1.2%	6.7%	0.0%	0.0%	3.2%
Lāna'i	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.7%
Maui-district unknown	5.8%	8.7%	0.0%	4.8%	21.0%	6.1%	0.0%	8.0%
Waimea	.0%	.0%	0.0%	0.0%	.0%	0.0%	0.0%	.0%
Hanapepe-Eleele	1.4%	.0%	0.0%	0.0%	.0%	0.0%	0.0%	.6%
Koloa-Poipu-Kalaheo	1.9%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%
Lihue	1.1%	0.0%	11.1%	1.9%	0.0%	.0%	0.0%	1.5%
East Kauai	2.5%	0.9%	0.0%	1.9%	.0%	0.0%	0.0%	1.5%
North Shore Kauai	3.4%	7.4%	0.0%	0.0%	4.6%	0.0%	0.0%	3.3%
Kauai-district unknown	1.6%	0.0%	8.1%	0.0%	0.0%	0.0%	0.0%	1.3%
Out-of-State Resident	1.4%	1.2%	0.0%	2.0%	6.0%	0.0%	0.0%	2.0%
Refused	2.6%	1.2%	0.0%	.0%	2.0%	6.1%	0.0%	1.9%
Total Effective Demand Buyers	23,452	6,872	3,088	5,153	7,328	1,702	49	47,643

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Table I-9. Preferred Next Location, RENTERS, County and Districts of Honolulu, 2019

Table I-9. Preferred Next Location, BUYERS, County and Districts of Honolulu, 2019	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
PREFERRED LOCATION OF NEXT UNIT								
Not in designated districts	1.4%	5.0%	0.0%	1.9%	.0%	0.0%	0.0%	1.8%
Primary Urban Center	40.4%	47.0%	42.1%	30.6%	28.3%	0.0%	0.0%	37.5%
Central O'ahu	10.7%	5.5%	50.7%	0.0%	14.0%	21.4%	0.0%	10.8%
East Honolulu	4.4%	1.5%	0.0%	4.6%	3.6%	0.0%	0.0%	3.5%
Ewa	5.7%	9.1%	50.7%	0.0%	8.8%	21.4%	0.0%	8.0%
Koolauloa-Koolaupoko	9.9%	1.2%	0.0%	23.7%	2.6%	6.3%	0.0%	7.6%
Rural Oahu	3.2%	7.6%	50.7%	0.0%	0.0%	0.0%	0.0%	4.4%
Oahu-district unknown	3.8%	8.0%	0.0%	0.0%	1.6%	.0%	0.0%	3.7%
South Kona to Ka'u	1.3%	0.0%	0.0%	.0%	1.5%	5.5%	0.0%	1.1%
Puna	2.1%	5.2%	0.0%	4.3%	1.1%	.0%	0.0%	2.5%
North & South Hilo	8.6%	0.0%	0.0%	0.0%	19.2%	45.3%	0.0%	8.8%
North Hawai'i	0.0%	5.2%	0.0%	2.4%	1.6%	9.5%	0.0%	1.6%
North Kona	4.9%	4.1%	0.0%	0.0%	3.0%	0.0%	0.0%	3.8%
Hawai'i-district unknown	5.1%	13.0%	0.0%	6.6%	0.0%	5.5%	0.0%	5.7%
Hana	3.4%	3.7%	0.0%	0.0%	.0%	0.0%	0.0%	2.4%
Makawao-Pukalani-Kula	18.9%	5.2%	7.1%	12.3%	0.0%	43.1%	0.0%	13.0%
Wailuku-Kahului	7.5%	7.4%	0.0%	38.4%	5.6%	0.0%	0.0%	8.9%
Pa'ia-Haiku	4.6%	0.0%	0.0%	11.1%	0.0%	.0%	0.0%	3.2%
Kihei-Makena	8.6%	0.0%	7.1%	14.9%	2.1%	7.2%	0.0%	6.3%
West Maui	7.1%	1.8%	0.0%	5.5%	1.2%	0.0%	0.0%	4.6%
Moloka'i	1.4%	.0%	0.0%	.0%	0.0%	14.1%	0.0%	1.1%
Lāna'i	.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Maui-district unknown	10.6%	9.0%	0.0%	19.4%	0.0%	7.8%	100.0%	9.8%
Waimea	.5%	.0%	0.0%	0.0%	.0%	41.9%	0.0%	1.3%
Hanapepe-Eleele	.0%	.0%	0.0%	0.0%	4.7%	0.0%	0.0%	.8%
Koloa-Poipu-Kalaheo	0.0%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%
Lihue	1.0%	7.7%	0.0%	.0%	4.7%	.0%	0.0%	2.7%
East Kauai	0.4%	7.6%	0.0%	.0%	.0%	6.4%	0.0%	1.8%
North Shore Kauai	1.8%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%
Kauai-district unknown	.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Out-of-State Resident	4.3%	.0%	0.0%	.0%	0.0%	0.0%	0.0%	2.2%
Refused	4.5%	0.0%	0.0%	0.0%	25.9%	.0%	0.0%	6.5%
Total Effective Demand Renters	27,787	9,967	2,505	3,915	5,375	2,677	333	52,560

Source: Hawai'i Demand Survey, 2019

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Table I-10. Current and Affordable Housing Payment, County and Districts of Honolulu, 2019

	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
AVERAGE CURRENT MORTGAGE AMOUNT								
Single-family	$2,424	$2,268	$2,252	$2,618	$2,493	$2,034		$2,396
Multifamily	$2,008	$2,097	$2,427	$2,115	$2,451	$1,568		$2,065
Other	$2,131	$4,000				$920		$1,858
Not reported								
AVERAGE CURRENT RENT AMOUNT								
Studio	$982	$1,096		$1,250	$350	$567		$991
One bedroom	$1,253	$1,760	$3,295	$1,184	$1,324	$883		$1,382
Two bedrooms	$1,715	$1,967	$2,959	$1,691	$2,022	$1,375		$1,824
Three bedrooms	$2,167	$2,542	$2,641	$2,299	$2,424	$1,832		$2,283
Four bedrooms	$2,595	$2,242	$3,466	$2,682	$3,613	$2,502		$2,731
Five bedrooms	$1,806	$1,550		$4,000	$2,920	$2,937		$2,173
Six bedrooms								
DK				$350				$350
AFFORDABLE MORTGAGE PAYMENT								
Less than $500	1.5%	0.0%	7.4%	2.7%	4.3%	0.0%		2.2%
$500 to $799	5.2%	5.9%	0.0%	3.4%	3.0%	0.0%		4.2%
$800 to $1,099	6.2%	6.5%	0.0%	1.5%	8.1%	22.9%		6.1%
$1,100 to $1,399	6.1%	5.8%	13.9%	2.3%	10.2%	8.7%		6.9%
$1,400 to $1,699	13.1%	3.6%	17.6%	12.7%	4.8%	9.3%		10.7%
$1,700 to $1,999	11.5%	19.7%	0.0%	11.6%	2.7%	10.6%		10.4%
$2,000 to $2,999	26.6%	34.2%	32.3%	26.4%	24.0%	39.8%		28.1%
$3,000 to $3,999	15.5%	20.4%	11.6%	25.9%	23.9%	8.5%		18.1%
$4,000 or more	14.3%	3.9%	17.3%	13.5%	19.1%	0.0%		13.2%
AVERAGE AFFORDABLE MORTGAGE	$2,511	$2,356	$2,542	$2,725	$2,748	$1,962		$2,533
AFFORDABLE RENT PAYMENT								
Less than $300	7.3%	9.7%	0.0%	8.3%	0.0%	15.0%		6.8%
$300 to $499	2.2%	7.5%	0.0%	6.3%	1.0%	15.7%		3.7%
$500 to $799	10.6%	7.0%	13.0%	9.0%	0.0%	12.3%		8.9%
$800 to $1,099	16.3%	13.7%	0.0%	12.9%	20.6%	14.6%		15.1%
$1,100 to $1,399	15.7%	9.2%	0.0%	20.9%	10.3%	4.3%		13.3%
$1,400 to $1,699	17.4%	19.3%	0.0%	16.1%	14.8%	6.5%		15.9%
$1,700 to $1,999	12.5%	9.4%	23.3%	22.9%	5.7%	0.0%		12.3%
$2,000 to $2,499	8.7%	11.4%	4.0%	3.7%	31.6%	8.9%		11.0%
$2,500 to $2,999	2.9%	8.1%	42.6%	0.0%	7.9%	12.2%		6.5%
$3,000 to $3,999	4.3%	1.3%	6.8%	0.0%	3.0%	0.0%		3.3%
$4,000 or more	.6%	0.0%	0.0%	0.0%	4.4%	0.0%		.8%
Not sure	1.6%	3.4%	10.2%	0.0%	.7%	10.5%		2.5%
AVERAGE AFFORDABLE RENT	$1,396	$1,378	$2,246	$1,234	$1,787	$1,109		$1,454

Source: Hawai'i Demand Survey, 2019

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Table I-11. Down Payment and Real Estate Ownership, County and Districts of Honolulu, 2019

	Honolulu Districts							
	Honolulu (PUC)	Central O'ahu	East Honolulu	'Ewa	Ko'olauloa-Ko'olaupoko	Rural O'ahu	O'ahu district unknown	Total
AMOUNT AVAILABLE FOR DOWN PAYMENT								
None	3.1%	2.7%	0.0%	12.6%	4.9%	3.7%	6.9%	4.2%
Less than $25,000	18.2%	15.8%	3.1%	13.7%	13.0%	23.1%	26.8%	15.8%
$25,000 to $49,999	14.8%	4.1%	0.0%	21.7%	3.2%	8.4%	29.8%	11.3%
$50,000 to $74,999	9.3%	16.4%	13.5%	9.4%	7.0%	16.3%	0.0%	10.4%
$75,000 to $99,999	9.5%	17.3%	.9%	4.8%	4.3%	4.5%	0.0%	8.2%
$100,000 to $149,999	13.6%	15.4%	22.1%	8.0%	16.2%	26.6%	36.4%	14.9%
$150,000 to $199,999	5.8%	3.9%	11.1%	5.5%	3.3%	0.0%	0.0%	5.3%
$200,000 to $299,999	3.5%	.8%	5.4%	8.5%	10.2%	0.0%	0.0%	4.7%
$300,000 to $399,999	3.2%	.6%	5.5%	2.6%	1.5%	1.4%	0.0%	2.6%
$400,000 or more	10.8%	12.2%	35.5%	4.1%	23.4%	7.8%	0.0%	13.7%
Not sure	8.2%	10.7%	2.9%	9.2%	13.1%	8.2%	0.0%	8.9%
OWN OTHER RESIDENTIAL PROPERTY								
Yes	13.4%	8.4%	23.8%	8.4%	15.3%	9.3%	0.0%	12.9%
No	86.6%	91.6%	76.2%	91.6%	84.7%	90.7%	100.0%	87.1%

Source: Hawai'i Demand Survey, 2019

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APPENDIX J: COUNTY AND DISTRICTS TABLES – MAUI COUNTY

The tables presented in Appendix J, referred to in prior HHPS as the "B Tables" or "County Districts Tables," provide detailed demographic and housing-related data for the County and its districts. This data is taken from the Housing Demand Survey 2019.

Table J-1. Unit Descriptions, County and Districts of Maui, 2019

	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lāna'i	Total
TOTAL HOUSEHOLDS	931	10,578	18,182	5,733	7,606	5,464	3,765	2,174	54,433
TENANCY									
Own	42.9%	66.1%	59.6%	67.8%	52.9%	41.2%	68.7%	58.1%	59.2%
Rent	52.1%	33.4%	38.8%	32.2%	47.1%	57.6%	26.2%	40.4%	39.5%
Other	4.9%	.5%	1.6%	0.0%	0.0%	1.2%	5.0%	1.5%	1.3%
UNIT TYPE									
Single-family house	84.9%	86.4%	73.1%	86.9%	49.2%	49.2%	86.9%	78.8%	72.7%
Townhouse	0.0%	1.7%	3.5%	0.0%	2.5%	.8%	0.0%	0.0%	1.9%
Condominium	0.0%	0.0%	4.2%	1.5%	31.2%	18.2%	3.3%	.9%	8.0%
Duplex/multiplex	0.0%	5.5%	4.6%	6.5%	3.2%	10.2%	0.0%	2.7%	4.9%
Apartment	5.3%	2.9%	11.9%	3.7%	10.7%	18.8%	5.7%	11.4%	9.2%
Co-op	0.0%	.4%	1.1%	0.0%	0.0%	1.0%	0.0%	3.3%	.7%
Other	9.8%	3.2%	1.6%	1.4%	3.2%	1.8%	4.1%	2.9%	2.5%
NUMBER OF BEDROOMS									
Studio or One	21.8%	8.5%	14.3%	22.1%	17.2%	28.4%	18.2%	13.9%	16.2%
Two	35.2%	20.7%	21.2%	26.6%	37.9%	25.3%	15.2%	36.5%	24.9%
Three	40.0%	47.9%	42.0%	33.7%	29.4%	28.3%	42.1%	26.1%	38.5%
Four plus	3.1%	22.8%	22.5%	17.5%	15.5%	17.9%	24.5%	23.4%	20.4%
NUMBER OF BATHROOMS									
One	60.1%	26.9%	30.9%	40.3%	26.1%	48.5%	32.2%	39.7%	33.2%
One and one-half	4.8%	4.3%	7.2%	9.0%	12.3%	2.5%	11.4%	6.2%	7.3%
Two	21.8%	35.7%	35.0%	29.7%	37.0%	29.7%	37.3%	32.9%	34.2%
Two and one-half	0.0%	8.9%	10.1%	7.4%	5.8%	6.7%	2.4%	4.3%	7.7%
Three	13.4%	18.6%	11.9%	9.2%	11.6%	3.0%	12.7%	9.2%	11.9%
Three and one-half	0.0%	2.2%	1.2%	2.1%	1.6%	1.7%	2.7%	3.1%	1.8%
Four or more	0.0%	3.5%	3.6%	2.3%	5.7%	7.9%	1.5%	4.5%	4.0%

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Table J-2. Households Demographics, County and Districts of Maui, 2019

	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lāna'i	Total
TOTAL HOUSEHOLDS	931	10,578	18,182	5,733	7,606	5,464	3,765	2,174	54,433
YEARS IN CURRENT UNIT									
Less than 1 year	7.7%	3.6%	5.9%	2.9%	10.6%	3.0%	3.4%	1.2%	5.2%
1 to 5 years	15.4%	28.4%	28.7%	22.6%	45.4%	40.0%	30.2%	21.8%	31.1%
6 to 10 years	15.8%	18.5%	19.1%	18.4%	15.8%	15.2%	12.1%	18.9%	17.5%
More than 10 years	61.1%	49.5%	46.2%	56.1%	28.1%	41.8%	54.3%	58.0%	46.2%
HOUSEHOLD TYPES									
Single Member	18.1%	17.1%	22.3%	30.9%	26.1%	29.4%	25.2%	29.7%	23.9%
Married couple, no children	24.9%	26.6%	16.4%	17.8%	25.1%	18.8%	19.9%	14.6%	20.3%
Parent(s) & children	22.2%	12.9%	13.1%	9.5%	12.5%	12.7%	15.6%	12.9%	12.9%
Unrelated Roommates	8.8%	6.9%	6.1%	4.1%	15.4%	9.4%	12.3%	4.4%	8.1%
Multiple Families	26.0%	36.3%	41.6%	36.4%	20.9%	29.6%	27.0%	38.5%	34.5%
Parent(s) and Adult Child(ren)	0.0%	.2%	.1%	0.0%	0.0%	0.0%	0.0%	0.0%	.1%
Undetermined	0.0%	0.0%	.4%	1.3%	0.0%	0.0%	0.0%	0.0%	.3%
KIDS IN HOUSEHOLD									
No children	60.2%	73.7%	68.5%	75.4%	80.5%	77.4%	65.6%	72.7%	72.6%
At least 1 child	39.8%	26.3%	31.5%	24.6%	19.5%	22.6%	34.4%	27.3%	27.4%
SENIORS IN HOUSEHOLD									
Single Person HH 60+	12.8%	12.6%	13.1%	16.3%	12.7%	14.3%	21.3%	16.7%	14.1%
2+ HH Members, All 60+	10.5%	19.0%	10.3%	16.5%	14.8%	10.2%	12.0%	12.9%	13.5%
2+ HH Members, Only Some 60+	20.2%	24.5%	25.3%	17.4%	20.6%	22.5%	28.3%	24.5%	23.5%
No HH Members 60+	56.6%	44.0%	51.3%	49.8%	51.8%	53.0%	38.5%	45.8%	49.0%

Source: Housing Demand Survey, 2019.

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Table J-3. Financial Characteristics, County and Districts of Maui, 2019

	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lāna'i	Total
TOTAL HOUSEHOLDS	931	10,578	18,182	5,733	7,606	5,464	3,765	2,174	54,433
HOUSEHOLD INCOME									
Less than $15,000	2.3%	6.9%	10.8%	7.6%	4.5%	6.1%	8.7%	5.4%	7.8%
$15,000 to $24,999	16.5%	4.8%	5.4%	13.0%	2.7%	9.2%	7.7%	11.6%	6.7%
$25,000 to $49,999	27.6%	16.1%	17.0%	20.7%	15.7%	17.6%	29.2%	13.1%	18.0%
$50,000 to $74,999	8.9%	10.6%	20.2%	21.9%	27.0%	13.7%	22.4%	26.3%	19.1%
$75,000 to $99,999	8.6%	16.6%	13.1%	13.7%	17.4%	15.1%	8.4%	18.2%	14.5%
More than $100,000	36.1%	45.0%	33.4%	23.1%	32.8%	38.5%	23.5%	25.4%	34.0%
HUD INCOME LEVELS									
30% or less	13.6%	10.1%	14.7%	17.2%	8.6%	13.5%	18.5%	21.2%	13.6%
30-50%	11.5%	7.3%	9.9%	13.8%	5.2%	8.8%	15.2%	1.7%	9.1%
50-80%	25.5%	14.3%	15.2%	14.3%	14.5%	16.4%	17.8%	16.0%	15.3%
80-120%	5.7%	3.6%	8.1%	3.3%	8.5%	3.3%	11.2%	9.6%	6.5%
120-140%	10.5%	8.8%	8.9%	8.8%	12.8%	10.6%	10.2%	17.5%	10.0%
Over 140%	33.3%	56.0%	43.2%	42.6%	50.4%	47.5%	27.2%	33.9%	45.4%
SHELTER-TO-INCOME RATIO									
No shelter cost	19.4%	14.4%	13.8%	17.8%	10.4%	7.3%	21.1%	31.8%	14.5%
Under 30%	42.3%	39.9%	45.4%	33.9%	44.5%	42.8%	49.2%	55.5%	43.3%
30-40%	21.7%	9.1%	11.4%	10.5%	8.9%	11.1%	12.8%	4.6%	10.5%
Over 40%	5.6%	24.0%	23.1%	29.8%	28.7%	29.9%	12.8%	8.1%	23.8%
Not enough info	11.0%	12.6%	6.4%	8.0%	7.4%	8.9%	4.0%	0.0%	7.8%

Source: Housing Demand Survey, 2019.

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Table J-4. Doubling Up, Crowding, and Hidden Homeless, County and Districts of Maui, 2019

	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lāna'i	Total
TOTAL HOUSEHOLDS	931	10,578	18,182	5,733	7,606	5,464	3,765	2,174	54,433
HH THAT ARE DOUBLED UP									
No	82.6%	85.5%	85.0%	85.4%	90.0%	87.0%	84.5%	83.9%	85.9%
Yes	17.4%	14.5%	15.0%	14.6%	10.0%	13.0%	15.5%	16.1%	14.1%
PERSONS PER BEDROOM									
Less than 2 persons per bedroom	72.1%	91.4%	83.2%	87.3%	88.7%	86.1%	86.5%	80.0%	86.2%
2 or more persons per bedroom	27.9%	8.6%	16.8%	12.7%	11.3%	13.9%	13.5%	20.0%	13.8%
HH THAT ARE CROWDED, DOUBLED UP, OR BOTH									
None of these	69.6%	79.4%	75.7%	76.2%	82.4%	78.2%	75.5%	75.2%	77.5%
Crowded, Doubled Up, or Both	30.4%	20.6%	24.3%	23.8%	17.6%	21.8%	24.5%	24.8%	22.5%
HIDDEN HOMELESS AND AT RISK OF HOMELESSNESS									
At Risk for Homelessness	9.8%	6.6%	11.6%	12.9%	5.9%	7.7%	9.0%	8.0%	9.2%
Hidden Homeless	23.8%	18.3%	20.6%	10.7%	22.6%	22.8%	18.6%	19.4%	19.5%
At Risk and Includes Hidden Homeless	3.0%	1.8%	2.0%	1.0%	0.0%	3.2%	5.2%	4.2%	2.0%
Has Adequate Housing	63.4%	73.4%	65.9%	75.4%	71.5%	66.3%	67.2%	68.5%	69.3%

Source: Housing Demand Survey, 2019.

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Table J-5. Intention to Move, County and Districts of Maui, 2019

	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lānaʻi	Total
TOTAL HOUSEHOLDS	931	10,578	18,182	5,733	7,606	5,464	3,765	2,174	54,433
WANT TO MOVE									
Yes	32.3%	38.1%	36.1%	31.6%	48.9%	49.0%	27.7%	27.6%	38.1%
No	67.7%	61.9%	63.9%	68.4%	51.1%	51.0%	72.3%	72.4%	61.9%
FINAL DEMAND MOVERS	300	4,031	6,554	1,811	3,722	2,668	1,043	600	20,729
SOONEST WILL MOVE									
in one year	25.1%	31.9%	27.8%	33.6%	39.7%	18.4%	10.6%	0.0%	28.3%
in two years	37.7%	16.9%	24.0%	14.5%	19.6%	25.6%	13.0%	45.3%	21.5%
3 to 5 years	20.9%	17.0%	17.9%	38.7%	17.4%	31.3%	38.1%	23.0%	22.4%
more than 5 years	16.3%	34.2%	30.3%	13.2%	23.3%	24.6%	38.3%	31.7%	27.8%
Not sure when	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PLANNED NEXT LOCATION									
Moving in Hawai'i or Not Sure	84.7%	77.3%	80.3%	85.8%	79.7%	78.1%	81.0%	90.3%	80.2%
Moving Out-of-State	15.3%	22.7%	19.7%	14.2%	20.3%	21.9%	19.0%	9.7%	19.8%

Source: Housing Demand Survey, 2019

[a] Final Demand Movers are those who will move and have an idea about the time frame of their move.

[b] Effective Demand Movers are those who will move, have an idea about the time frame of their move, and plan to remain in the State of Hawai'i when they move.

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Table J-6. Mover Tenancy Preferences, County and Districts of Maui, 2019

	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lānaʻi	Total
EFFECTIVE DEMAND MOVERS	254	3,116	5,261	1,555	2,968	2,085	844	542	16,624
PLANNED NEXT TENANCY									
Own	12.3%	44.0%	47.3%	44.1%	33.4%	31.1%	44.5%	11.0%	40.0%
Rent	87.7%	56.0%	52.7%	55.9%	66.6%	68.9%	55.5%	89.0%	60.0%
CERTAIN TO BUY									
certain to Buy	58.8%	79.4%	79.0%	90.3%	94.4%	64.2%	68.9%	93.0%	79.7%
Might Have to Rent	28.2%	17.0%	10.7%	9.7%	5.6%	31.8%	8.9%	0.0%	14.2%
Not Sure	13.1%	3.6%	10.3%	0.0%	0.0%	4.1%	22.2%	7.0%	6.2%
WOULD BUY IF AFFORDABLE									
Yes	22.8%	71.8%	84.5%	90.3%	91.4%	77.2%	53.2%	100.0%	82.9%
No	77.2%	24.7%	14.0%	9.7%	8.6%	15.0%	46.8%	0.0%	15.2%
Not Sure	0.0%	3.4%	1.5%	0.0%	0.0%	7.7%	0.0%	0.0%	1.9%

Source: Hawai'i Demand Survey, 2019
Base for Preferred Next Tenancy is all effective demand households.
Base for Certain to Buy is all effective demand households that prefer to purchase their next home.
Base for Would Buy If Affordable is all effective demand households that prefer to rent their next home.

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Table J-7. Buyer Unit Preferences, County and Districts of Maui, 2019

	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lāna'i	Total
TOTAL BUYER HOUSEHOLDS	153	2,139	3,638	933	1,262	1,538	532	399	10,594
PREFERRED UNIT TYPE									
Single-family House	27.1%	88.0%	80.1%	76.1%	72.7%	76.0%	88.2%	71.2%	79.2%
Townhouse	0.0%	2.7%	6.6%	0.0%	6.5%	1.3%	7.5%	21.9%	5.0%
Condo	49.3%	4.7%	6.9%	6.8%	20.8%	9.1%	0.0%	6.9%	8.7%
Apt	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	.4%
Other	23.6%	0.0%	3.6%	8.0%	0.0%	0.0%	0.0%	0.0%	2.3%
DK	0.0%	4.6%	2.8%	9.1%	0.0%	10.5%	4.3%	0.0%	4.4%
PREFERRED NUMBER OF BEDROOMS									
0 - None - studio	0.0%	0.0%	0.0%	9.5%	0.0%	0.0%	0.0%	0.0%	.9%
1 - One	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	0.0%	.3%
2 - Two	89.1%	26.8%	13.5%	16.7%	20.7%	43.9%	6.1%	21.9%	22.8%
3 - Three	10.9%	55.2%	52.3%	36.3%	55.2%	31.8%	73.8%	22.1%	48.1%
4 - Four	0.0%	15.9%	31.0%	33.9%	20.4%	24.3%	14.0%	56.0%	25.7%
5 - Five or more	0.0%	2.1%	3.2%	3.5%	3.7%	0.0%	0.0%	0.0%	2.3%
MINIMUM ACCEPTABLE BEDROOMS									
0 - None - studio	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.4%
1 - One	0.0%	3.8%	6.5%	7.3%	10.3%	2.4%	0.0%	21.3%	6.1%
2 - Two	100.0%	54.5%	54.4%	41.4%	34.3%	78.5%	79.5%	34.8%	54.6%
3 - Three	0.0%	41.7%	36.4%	46.5%	49.9%	19.2%	20.5%	43.8%	37.2%
4 - Four	0.0%	0.0%	1.7%	4.8%	0.0%	0.0%	0.0%	0.0%	1.1%
5 - Five or more	0.0%	0.0%	0.0%	0.0%	5.5%	0.0%	0.0%	0.0%	.6%
PREFERRED NUMBER OF BATHROOMS									
1 - One	23.6%	6.6%	1.3%	9.5%	0.0%	2.7%	13.6%	31.7%	5.2%
2 - One and one-half	0.0%	6.0%	7.1%	0.0%	0.0%	0.0%	3.6%	0.0%	3.8%
3 - Two	65.4%	66.6%	57.7%	50.5%	53.2%	76.0%	75.4%	41.1%	61.4%
4 - Two and one-half	0.0%	12.5%	12.9%	14.0%	15.2%	10.1%	4.3%	5.4%	11.9%
5 - Three	10.9%	4.3%	17.5%	23.4%	25.8%	8.1%	3.1%	0.0%	13.5%
6 - Three and one-half	0.0%	4.0%	2.4%	2.6%	0.0%	0.0%	0.0%	0.0%	1.9%
7 - Four or more	0.0%	0.0%	1.3%	0.0%	5.9%	3.1%	0.0%	21.8%	2.4%
MINIMUM ACCEPTABLE BATHROOMS									
1 - One	85.7%	31.5%	36.0%	28.4%	22.7%	49.9%	37.6%	82.0%	36.9%
2 - One and one-half	0.0%	8.1%	5.1%	7.4%	18.4%	9.8%	15.9%	8.0%	8.8%
3 - Two	14.3%	58.1%	47.4%	60.6%	51.9%	40.3%	46.5%	10.1%	48.6%
4 - Two and one-half	0.0%	2.3%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%
5 - Three	0.0%	0.0%	5.6%	3.7%	6.9%	0.0%	0.0%	0.0%	3.1%
6 - Three and one-half	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7 - Four or more	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	.5%

Source: Hawai'i Demand Survey, 2019

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Table J-8. Renter Unit Preferences, County and Districts of Maui, 2019

	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lānaʻi	Total
TOTAL RENTER HOUSEHOLDS	178	1,072	2,734	713	2,022	964	282	192	8,158
PREFERRED UNIT TYPE									
SFD	72.6%	51.5%	48.7%	67.5%	40.2%	29.3%	66.4%	0.0%	46.3%
Townhouse	0.0%	2.3%	2.5%	0.0%	5.7%	2.2%	0.0%	0.0%	2.8%
Condo	0.0%	0.0%	7.7%	3.7%	21.8%	31.0%	20.2%	5.5%	12.8%
Apt	27.4%	23.1%	20.5%	0.0%	21.6%	26.6%	0.0%	9.9%	19.2%
Other	0.0%	13.4%	10.4%	0.0%	1.1%	0.0%	5.7%	0.0%	5.7%
DK	0.0%	9.8%	10.2%	28.8%	9.6%	10.9%	7.7%	84.7%	13.2%
PREFERRED NUMBER OF BEDROOMS									
0 - None - studio	0.0%	0.0%	.9%	0.0%	2.3%	0.0%	0.0%	5.5%	1.0%
1 - One	27.4%	18.3%	10.8%	19.2%	10.0%	6.4%	5.7%	0.0%	11.6%
2 - Two	30.5%	21.9%	39.7%	47.7%	64.2%	57.0%	20.2%	94.5%	46.8%
3 - Three	42.1%	44.4%	32.4%	33.1%	15.3%	15.4%	67.6%	0.0%	28.2%
4 - Four	0.0%	11.8%	14.8%	0.0%	8.1%	21.2%	6.4%	0.0%	11.3%
5 - Five or more	0.0%	3.6%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	.9%
MINIMUM ACCEPTABLE BEDROOMS									
0 - None - studio	0.0%	0.0%	2.5%	33.8%	0.0%	0.0%	0.0%	0.0%	4.0%
1 - One	0.0%	41.2%	22.0%	0.0%	21.0%	16.3%	25.6%	0.0%	22.8%
2 - Two	80.8%	25.8%	40.0%	54.3%	54.3%	30.7%	74.4%	0.0%	42.5%
3 - Three	19.2%	30.9%	35.5%	11.9%	24.7%	53.1%	0.0%	0.0%	30.4%
4 - Four	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.4%
5 - Five or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PREFERRED NUMBER OF BATHROOMS									
1 - One	57.9%	31.4%	30.9%	49.7%	8.5%	12.3%	5.7%	5.5%	24.0%
2 - One and one-half	0.0%	5.4%	17.2%	19.4%	19.1%	26.3%	17.3%	9.9%	16.9%
3 - Two	42.1%	52.0%	34.2%	30.8%	58.7%	30.8%	56.2%	84.7%	44.0%
4 - Two and one-half	0.0%	3.9%	8.4%	0.0%	7.9%	16.4%	0.0%	0.0%	7.2%
5 - Three	0.0%	7.3%	4.0%	0.0%	5.8%	12.5%	20.8%	0.0%	5.9%
6 - Three and one-half	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	.2%
7 - Four or more	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%
MINIMUM ACCEPTABLE BATHROOMS									
1 - One	80.8%	81.9%	45.6%	78.3%	56.6%	46.6%	91.6%	100.0%	60.0%
2 - One and one-half	0.0%	0.0%	20.4%	0.0%	28.6%	29.5%	0.0%	0.0%	18.3%
3 - Two	19.2%	8.3%	34.0%	21.7%	14.8%	16.7%	8.4%	0.0%	19.4%
4 - Two and one-half	0.0%	9.8%	0.0%	0.0%	0.0%	7.2%	0.0%	0.0%	2.2%
5 - Three	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
6 - Three and one-half	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7 - Four or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Hawai'i Demand Survey, 2019
Base for Total Renter Households are effective demand households who plan to rent.

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Table J-9. Preferred Next Location, County and Districts of Maui, 2019

	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lāna'i	Total
PREFERRED LOCATION OF NEXT UNIT - BUYERS									
Not in designated districts	0.0%	0.0%	0.0%	0.0%	19.5%	0.0%	.0%	0.0%	2.9%
Primary Urban Center	100.0%	0.0%	29.5%	0.0%	14.0%	0.0%	18.1%	100.0%	17.6%
Central O'ahu	0.0%	0.0%	8.4%	0.0%	0.0%	0.0%	14.2%	69.0%	6.1%
East Honolulu	40.7%	0.0%	16.5%	0.0%	14.0%	0.0%	33.6%	0.0%	9.9%
Ewa	0.0%	0.0%	8.4%	0.0%	7.3%	0.0%	14.2%	0.0%	4.5%
Koolauloa-Koolaupoko	0.0%	0.0%	10.6%	17.0%	14.4%	0.0%	19.2%	0.0%	8.1%
Rural Oahu	0.0%	.0%	0.0%	0.0%	0.0%	0.0%	10.5%	0.0%	0.7%
Oahu-district unknown	0.0%	8.1%	7.5%	.0%	10.3%	0.0%	0.0%	0.0%	5.1%
South Kona to Ka'u	0.0%	0.0%	0.0%	17.0%	0.0%	0.0%	14.9%	0.0%	2.6%
Puna	0.0%	.0%	0.0%	0.0%	0.0%	27.2%	0.0%	0.0%	4.4%
North & South Hilo	0.0%	0.0%	8.8%	0.0%	14.4%	8.0%	14.9%	0.0%	7.0%
North Hawai'i	0.0%	9.6%	17.1%	17.0%	14.4%	0.0%	14.9%	0.0%	11.4%
North Kona	0.0%	16.1%	13.4%	0.0%	8.3%	0.0%	0.0%	0.0%	8.0%
Hawai'i -district unknown	0.0%	11.1%	0.0%	15.7%	0.0%	0.0%	0.0%	0.0%	3.5%
Hana	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%	0.0%	.0%
Makawao-Pukalani-Kula	0.0%	25.4%	4.8%	42.9%	0.0%	22.1%	8.7%	31.0%	15.4%
Wailuku-Kahului	0.0%	41.9%	11.8%	37.3%	19.6%	22.7%	0.0%	0.0%	21.1%
Pa'ia-Haiku	0.0%	.0%	0.0%	13.8%	0.0%	22.1%	0.0%	0.0%	4.9%
Kihei-Makena	0.0%	0.0%	2.4%	13.8%	0.0%	22.1%	.0%	31.0%	6.8%
West Maui	0.0%	4.6%	2.3%	0.0%	0.0%	3.9%	0.0%	0.0%	2.1%
Moloka'i	0.0%	0.0%	.0%	0.0%	7.3%	9.2%	0.0%	0.0%	2.6%
Lāna'i	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Maui-district unknown	0.0%	17.4%	2.3%	8.2%	54.3%	0.0%	0.0%	0.0%	12.6%
Waimea	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Hanapepe-Eleele	0.0%	0.0%	.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Koloa-Poipu-Kalaheo	0.0%	.0%	.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Lihue	0.0%	0.0%	11.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%
East Kauai	0.0%	0.0%	0.0%	0.0%	0.0%	14.8%	0.0%	0.0%	2.4%
North Shore Kauai	0.0%	0.0%	3.7%	0.0%	0.0%	14.8%	.0%	0.0%	3.5%
Kauai-district unknown	0.0%	17.0%	3.7%	0.0%	17.0%	0.0%	0.0%	0.0%	6.7%
Out-of-State Resident	0.0%	0.0%	0.0%	0.0%	17.0%	0.0%	0.0%	0.0%	2.5%
Refused	0.0%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%
Total Effective Demand Buyers	128	2,031	2,497	741	1,082	1,169	458	311	8,417

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	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lāna'i	Total
PREFERRED LOCATION OF NEXT UNIT - RENTERS									
Not in designated districts	0.0%	0.0%	8.9%	0.0%	0.0%	0.0%	.0%	0.0%	3.4%
Primary Urban Center	0.0%	49.2%	37.7%	35.8%	6.6%	41.8%	16.5%	0.0%	30.8%
Central O'ahu	0.0%	16.9%	1.6%	0.0%	15.2%	16.3%	6.5%	0.0%	8.6%
East Honolulu	0.0%	8.1%	0.0%	37.7%	0.0%	0.0%	0.0%	0.0%	3.2%
Ewa	52.7%	18.6%	19.3%	0.0%	0.0%	11.8%	0.0%	0.0%	13.3%
Koolauloa-Koolaupoko	52.7%	25.1%	11.0%	35.8%	0.0%	0.0%	0.0%	0.0%	11.3%
Rural Oahu	0.0%	4.5%	10.2%	0.0%	15.2%	17.7%	0.0%	0.0%	10.3%
Oahu-district unknown	0.0%	4.5%	2.8%	.0%	5.8%	0.0%	0.0%	0.0%	2.9%
South Kona to Ka'u	0.0%	0.0%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%
Puna	0.0%	.0%	1.4%	0.0%	3.2%	0.0%	0.0%	0.0%	1.2%
North & South Hilo	0.0%	5.4%	7.6%	0.0%	4.8%	17.7%	0.0%	0.0%	7.2%
North Hawai'i	47.3%	0.0%	1.4%	0.0%	5.8%	0.0%	0.0%	0.0%	3.5%
North Kona	47.3%	15.6%	9.8%	26.5%	19.9%	0.0%	0.0%	0.0%	13.1%
Hawai‘i-district unknown	0.0%	0.0%	0.0%	0.0%	5.8%	8.9%	77.0%	0.0%	5.7%
Hana	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%	0.0%	.0%
Makawao-Pukalani-Kula	0.0%	0.0%	2.2%	0.0%	26.6%	9.7%	0.0%	0.0%	8.0%
Wailuku-Kahului	0.0%	6.9%	7.1%	0.0%	19.1%	43.9%	0.0%	0.0%	14.1%
Pa'ia-Haiku	0.0%	.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%
Kihei-Makena	0.0%	0.0%	0.0%	0.0%	5.0%	21.9%	.0%	0.0%	4.3%
West Maui	0.0%	6.6%	6.2%	0.0%	0.0%	.0%	0.0%	0.0%	3.2%
Moloka'i	0.0%	0.0%	.0%	0.0%	15.2%	0.0%	0.0%	0.0%	3.3%
Lāna‘i	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Maui-district unknown	0.0%	0.0%	0.0%	0.0%	5.8%	4.4%	0.0%	0.0%	1.9%
Waimea	0.0%	0.0%	0.0%	0.0%	14.1%	0.0%	0.0%	0.0%	3.0%
Hanapepe-Eleele	0.0%	0.0%	.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Koloa-Poipu-Kalaheo	0.0%	.0%	.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Lihue	0.0%	9.8%	5.9%	0.0%	0.0%	14.1%	0.0%	0.0%	5.5%
East Kauai	0.0%	9.8%	3.5%	0.0%	0.0%	14.1%	0.0%	0.0%	4.6%
North Shore Kauai	0.0%	0.0%	0.0%	0.0%	12.9%	3.6%	.0%	0.0%	3.3%
Kauai-district unknown	0.0%	0.0%	.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.6%
Out-of-State Resident	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%
Refused	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%
Total Effective Demand Renters	126	1,085	2,764	813	1,886	916	386	231	8,207

Source: Hawai‘i Demand Survey, 2019

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Table J-10. Current and Affordable Housing Payment, County and Districts of Maui, 2019

	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lāna'i	Total
AVERAGE CURRENT MORTGAGE AMOUNT									
Single-family	$1,201	$2,398	$2,132	$1,797	$2,568	$2,565	$1,379	$1,878	$2,119
Multifamily		$2,087	$1,797	$2,948	$1,605	$2,166	$888	$650	$1,856
Other		$285	$611	$1,619			$350		$608
Not reported		$650							$650
AVERAGE CURRENT RENT AMOUNT									
Studio	$950	$1,250	$777	$950	$2,392	$1,293	$350		$1,078
One bedroom	$650	$1,152	$838	$875	$1,258	$1,571	$412	$760	$1,047
Two bedrooms	$1,282	$1,533	$1,481	$1,471	$2,188	$1,929	$1,059	$1,400	$1,689
Three bedrooms	$1,752	$2,315	$1,922	$1,964	$2,167	$2,394	$1,386	$1,850	$2,078
Four bedrooms		$2,804	$1,845		$4,000	$1,782	$229		$2,220
Five bedrooms			$855		$4,000	$650	$950		$1,945
Six bedrooms									
DK									
AFFORDABLE MORTGAGE PAYMENT									
Less than $500	0.0%	2.6%	5.4%	11.1%	0.0%	0.0%	5.2%	23.5%	4.4%
$500 to $799	0.0%	0.0%	2.5%	13.5%	0.0%	3.1%	3.3%	0.0%	2.6%
$800 to $1,099	50.7%	0.0%	3.0%	3.3%	3.3%	8.2%	8.3%	0.0%	4.1%
$1,100 to $1,399	49.3%	4.4%	3.9%	0.0%	0.0%	0.0%	22.9%	0.0%	4.1%
$1,400 to $1,699	0.0%	9.6%	9.9%	8.4%	4.4%	8.2%	32.3%	0.0%	9.4%
$1,700 to $1,999	0.0%	3.1%	9.5%	6.5%	18.7%	5.3%	16.7%	47.3%	10.0%
$2,000 to $2,999	0.0%	42.0%	49.1%	42.4%	39.2%	29.2%	11.3%	29.2%	39.3%
$3,000 to $3,999	0.0%	24.4%	10.6%	0.0%	12.2%	27.8%	0.0%	0.0%	14.4%
$4,000 or more	0.0%	13.9%	6.1%	14.9%	22.3%	18.3%	0.0%	0.0%	11.7%
AVERAGE AFFORDABLE MORTGAGE	$1,097	$2,868	$2,339	$2,202	$2,965	$2,938	$1,491	$1,663	$2,519
AFFORDABLE RENT PAYMENT									
Less than $300	0.0%	5.5%	8.9%	0.0%	0.0%	0.0%	11.3%	0.0%	4.0%
$300 to $499	0.0%	13.4%	4.5%	3.7%	7.1%	1.6%	23.3%	0.0%	6.3%
$500 to $799	27.4%	1.8%	3.6%	6.7%	1.8%	11.5%	5.7%	0.0%	4.7%
$800 to $1,099	0.0%	9.9%	17.2%	31.8%	2.5%	14.6%	6.4%	15.3%	12.7%
$1,100 to $1,399	8.1%	6.3%	23.8%	33.2%	25.0%	5.0%	43.7%	0.0%	20.2%
$1,400 to $1,699	30.5%	11.2%	15.8%	5.1%	26.3%	28.2%	9.6%	84.7%	20.1%
$1,700 to $1,999	0.0%	4.0%	6.4%	0.0%	9.0%	23.6%	0.0%	0.0%	7.7%
$2,000 to $2,499	0.0%	8.9%	11.9%	19.5%	13.3%	6.5%	0.0%	0.0%	10.9%
$2,500 to $2,999	34.0%	23.5%	1.8%	0.0%	4.3%	6.9%	0.0%	0.0%	6.3%
$3,000 to $3,999	0.0%	1.3%	4.1%	0.0%	7.8%	2.2%	0.0%	0.0%	3.7%
$4,000 or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Not sure	0.0%	14.1%	2.1%	0.0%	3.0%	0.0%	0.0%	0.0%	3.3%

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AVERAGE AFFORDABLE RENT	$1,686	$1,615	$1,366	$1,293	$1,689	$1,566	$903	$1,457	$1,488

Source: Hawai'i Demand Survey, 2019

Table I-11. Down Payment and Real Estate Ownership, County and Districts of Maui, 2019

	Maui County								
	Hana	Makawao-Pukalani-Kula	Wailuku-Kahului	Paia-Haiku	Kihei-Makena	West Maui	Island of Moloka'i	Island of Lāna'i	Total
AMOUNT AVAILABLE FOR DOWN PAYMENT									
None	0.0%	2.8%	6.4%	16.5%	1.8%	2.6%	10.9%	0.0%	5.3%
Less than $25,000	27.1%	8.2%	21.7%	17.9%	10.5%	8.5%	41.2%	21.8%	16.5%
$25,000 to $49,999	23.6%	7.3%	10.2%	1.9%	10.4%	16.7%	6.1%	34.2%	10.8%
$50,000 to $74,999	0.0%	17.3%	11.1%	8.4%	5.3%	5.1%	13.3%	9.8%	10.5%
$75,000 to $99,999	0.0%	17.4%	2.6%	3.8%	0.0%	33.9%	5.8%	0.0%	10.0%
$100,000 to $149,999	0.0%	12.9%	6.7%	7.2%	1.6%	5.8%	15.1%	0.0%	7.4%
$150,000 to $199,999	0.0%	.8%	6.7%	0.0%	4.8%	13.3%	0.0%	0.0%	5.0%
$200,000 to $299,999	0.0%	9.8%	3.7%	10.3%	28.3%	0.0%	0.0%	0.0%	7.4%
$300,000 to $399,999	0.0%	6.4%	1.3%	12.0%	0.0%	0.0%	0.0%	6.9%	3.0%
$400,000 or more	0.0%	9.0%	9.9%	11.0%	21.6%	6.5%	0.0%	0.0%	9.6%
Not sure	49.3%	8.0%	19.8%	11.1%	15.7%	7.5%	7.5%	27.4%	14.5%
OWN OTHER RESIDENTIAL PROPERTY									
Yes	5.8%	16.7%	11.1%	11.6%	16.3%	12.7%	15.0%	5.5%	13.1%
No	94.2%	83.3%	88.9%	88.4%	83.7%	87.3%	85.0%	94.5%	86.9%

Source: Hawai'i Demand Survey, 2019

APPENDIX K: COUNTY AND DISTRICTS TABLES – HAWAIʻI COUNTY

The tables in Appendix K, referred to in prior HHPS as the "B Tables" or "County Districts Tables," provide detailed demographic and housing-related data for the County and its districts. This data is taken from the Housing Demand Survey 2016.

Table K-1. Unit Descriptions, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
TOTAL HOUSEHOLDS	6,591	13,018	24,403	10,574	12,398	67,054
TENANCY						
Own	66.0%	74.3%	64.8%	71.5%	61.3%	67.2%
Rent	31.4%	22.2%	32.3%	26.6%	38.1%	30.4%
Other	2.6%	3.4%	2.9%	1.9%	.7%	2.4%
UNIT TYPE						
Single-family house	86.0%	91.3%	82.3%	83.2%	69.9%	82.3%
Townhouse	.7%	0.0%	.3%	.4%	1.6%	.5%
Condominium	2.9%	.1%	2.0%	3.0%	9.7%	3.3%
Duplex/multiplex	2.8%	2.4%	3.5%	5.0%	6.3%	4.0%
Apartment	4.2%	2.6%	8.0%	4.0%	8.6%	6.1%
Co-op	0.0%	.6%	.2%	1.8%	.3%	.5%
Other	3.5%	3.1%	3.6%	2.5%	3.5%	3.3%
NUMBER OF BEDROOMS						
Studio or One	12.8%	23.4%	15.2%	12.7%	20.6%	17.1%
Two	30.3%	18.1%	17.5%	23.1%	22.2%	20.6%
Three	46.2%	40.4%	41.7%	45.6%	38.6%	42.0%
Four plus	10.7%	18.1%	25.6%	18.6%	18.6%	20.2%
NUMBER OF BATHROOMS						
One	30.7%	34.3%	30.6%	22.0%	29.0%	29.7%
One and one-half	11.5%	6.6%	6.1%	3.5%	4.6%	6.0%
Two	36.9%	35.9%	35.2%	45.9%	38.5%	37.8%
Two and one-half	6.6%	5.9%	8.2%	9.8%	7.7%	7.8%
Three	12.8%	13.0%	13.5%	9.3%	15.2%	13.0%
Three and one-half	1.2%	1.9%	.2%	5.7%	.9%	1.6%
Four or more	.3%	2.5%	6.2%	3.8%	4.1%	4.1%

Source: Housing Demand Survey, 2019.

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Table K-2. Households Demographics, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
TOTAL HOUSEHOLDS	6,591	13,018	24,403	10,574	12,398	67,054
YEARS IN CURRENT UNIT						
Less than 1 year	4.8%	6.9%	6.6%	7.0%	6.3%	6.5%
1 to 5 years	32.2%	27.7%	23.9%	28.0%	39.4%	28.9%
6 to 10 years	12.7%	15.9%	14.1%	18.0%	18.0%	15.7%
More than 10 years	50.3%	49.5%	55.5%	47.0%	36.3%	49.0%
HOUSEHOLD TYPES						
Single Member	27.1%	21.9%	25.5%	24.7%	31.7%	25.9%
Married couple, no children	22.9%	23.8%	21.2%	26.6%	25.2%	23.4%
Parent(s) & children	12.3%	15.1%	12.5%	11.2%	13.7%	13.0%
Unrelated Roommates	7.7%	12.5%	7.6%	10.2%	8.0%	9.0%
Multiple Families	29.7%	26.2%	32.0%	27.0%	20.8%	27.8%
Parent(s) and Adult Child(ren)	.2%	0.0%	0.0%	0.0%	0.0%	.0%
Undetermined	0.0%	.6%	1.3%	.3%	.6%	.7%
KIDS IN HOUSEHOLD						
No children	72.8%	72.6%	75.8%	76.3%	76.6%	75.1%
At least 1 child	27.2%	27.4%	24.2%	23.7%	23.4%	24.9%
SENIORS IN HOUSEHOLD						
Single Person HH 60+	15.9%	10.9%	16.9%	15.8%	18.2%	15.7%
2+ HH Members, All 60+	22.2%	14.5%	18.4%	20.1%	16.4%	17.9%
2+ HH Members, Only Some 60+	18.7%	25.8%	25.4%	18.9%	18.2%	22.5%
No HH Members 60+	43.3%	48.8%	39.3%	45.2%	47.2%	43.9%

Source: Housing Demand Survey, 2019.

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Table K-3. Financial Characteristics, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
TOTAL HOUSEHOLDS	6,591	13,018	24,403	10,574	12,398	67,054
HOUSEHOLD INCOME						
Less than $15,000	15.7%	20.4%	17.0%	16.4%	5.8%	15.4%
$15,000 to $24,999	10.6%	10.2%	13.0%	10.1%	9.2%	11.0%
$25,000 to $49,999	32.2%	17.8%	17.4%	19.9%	20.7%	19.9%
$50,000 to $74,999	19.2%	19.3%	18.7%	13.3%	19.1%	18.1%
$75,000 to $99,999	11.1%	16.8%	11.1%	12.1%	11.9%	12.5%
More than $100,000	11.2%	15.5%	22.8%	28.3%	33.4%	23.0%
HUD INCOME LEVELS						
30% or less	18.4%	23.0%	22.0%	20.4%	10.6%	19.5%
30-50%	16.1%	10.4%	12.5%	13.9%	12.6%	12.7%
50-80%	20.5%	20.9%	16.8%	16.3%	16.8%	17.9%
80-120%	19.2%	11.6%	12.5%	11.2%	14.6%	13.2%
120-140%	9.9%	14.5%	10.9%	10.5%	9.8%	11.2%
Over 140%	15.8%	19.5%	25.2%	27.8%	35.7%	25.5%
SHELTER-TO-INCOME RATIO						
No shelter cost	24.2%	27.2%	22.5%	17.4%	13.5%	21.1%
Under 30%	41.5%	43.6%	41.9%	33.8%	41.9%	41.0%
30-40%	13.3%	6.8%	6.9%	9.4%	11.6%	8.8%
Over 40%	13.6%	16.8%	20.5%	31.0%	26.5%	21.8%
Not enough info	7.4%	5.5%	8.3%	8.4%	6.6%	7.3%

Source: Housing Demand Survey, 2019.

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Table K-4. Doubling Up, Crowding, and Hidden Homeless, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
TOTAL HOUSEHOLDS	6,591	13,018	24,403	10,574	12,398	67,054
HH THAT ARE DOUBLED UP						
No	91.1%	88.5%	88.7%	90.1%	92.3%	89.7%
Yes	8.9%	11.5%	11.3%	9.9%	7.7%	10.3%
PERSONS PER BEDROOM						
Less than 2 persons per bedroom	86.5%	85.3%	90.3%	90.7%	87.7%	88.5%
2 or more persons per bedroom	13.5%	14.7%	9.7%	9.3%	12.3%	11.5%
HH THAT ARE CROWDED, DOUBLED UP, OR BOTH						
None of these	79.5%	79.6%	82.5%	84.5%	83.6%	82.0%
Crowded, Doubled Up, or Both	20.5%	20.4%	17.5%	15.5%	16.4%	18.0%
HIDDEN HOMELESS AND AT RISK OF HOMELESSNESS						
At Risk for Homelessness	14.8%	21.2%	19.9%	15.8%	9.0%	17.0%
Hidden Homeless	9.3%	11.5%	11.5%	11.5%	12.9%	11.6%
At Risk and Includes Hidden Homeless	4.7%	3.1%	2.8%	4.4%	2.0%	3.1%
Has Adequate Housing	71.2%	64.1%	65.8%	68.3%	76.1%	68.3%

Source: Housing Demand Survey, 2019.

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Table K-5. Intention to Move, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
TOTAL HOUSEHOLDS	6,591	13,018	24,403	10,574	12,398	67,054
WANT TO MOVE						
Yes	29.8%	30.5%	36.3%	34.8%	48.4%	36.6%
No	70.2%	69.5%	63.7%	65.2%	51.6%	63.4%
FINAL DEMAND MOVERS	1,965	3,944	8,849	3,682	5,996	24,479
SOONEST WILL MOVE						
in one year	25.4%	25.9%	30.6%	29.3%	30.5%	29.1%
in two years	10.9%	30.7%	20.9%	24.8%	20.1%	22.0%
3 to 5 years	37.0%	25.6%	20.2%	24.8%	19.1%	22.8%
more than 5 years	26.7%	17.8%	28.3%	21.1%	30.3%	26.0%
Not sure when	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PLANNED NEXT LOCATION						
Moving in Hawai'i or Not Sure	69.9%	80.5%	85.6%	75.4%	84.2%	81.7%
Moving Out-of-State	30.1%	19.5%	14.4%	24.6%	15.8%	18.3%

Source: Housing Demand Survey, 2019

[a] Final Demand Movers are those who will move and have an idea about the time frame of their move.

[b] Effective Demand Movers are those who will move, have an idea about the time frame of their move, and plan to remain in the State of Hawai'i when they move.

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Table K-6. Mover Tenancy Preferences, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
EFFECTIVE DEMAND MOVERS	1,374	3,175	7,576	2,776	5,047	19,992
PLANNED NEXT TENANCY						
Own	42.7%	53.1%	38.8%	49.6%	44.3%	44.4%
Rent	57.3%	46.9%	61.2%	50.4%	55.7%	55.6%
CERTAIN TO BUY						
certain to Buy	65.3%	89.2%	75.7%	93.7%	85.1%	82.8%
Might Have to Rent	32.6%	8.1%	13.0%	0.0%	9.4%	10.7%
Not Sure	2.1%	2.8%	11.3%	6.3%	5.5%	6.5%
WOULD BUY IF AFFORDABLE						
Yes	92.8%	84.6%	61.3%	71.1%	81.3%	71.0%
No	7.2%	4.5%	28.4%	22.5%	14.0%	21.0%
Not Sure	0.0%	10.9%	10.3%	6.4%	4.7%	8.1%

Source: Housing Demand Survey, 2019
Base for Preferred Next Tenancy is all effective demand households.

Base for Certain to Buy is all effective demand households that prefer to purchase their next home.

Base for Would Buy If Affordable is all effective demand households that prefer to rent their next home.

Table K-7. Buyer Unit Preferences, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
TOTAL BUYER HOUSEHOLDS	1,002	2,555	3,849	1,899	2,789	12,095
PREFERRED UNIT TYPE						
SFD	70.9%	85.8%	81.6%	86.1%	73.8%	80.5%
Townhouse	14.9%	.9%	3.1%	3.0%	5.2%	4.1%
Condo	6.8%	3.5%	4.8%	3.9%	17.8%	7.6%
Apt	0.0%	0.0%	1.7%	0.0%	0.0%	.5%
Other	1.9%	5.7%	1.1%	4.3%	1.0%	2.6%
DK	5.5%	4.1%	7.6%	2.7%	2.3%	4.7%
PREFERRED NUMBER OF BEDROOMS						
0 - None - studio	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1 - One	0.0%	2.8%	3.7%	12.5%	5.5%	5.0%
2 - Two	22.0%	30.5%	23.9%	15.9%	25.8%	24.4%
3 - Three	57.5%	43.2%	47.1%	54.2%	57.5%	50.6%
4 - Four	18.6%	21.4%	21.8%	17.4%	8.8%	17.8%
5 - Five or more	1.9%	2.0%	3.5%	0.0%	2.4%	2.3%
MINIMUM ACCEPTABLE BEDROOMS						
0 - None - studio	0.0%	0.0%	4.5%	0.0%	8.0%	3.3%
1 - One	0.0%	15.2%	11.5%	2.4%	10.1%	9.4%
2 - Two	46.9%	30.0%	49.3%	50.2%	53.7%	46.4%
3 - Three	50.7%	44.5%	25.8%	45.8%	28.2%	35.6%
4 - Four	0.0%	5.8%	7.3%	1.6%	0.0%	3.8%
5 - Five or more	2.4%	4.5%	1.5%	0.0%	0.0%	1.6%
PREFERRED NUMBER OF BATHROOMS						
1 - One	0.0%	12.6%	9.2%	12.0%	8.6%	9.4%
2 - One and one-half	7.9%	8.3%	6.7%	1.7%	7.1%	6.4%
3 - Two	67.4%	44.1%	44.8%	52.7%	63.2%	52.0%
4 - Two and one-half	12.3%	7.2%	20.8%	18.6%	6.0%	13.5%
5 - Three	7.2%	23.0%	11.7%	6.7%	13.7%	13.4%
6 - Three and one-half	0.0%	1.1%	5.8%	3.3%	.6%	2.7%
7 - Four or more	5.2%	3.7%	1.1%	5.1%	.7%	2.5%
MINIMUM ACCEPTABLE BATHROOMS						
1 - One	33.7%	39.7%	39.8%	34.4%	38.0%	37.9%
2 - One and one-half	9.7%	12.6%	12.7%	12.7%	13.7%	12.7%
3 - Two	28.6%	40.8%	39.6%	40.2%	40.9%	39.2%
4 - Two and one-half	6.3%	0.0%	4.9%	8.1%	.9%	3.6%
5 - Three	21.7%	6.8%	1.7%	4.5%	6.6%	6.1%
6 - Three and one-half	0.0%	0.0%	1.3%	0.0%	0.0%	.4%
7 - Four or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Hawai'i Demand Survey, 2019

Table K-8. Renter Unit Preferences, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
TOTAL RENTER HOUSEHOLDS	371	1,231	4,104	1,635	2,079	9,421
PREFERRED UNIT TYPE						
SFD	65.6%	89.2%	52.3%	44.0%	48.9%	55.3%
Townhouse	23.0%	.0%	3.9%	1.0%	0.0%	2.8%
Condo	0.0%	0.0%	1.0%	2.0%	0.0%	0.8%
Apt	0.0%	3.6%	31.2%	26.2%	32.3%	25.9%
Other	0.0%	5.4%	3.6%	0.0%	.0%	2.3%
DK	11.3%	1.8%	8.1%	26.8%	18.8%	13.1%
PREFERRED NUMBER OF BEDROOMS						
0 - None - studio	0.0%	0.0%	0.0%	0.0%	1.4%	0.3%
1 - One	23.0%	20.6%	35.5%	16.2%	9.7%	24.0%
2 - Two	46.8%	57.6%	29.8%	63.6%	50.1%	44.4%
3 - Three	10.8%	12.4%	27.2%	10.6%	37.3%	24.0%
4 - Four	0.0%	9.4%	5.4%	9.6%	1.5%	5.6%
5 - Five or more	19.4%	0.0%	2.2%	0.0%	0.0%	1.7%
MINIMUM ACCEPTABLE BEDROOMS						
0 - None - studio	0.0%	21.7%	0.0%	0.0%	15.2%	6.1%
1 - One	20.1%	8.0%	4.7%	26.7%	22.7%	13.0%
2 - Two	15.6%	56.0%	73.4%	47.6%	42.4%	58.2%
3 - Three	14.7%	14.4%	16.5%	25.8%	19.7%	18.2%
4 - Four	49.6%	0.0%	5.4%	0.0%	0.0%	4.5%
5 - Five or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PREFERRED NUMBER OF BATHROOMS						
1 - One	27.2%	30.6%	33.5%	22.9%	19.3%	27.9%
2 - One and one-half	0.0%	21.6%	20.9%	1.9%	13.1%	15.2%
3 - Two	47.3%	47.8%	35.5%	56.1%	61.0%	46.7%
4 - Two and one-half	0.0%	0.0%	4.1%	9.2%	3.7%	4.2%
5 - Three	25.5%	0.0%	5.3%	9.8%	2.8%	5.6%
6 - Three and one-half	0.0%	0.0%	0.0%	0.0%	.0%	0.0%
7 - Four or more	0.0%	0.0%	0.8%	0.0%	.0%	0.3%
MINIMUM ACCEPTABLE BATHROOMS						
1 - One	6.5%	73.0%	56.8%	52.9%	61.1%	56.3%
2 - One and one-half	35.2%	17.2%	19.2%	14.5%	12.3%	16.9%
3 - Two	20.6%	0.0%	16.4%	22.6%	26.5%	18.9%
4 - Two and one-half	37.7%	0.0%	5.9%	0.0%	.0%	4.0%
5 - Three	0.0%	9.9%	0.0%	10.0%	0.0%	3.4%
6 - Three and one-half	0.0%	0.0%	1.7%	0.0%	0.0%	.6%
7 - Four or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Hawai'i Demand Survey, 2019
Base for Total Renter Households are effective demand households who plan to rent.

Table K-9. Preferred Next Location, BUYERS, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
PREFERRED LOCATION OF NEXT UNIT - BUYERS						
Not in designated districts	0.0%	0.0%	5.3%	0.0%	0.0%	2.3%
Primary Urban Center	28.7%	47.7%	26.0%	36.0%	54.7%	37.3%
Central O'ahu	7.9%	14.4%	15.7%	50.1%	30.2%	22.3%
East Honolulu	3.6%	1.9%	4.8%	10.2%	8.6%	5.7%
Ewa	5.7%	9.3%	9.2%	27.5%	16.5%	12.8%
Koolauloa-Koolaupoko	46.4%	27.3%	9.2%	0.0%	7.7%	13.3%
Rural Oahu	14.0%	0.0%	2.8%	3.5%	5.7%	3.9%
Oahu-district unknown	0.0%	7.8%	4.3%	11.3%	14.8%	7.7%
South Kona to Ka'u	0.0%	8.0%	2.9%	.0%	.0%	2.5%
Puna	0.0%	4.9%	3.6%	0.0%	0.0%	2.3%
North & South Hilo	16.3%	16.1%	17.8%	10.6%	2.2%	13.1%
North Hawai'i	24.9%	14.8%	15.6%	18.9%	4.9%	14.1%
North Kona	8.6%	4.6%	4.6%	7.5%	4.3%	5.2%
Hawai'i-district unknown	0.0%	0.0%	9.3%	.0%	0.0%	4.0%
Hana	0.0%	.0%	2.4%	0.0%	0.0%	1.0%
Makawao-Pukalani-Kula	0.0%	0.0%	1.3%	0.0%	7.3%	2.2%
Wailuku-Kahului	0.0%	6.3%	2.7%	11.9%	4.3%	4.5%
Pa'ia-Haiku	0.0%	0.0%	1.4%	0.0%	.0%	0.6%
Kihei-Makena	0.0%	.0%	0.7%	.0%	0.0%	0.3%
West Maui	0.0%	10.4%	4.8%	.0%	.0%	3.7%
Moloka'i	0.0%	0.0%	4.8%	0.0%	0.0%	2.0%
Lāna'i	0.0%	0.0%	2.8%	0.0%	0.0%	1.2%
Maui-district unknown	0.0%	0.0%	5.1%	11.9%	7.0%	5.2%
Waimea	0.0%	0.0%	3.0%	0.0%	.0%	1.3%
Hanapepe-Eleele	0.0%	0.0%	1.0%	0.0%	2.7%	1.0%
Koloa-Poipu-Kalaheo	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lihue	0.0%	11.4%	5.1%	3.2%	0.0%	4.4%
East Kauai	0.0%	10.3%	6.7%	6.3%	2.2%	5.7%
North Shore Kauai	0.0%	1.9%	0.0%	.0%	0.0%	0.3%
Kauai-district unknown	0.0%	0.0%	3.2%	0.0%	0.0%	1.4%
Out-of-State Resident	0.0%	7.5%	4.7%	0.0%	.0%	3.2%
Refused	0.0%	0.0%	2.2%	0.0%	.0%	0.9%
Total Effective Demand Buyers	889	1,884	2,891	1,677	2,645	9,986

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Table K-10. Preferred Next Location, RENTERS, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
PREFERRED LOCATION OF NEXT UNIT - RENTERS						
Not in designated districts	0.0%	0.0%	5.1%	0.0%	0.0%	2.1%
Primary Urban Center	51.0%	55.7%	19.6%	39.7%	35.7%	32.7%
Central O'ahu	0.0%	0.0%	0.0%	18.6%	3.1%	5.1%
East Honolulu	0.0%	0.0%	14.0%	0.0%	3.1%	6.3%
Ewa	0.0%	21.0%	2.9%	22.4%	17.1%	12.0%
Koolauloa-Koolaupoko	0.0%	24.9%	12.2%	18.8%	8.9%	13.7%
Rural Oahu	0.0%	0.0%	9.7%	0.0%	11.9%	6.4%
Oahu-district unknown	0.0%	34.1%	1.6%	13.7%	8.3%	8.9%
South Kona to Ka'u	0.0%	0.0%	0.0%	.0%	.0%	0.0%
Puna	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
North & South Hilo	0.0%	12.8%	1.2%	0.0%	15.8%	5.0%
North Hawai'i	49.0%	33.0%	0.0%	13.7%	7.5%	10.5%
North Kona	0.0%	19.7%	0.0%	0.0%	2.4%	2.4%
Hawai'i-district unknown	0.0%	0.0%	5.0%	.0%	0.0%	2.1%
Hana	0.0%	.0%	2.4%	0.0%	0.0%	1.0%
Makawao-Pukalani-Kula	49.0%	0.0%	12.8%	7.3%	14.3%	12.4%
Wailuku-Kahului	49.0%	0.0%	3.2%	4.0%	0.0%	4.7%
Pa'ia-Haiku	0.0%	0.0%	5.7%	0.0%	.0%	2.3%
Kihei-Makena	0.0%	.0%	2.4%	.0%	0.0%	1.0%
West Maui	0.0%	0.0%	8.4%	.0%	.0%	3.4%
Moloka'i	0.0%	0.0%	0.0%	3.3%	8.5%	2.5%
Lāna'i	0.0%	0.0%	.0%	13.7%	0.0%	3.3%
Maui-district unknown	0.0%	0.0%	5.0%	0.0%	17.7%	5.7%
Waimea	0.0%	0.0%	0.0%	0.0%	3.4%	.7%
Hanapepe-Eleele	0.0%	0.0%	2.6%	0.0%	.0%	1.1%
Koloa-Poipu-Kalaheo	0.0%	0.0%	0.0%	0.0%	14.9%	3.1%
Lihue	0.0%	0.0%	3.4%	.0%	0.0%	1.4%
East Kauai	0.0%	0.0%	13.5%	0.0%	.0%	5.5%
North Shore Kauai	0.0%	0.0%	2.3%	.0%	0.0%	0.9%
Kauai-district unknown	0.0%	0.0%	11.1%	0.0%	0.0%	4.5%
Out-of-State Resident	0.0%	0.0%	9.0%	5.9%	.0%	5.1%
Refused	0.0%	0.0%	6.1%	0.0%	.0%	2.5%
Total Effective Demand Renters	485	1,291	4,685	1,099	2,403	9,963

Source: Hawai'i Demand Survey, 2019

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Table K-11. Current and Affordable Housing Payment, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
AVERAGE CURRENT MORTGAGE AMOUNT						
Single-family	$1,132	$1,136	$1,307	$1,867	$2,235	$1,507
Multifamily	$920	$1,645	$779	$1,243	$1,420	$1,292
Other	$679	$350	$260	$1,094	$650	$653
Not reported						
AVERAGE CURRENT RENT AMOUNT						
Studio		$912	$728	$881	$1,065	$898
One bedroom	$726	$602	$654	$1,096	$1,168	$838
Two bedrooms	$1,165	$1,105	$1,219	$1,254	$1,510	$1,274
Three bedrooms	$1,491	$1,405	$1,375	$1,753	$2,130	$1,586
Four bedrooms	$815	$650	$2,008	$1,749	$1,808	$1,692
Five bedrooms	$1,197	$1,747	$887		$950	$1,170
Six bedrooms						
DK						
AFFORDABLE MORTGAGE PAYMENT						
Less than $500	13.0%	3.1%	1.2%	5.6%	3.7%	3.9%
$500 to $799	20.7%	23.9%	10.4%	13.4%	7.7%	14.0%
$800 to $1,099	10.8%	17.2%	12.5%	9.0%	6.8%	11.4%
$1,100 to $1,399	10.3%	14.1%	20.6%	12.0%	9.1%	14.1%
$1,400 to $1,699	7.4%	19.6%	24.8%	13.2%	17.6%	18.6%
$1,700 to $1,999	14.7%	5.1%	6.8%	9.3%	16.8%	10.0%
$2,000 to $2,999	11.4%	4.2%	15.9%	27.4%	25.2%	17.1%
$3,000 to $3,999	6.5%	7.2%	6.5%	8.9%	6.7%	7.1%
$4,000 or more	5.1%	5.7%	1.4%	1.2%	6.5%	3.9%
AVERAGE AFFORDABLE MORTGAGE	$1,551	$1,543	$1,648	$1,770	$2,007	$1,725
AFFORDABLE RENT PAYMENT						
Less than $300	0.0%	6.5%	19.0%	0.0%	0.0%	9.2%
$300 to $499	10.0%	32.3%	10.5%	0.0%	4.8%	10.1%
$500 to $799	0.0%	16.1%	15.8%	6.2%	14.2%	13.2%
$800 to $1,099	10.5%	36.5%	19.7%	43.4%	20.0%	25.6%
$1,100 to $1,399	36.9%	2.3%	9.9%	10.1%	24.8%	13.4%
$1,400 to $1,699	42.6%	6.2%	10.0%	15.7%	16.1%	13.1%
$1,700 to $1,999	0.0%	0.0%	2.6%	7.5%	7.9%	4.2%
$2,000 to $2,499	0.0%	0.0%	4.6%	13.5%	12.3%	7.1%
$2,500 to $2,999	0.0%	0.0%	0.0%	2.2%	0.0%	.4%
$3,000 to $3,999	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
$4,000 or more	0.0%	0.0%	1.9%	0.0%	0.0%	.8%
Not sure	0.0%	0.0%	6.1%	1.5%	0.0%	2.9%
AVERAGE AFFORDABLE RENT	$1,261	$716	$858	$1,343	$1,283	$1,041

Source: Hawai'i Demand Survey, 2019

Table K-12. Down Payment and Real Estate Ownership, County and Districts of Hawai'i, 2019

	Hawai'i Districts					
	South Kona to Ka'u	Puna	North and South Hilo	North Hawai'i	North Kona	Total
AMOUNT AVAILABLE FOR DOWN PAYMENT						
None	3.4%	15.1%	6.8%	13.7%	2.4%	8.3%
Less than $25,000	35.4%	27.6%	24.1%	35.4%	23.2%	27.3%
$25,000 to $49,999	6.6%	8.6%	15.3%	8.4%	4.0%	9.5%
$50,000 to $74,999	17.3%	5.2%	13.4%	10.4%	10.0%	10.7%
$75,000 to $99,999	0.0%	10.4%	4.4%	7.6%	8.5%	6.8%
$100,000 to $149,999	12.7%	4.2%	6.8%	7.3%	6.9%	6.8%
$150,000 to $199,999	0.0%	.7%	1.1%	0.0%	3.3%	1.3%
$200,000 to $299,999	0.0%	8.2%	.6%	4.0%	6.7%	4.1%
$300,000 to $399,999	0.0%	5.4%	3.9%	0.0%	10.1%	4.7%
$400,000 or more	7.2%	5.8%	5.7%	4.7%	15.3%	7.9%
Not sure	17.5%	8.8%	17.9%	8.4%	9.5%	12.5%
OWN OTHER RESIDENTIAL PROPERTY						
Yes	10.1%	13.6%	15.7%	10.6%	10.8%	13.0%
No	89.9%	86.4%	84.3%	89.4%	89.2%	87.0%

Source: Hawai'i Demand Survey, 2019

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APPENDIX L: COUNTY AND DISTRICTS TABLES – KAUA'I COUNTY

Tables presented in Appendix L, referred to in prior iterations of HHPS as the "B Tables" or "County Districts Tables," provide detailed demographic and housing-related data for the County and its districts. This data is taken from the Housing Demand Survey 2019.

Table L-1. Unit Descriptions, County and Districts of Kaua'i, 2019

	Kaua'i County						
	Waimea	Hanapepe-'Ele'ele	Koloa-Po'ipu-Kalaheo	Lihue	East Kaua'i	North Shore-Kaua'i	Total
TOTAL HOUSEHOLDS	2,544	2,844	2,260	5,433	6,364	3,118	22,563
TENANCY							
Own	61.6%	72.6%	54.8%	58.0%	65.2%	64.4%	62.9%
Rent	35.8%	27.1%	39.4%	38.6%	32.1%	35.1%	34.6%
Other	2.5%	.4%	5.7%	3.4%	2.7%	.5%	2.5%
UNIT TYPE							
Single-family house	91.0%	89.8%	64.6%	61.2%	84.8%	77.3%	77.4%
Townhouse	0.0%	.6%	0.0%	4.9%	.8%	1.9%	1.8%
Condominium	1.3%	0.0%	11.2%	9.7%	4.5%	7.3%	5.9%
Duplex/multiplex	0.0%	3.3%	2.8%	2.5%	3.7%	2.4%	2.7%
Apartment	3.5%	2.7%	11.1%	16.0%	2.8%	4.3%	7.1%
Co-op	.3%	0.0%	0.0%	.5%	0.0%	1.9%	.4%
Other	4.0%	3.6%	10.3%	5.2%	3.3%	4.9%	4.8%
NUMBER OF BEDROOMS							
Studio or One	8.1%	6.0%	19.6%	18.3%	12.8%	19.4%	14.4%
Two	11.5%	9.9%	20.9%	21.5%	22.0%	21.2%	18.9%
Three	56.4%	57.0%	41.8%	47.6%	47.8%	44.2%	48.8%
Four plus	24.0%	27.1%	17.7%	12.6%	17.4%	15.2%	18.0%
NUMBER OF BATHROOMS							
One	20.9%	19.3%	32.8%	31.2%	31.5%	31.5%	28.8%
One and one-half	7.6%	5.1%	7.6%	7.4%	6.7%	2.1%	6.2%
Two	55.4%	35.9%	29.5%	35.2%	38.1%	30.7%	37.2%
Two and one-half	4.8%	10.4%	9.5%	9.2%	3.5%	6.5%	6.9%
Three	6.5%	21.8%	12.4%	10.0%	14.7%	22.2%	14.3%
Three and one-half	.6%	3.7%	2.2%	1.3%	2.5%	2.2%	2.1%
Four or more	4.2%	3.7%	6.1%	5.7%	3.0%	4.9%	4.4%

Source: Housing Demand Survey, 2019.

Table L-2. Households Demographics, County and Districts of Kauaʻi, 2019

	Kaua'i County						
	Waimea	Hanapepe-'Ele'ele	Koloa-Po'ipu-Kalaheo	Līhuʻe	East Kaua'i	North Shore-Kaua'i	Total
TOTAL HOUSEHOLDS	2,544	2,844	2,260	5,433	6,364	3,118	22,563
YEARS IN CURRENT UNIT							
Less than 1 year	.8%	1.5%	12.0%	6.1%	6.0%	3.4%	5.1%
1 to 5 years	20.8%	17.6%	22.0%	32.1%	26.2%	44.4%	28.0%
6 to 10 years	13.5%	19.9%	14.1%	15.8%	13.5%	11.6%	14.7%
More than 10 years	64.8%	61.0%	51.9%	46.0%	54.3%	40.6%	52.2%
HOUSEHOLD TYPES							
Single Member	17.3%	19.1%	35.0%	29.8%	19.9%	19.0%	23.3%
Married couple, no children	20.8%	25.8%	33.2%	17.2%	27.4%	35.5%	25.7%
Parent(s) & children	19.7%	8.1%	8.5%	17.4%	10.3%	13.8%	13.1%
Unrelated Roommates	5.4%	6.5%	1.6%	3.1%	7.5%	8.5%	5.6%
Multiple Families	36.4%	39.8%	21.7%	32.5%	34.8%	23.2%	32.1%
Parent(s) and Adult Child(ren)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Undetermined	.3%	.7%	0.0%	0.0%	0.0%	0.0%	.1%
KIDS IN HOUSEHOLD							
No children	65.6%	69.0%	85.1%	62.8%	74.6%	80.4%	71.9%
At least 1 child	34.4%	31.0%	14.9%	37.2%	25.4%	19.6%	28.1%
SENIORS IN HOUSEHOLD							
Single Person HH 60+	16.1%	16.1%	16.7%	16.3%	11.9%	13.6%	14.7%
2+ HH Members, All 60+	27.6%	19.0%	17.2%	10.5%	17.8%	21.8%	17.8%
2+ HH Members, Only Some 60+	24.2%	24.1%	22.0%	21.4%	28.8%	19.8%	24.0%
No HH Members 60+	32.0%	40.8%	44.2%	51.8%	41.5%	44.9%	43.6%

Source: Housing Demand Survey, 2019.

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Table L-3. Financial Characteristics, County and Districts of Kauaʻi, 2019

	Kaua'i County						
	Waimea	Hanapepe-'Ele'ele	Koloa-Po'ipu-Kalaheo	Līhuʻe	East Kaua'i	North Shore-Kaua'i	Total
TOTAL HOUSEHOLDS	2,544	2,844	2,260	5,433	6,364	3,118	22,563
HOUSEHOLD INCOME							
Less than $15,000	13.7%	10.1%	7.6%	8.6%	8.1%	7.4%	9.0%
$15,000 to $24,999	4.1%	9.7%	5.4%	5.8%	5.0%	6.6%	5.9%
$25,000 to $49,999	21.3%	15.2%	11.2%	17.0%	22.8%	20.5%	18.9%
$50,000 to $74,999	15.0%	15.4%	16.1%	18.1%	15.5%	14.1%	15.8%
$75,000 to $99,999	11.3%	23.7%	15.7%	14.1%	13.0%	13.8%	14.9%
More than $100,000	34.6%	25.9%	44.0%	36.4%	35.6%	37.5%	35.5%
HUD INCOME LEVELS							
30% or less	21.7%	21.5%	12.7%	19.0%	12.2%	15.3%	16.6%
30-50%	9.5%	5.5%	10.4%	11.5%	13.2%	13.6%	11.2%
50-80%	15.9%	16.9%	7.3%	15.2%	21.2%	17.3%	16.7%
80-120%	11.6%	5.9%	3.6%	7.3%	5.9%	4.3%	6.4%
120-140%	10.3%	20.2%	10.9%	14.4%	12.9%	5.7%	12.7%
Over 140%	30.9%	29.9%	55.1%	32.5%	34.6%	43.9%	36.4%
SHELTER-TO-INCOME RATIO							
No shelter cost	22.3%	23.6%	26.2%	14.0%	14.6%	11.3%	17.2%
Under 30%	36.5%	40.7%	39.0%	39.0%	38.1%	36.3%	38.3%
30-40%	16.8%	8.2%	8.6%	7.6%	9.4%	16.5%	10.5%
Over 40%	12.0%	19.5%	22.0%	24.4%	29.6%	31.0%	24.5%
Not enough info	12.4%	8.1%	4.1%	14.9%	8.3%	4.9%	9.4%

Source: Housing Demand Survey, 2019.

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Table L-4. Doubling Up, Crowding, and Hidden Homeless, County and Districts of Kaua'i, 2019

	Kaua'i County						
	Waimea	Hanapepe-'Ele'ele	Koloa-Po'ipu-Kalaheo	Līhu'e	East Kaua'i	North Shore-Kaua'i	Total
TOTAL HOUSEHOLDS	2,544	2,844	2,260	5,433	6,364	3,118	22,563
HH THAT ARE DOUBLED UP							
No	81.3%	80.7%	96.3%	83.1%	84.2%	91.9%	85.5%
Yes	18.7%	19.3%	3.7%	16.9%	15.8%	8.1%	14.5%
PERSON PER BEDROOM							
Less than 2 persons per bedroom	92.7%	97.1%	90.0%	80.5%	89.1%	82.9%	87.8%
2 or more persons per bedroom	7.3%	2.9%	10.0%	19.5%	10.9%	17.1%	12.2%
HH THAT ARE CROWDED, DOUBLED UP, OR BOTH							
None of these	75.2%	79.9%	87.6%	76.5%	77.5%	79.7%	78.6%
Crowded, Doubled Up, or Both	24.8%	20.1%	12.4%	23.5%	22.5%	20.3%	21.4%
HIDDEN HOMELESS AND AT RISK OF HOMELESSNESS							
At Risk for Homelessness	15.7%	16.7%	10.3%	11.7%	9.0%	11.7%	11.9%
Hidden Homeless	11.4%	12.5%	7.4%	20.8%	21.3%	12.8%	16.4%
At Risk and Includes Hidden Homeless	3.6%	3.1%	2.2%	1.9%	3.0%	.7%	2.4%
Has Adequate Housing	69.3%	67.8%	80.0%	65.6%	66.7%	74.8%	69.3%

Source: Housing Demand Survey, 2019.

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Table L-5. Intention to Move, County and Districts of Kaua‘i, 2019

	Kaua'i County						
	Waimea	Hanapepe-'Ele'ele	Koloa-Po'ipu-Kalaheo	Līhu‘e	East Kaua'i	North Shore-Kaua'i	Total
TOTAL HOUSEHOLDS	2,544	2,844	2,260	5,433	6,364	3,118	22,563
WANT TO MOVE							
Yes	13.8%	26.8%	36.3%	22.7%	34.1%	30.4%	27.8%
No	86.2%	73.2%	63.7%	77.3%	65.9%	69.6%	72.2%
FINAL DEMAND MOVERS	350	761	819	1,233	2,167	947	6,278
SOONEST WILL MOVE							
in one year	26.8%	17.6%	42.4%	21.2%	30.4%	32.4%	28.7%
in two years	19.7%	8.4%	9.0%	22.6%	22.9%	16.4%	18.1%
3 to 5 years	16.2%	27.6%	25.6%	34.4%	27.4%	32.1%	28.7%
more than 5 years	37.2%	46.4%	23.0%	21.8%	19.2%	19.0%	24.5%
Not sure when	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Moving in Hawai'i or Not Sure	70.7%	72.7%	87.5%	79.5%	76.3%	83.1%	78.7%
Moving Out-of-State	29.3%	27.3%	12.5%	20.5%	23.7%	16.9%	21.3%

Source: Housing Demand Survey, 2019

[a] Final Demand Movers are those who will move and have an idea about the time frame of their move.
[b] Effective Demand Movers are those who will move, have an idea about the time frame of their move, and plan to remain in the State of Hawai'i when they move.

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Table L-6. Mover Tenancy Preferences, County and Districts of Kauaʻi, 2019

	Kaua'i County						
	Waimea	Hanapepe-'Ele'ele	Koloa-Po'ipu-Kalaheo	Līhuʻe	East Kaua'i	North Shore-Kaua'i	Total
EFFECTIVE DEMAND MOVERS	256	554	717	980	1,653	787	4,946
PLANNED NEXT TENANCY							
Own	3.3%	66.7%	17.5%	47.0%	44.1%	50.6%	42.3%
Rent	96.7%	33.3%	82.5%	53.0%	55.9%	49.4%	57.7%
CERTAIN TO BUY							
certain to Buy	100.0%	93.9%	38.2%	94.3%	89.0%	84.8%	78.8%
Might Have to Rent	0.0%	6.1%	61.8%	5.7%	11.0%	15.2%	21.2%
Not Sure	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
WOULD BUY IF AFFORDABLE							
Yes	58.2%	89.9%	90.5%	100.0%	93.7%	74.7%	89.8%
No	15.0%	10.1%	9.5%	0.0%	2.7%	25.3%	7.0%
Not Sure	26.8%	0.0%	0.0%	0.0%	3.6%	0.0%	3.3%

Source: Housing Demand Survey, 2019
Base for Preferred Next Tenancy is all effective demand households.
Base for Certain to Buy is all effective demand households that prefer to purchase their next home.
Base for Would Buy If Affordable is all effective demand households that prefer to rent their next home.

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Table L-7. Buyer Unit Preferences, County and Districts of Kauaʻi, 2019

	Kaua'i County						
	Waimea	Hanapepe-'Ele'ele	Koloa-Po'ipu-Kalaheo	Līhuʻe	East Kaua'i	North Shore-Kaua'i	Total
TOTAL BUYER HOUSEHOLDS	133	387	503	782	826	686	3317
PREFERRED UNIT TYPE							
SFD	100.0%	57.0%	71.8%	92.4%	76.7%	72.9%	77.5%
Townhouse	0.0%	20.3%	27.0%	0.0%	0.0%	0.0%	6.5%
Condo	0.0%	9.4%	0.0%	1.8%	7.4%	8.3%	5.1%
Apt	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	.5%
Other	0.0%	0.0%	1.2%	0.0%	6.6%	2.7%	2.4%
DK	0.0%	13.3%	0.0%	3.7%	9.4%	16.1%	8.1%
PREFERRED NUMBER OF BEDROOMS							
0 - None - studio	0.0%	0.0%	0.0%	0.0%	12.3%	0.0%	3.1%
1 - One	0.0%	0.0%	0.0%	2.2%	16.0%	0.0%	4.5%
2 - Two	0.0%	9.4%	66.4%	5.5%	14.8%	29.3%	22.2%
3 - Three	6.4%	49.3%	33.6%	57.8%	46.2%	53.2%	47.2%
4 - Four	93.6%	36.5%	0.0%	26.5%	4.0%	10.5%	17.4%
5 - Five or more	0.0%	4.8%	0.0%	7.9%	6.6%	7.1%	5.5%
MINIMUM ACCEPTABLE BEDROOMS							
0 - None - studio	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1 - One	0.0%	11.2%	0.0%	12.6%	0.0%	22.1%	10.6%
2 - Two	36.2%	24.5%	43.4%	41.9%	62.8%	47.8%	43.7%
3 - Three	24.7%	58.9%	56.6%	42.8%	24.0%	23.9%	38.0%
4 - Four	39.1%	0.0%	0.0%	2.7%	2.7%	6.2%	5.0%
5 - Five or more	0.0%	5.3%	0.0%	0.0%	10.5%	0.0%	2.6%
PREFERRED NUMBER OF BATHROOMS							
1 - One	0.0%	0.0%	0.0%	14.8%	23.0%	13.2%	11.9%
2 - One and one-half	29.8%	10.2%	0.0%	6.4%	13.9%	0.0%	7.3%
3 - Two	31.2%	64.7%	100.0%	33.0%	36.6%	42.5%	49.7%
4 - Two and one-half	0.0%	20.3%	0.0%	25.4%	13.4%	16.8%	15.2%
5 - Three	39.1%	0.0%	0.0%	15.1%	3.9%	24.9%	11.2%
6 - Three and one-half	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	.4%
7 - Four or more	0.0%	4.8%	0.0%	5.3%	7.8%	2.7%	4.3%
MINIMUM ACCEPTABLE BATHROOMS							
1 - One	64.8%	28.0%	57.4%	32.0%	25.7%	47.8%	40.2%
2 - One and one-half	0.0%	10.5%	0.0%	5.1%	28.5%	17.8%	11.4%
3 - Two	35.2%	56.2%	42.6%	59.4%	26.7%	30.1%	42.7%
4 - Two and one-half	0.0%	5.3%	0.0%	3.5%	2.8%	0.0%	2.0%
5 - Three	0.0%	0.0%	0.0%	0.0%	16.2%	4.3%	3.7%
6 - Three and one-half	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7 - Four or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Housing Demand Survey, 2019

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Table L-8. Renter Unit Preferences, County and Districts of Kaua'i, 2019

	Kaua'i County						
	Waimea	Hanapepe-'Ele'ele	Koloa-Po'ipu-Kalaheo	Līhu'e	East Kaua'i	North Shore-Kaua'i	Total
TOTAL RENTER HOUSEHOLDS	110	233	167	743	1,063	447	2,764
PREFERRED UNIT TYPE							
SFD	100.0%	57.0%	71.8%	92.4%	76.7%	72.9%	77.5%
Townhouse	0.0%	20.3%	27.0%	0.0%	0.0%	0.0%	6.5%
Condo	0.0%	9.4%	0.0%	1.8%	7.4%	8.3%	5.1%
Apt	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	.5%
Other	0.0%	0.0%	1.2%	0.0%	6.6%	2.7%	2.4%
DK	0.0%	13.3%	0.0%	3.7%	9.4%	16.1%	8.1%
PREFERRED NUMBER OF BEDROOMS							
0 - None - studio	0.0%	0.0%	0.0%	0.0%	12.3%	0.0%	3.1%
1 - One	0.0%	0.0%	0.0%	2.2%	16.0%	0.0%	4.5%
2 - Two	0.0%	9.4%	66.4%	5.5%	14.8%	29.3%	22.2%
3 - Three	6.4%	49.3%	33.6%	57.8%	46.2%	53.2%	47.2%
4 - Four	93.6%	36.5%	0.0%	26.5%	4.0%	10.5%	17.4%
5 - Five or more	0.0%	4.8%	0.0%	7.9%	6.6%	7.1%	5.5%
MINIMUM ACCEPTABLE BEDROOMS							
0 - None - studio	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1 - One	0.0%	11.2%	0.0%	12.6%	0.0%	22.1%	10.6%
2 - Two	36.2%	24.5%	43.4%	41.9%	62.8%	47.8%	43.7%
3 - Three	24.7%	58.9%	56.6%	42.8%	24.0%	23.9%	38.0%
4 - Four	39.1%	0.0%	0.0%	2.7%	2.7%	6.2%	5.0%
5 - Five or more	0.0%	5.3%	0.0%	0.0%	10.5%	0.0%	2.6%
PREFERRED NUMBER OF BATHROOMS							
1 - One	0.0%	0.0%	0.0%	14.8%	23.0%	13.2%	11.9%
2 - One and one-half	29.8%	10.2%	0.0%	6.4%	13.9%	0.0%	7.3%
3 - Two	31.2%	64.7%	100.0%	33.0%	36.6%	42.5%	49.7%
4 - Two and one-half	0.0%	20.3%	0.0%	25.4%	13.4%	16.8%	15.2%
5 - Three	39.1%	0.0%	0.0%	15.1%	3.9%	24.9%	11.2%
6 - Three and one-half	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	.4%
7 - Four or more	0.0%	4.8%	0.0%	5.3%	7.8%	2.7%	4.3%
MINIMUM ACCEPTABLE BATHROOMS							
1 - One	64.8%	28.0%	57.4%	32.0%	25.7%	47.8%	40.2%
2 - One and one-half	0.0%	10.5%	0.0%	5.1%	28.5%	17.8%	11.4%
3 - Two	35.2%	56.2%	42.6%	59.4%	26.7%	30.1%	42.7%
4 - Two and one-half	0.0%	5.3%	0.0%	3.5%	2.8%	0.0%	2.0%
5 - Three	0.0%	0.0%	0.0%	0.0%	16.2%	4.3%	3.7%
6 - Three and one-half	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7 - Four or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Housing Demand Survey, 2019

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Table K-9. Preferred Next Location, BUYERS, County and Districts of Hawai'i, 2019

	Kaua'i County						
	Waimea	Hanapepe-'Ele'ele	Koloa-Po'ipu-Kalaheo	Līhu'e	East Kaua'i	North Shore-Kaua'i	Total
PREFERRED LOCATION OF NEXT UNIT - BUYERS							
Not in designated districts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Primary Urban Center	0.0%	20.5%	0.0%	9.1%	27.1%	12.8%	13.0%
Central O'ahu	0.0%	0.0%	53.4%	0.0%	0.0%	12.8%	14.2%
East Honolulu	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ewa	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Koolauloa-Koolaupoko	0.0%	0.0%	0.0%	9.1%	21.9%	0.0%	6.4%
Rural Oahu	0.0%	0.0%	0.0%	0.0%	24.3%	0.0%	5.3%
Oahu-district unknown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Kona to Ka'u	0.0%	0.0%	25.3%	0.0%	0.0%	0.0%	5.7%
Puna	0.0%	0.0%	0.0%	10.4%	0.0%	0.0%	1.9%
North & South Hilo	0.0%	0.0%	0.0%	10.4%	0.0%	0.0%	1.9%
North Hawai'i	17.8%	0.0%	46.6%	0.0%	0.0%	0.0%	11.2%
North Kona	0.0%	0.0%	0.0%	0.0%	0.0%	27.7%	4.9%
Hawai'i-district unknown	0.0%	0.0%	0.0%	5.6%	0.0%	59.5%	11.6%
Hana	0.0%	0.0%	0.0%	10.3%	0.0%	0.0%	1.9%
Makawao-Pukalani-Kula	0.0%	44.2%	0.0%	43.4%	0.0%	0.0%	14.8%
Wailuku-Kahului	0.0%	44.2%	0.0%	26.6%	3.8%	0.0%	12.6%
Pa'ia-Haiku	0.0%	0.0%	0.0%	14.5%	0.0%	0.0%	2.6%
Kihei-Makena	0.0%	0.0%	21.3%	0.0%	0.0%	0.0%	4.8%
West Maui	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Moloka'i	0.0%	0.0%	0.0%	0.0%	0.0%	31.8%	5.6%
Lāna'i	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Maui-district unknown	0.0%	44.2%	0.0%	15.3%	2.3%	31.8%	15.8%
Waimea	0.0%	0.0%	0.0%	0.0%	.0%	0.0%	0.0%
Hanapepe-Eleele	82.2%	0.0%	0.0%	0.0%	24.6%	0.0%	8.8%
Koloa-Poipu-Kalaheo	.0%	0.0%	0.0%	0.0%	24.6%	0.0%	5.4%
Lihue	82.2%	0.0%	0.0%	0.0%	24.6%	27.7%	13.7%
East Kauai	0.0%	0.0%	0.0%	8.6%	17.9%	27.7%	10.4%
North Shore Kauai	0.0%	0.0%	0.0%	8.6%	.0%	0.0%	1.6%
Kauai-district unknown	0.0%	35.3%	0.0%	8.6%	0.0%	0.0%	7.1%
Out-of-State Resident	0.0%	0.0%	0.0%	.0%	0.0%	0.0%	.0%
Refused	0.0%	0.0%	0.0%	.0%	24.3%	0.0%	5.3%
Total Effective Demand Buyers	41	291	503	473	552	393	2,253

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Table K-10. Preferred Next Location, RENTERS, County and Districts of Hawai'i, 2019

	Kaua'i County						
	Waimea	Hanapepe-'Ele'ele	Koloa-Po'ipu-Kalaheo	Līhu'e	East Kaua'i	North Shore-Kaua'i	Total
PREFERRED LOCATION OF NEXT UNIT - RENTERS							
Not in designated districts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Primary Urban Center	0.0%	39.0%	60.3%	24.1%	30.9%	19.5%	25.2%
Central O'ahu	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
East Honolulu	58.4%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%
Ewa	100.0%	0.0%	0.0%	10.7%	0.0%	0.0%	10.5%
Koolauloa-Koolaupoko	58.4%	0.0%	0.0%	0.0%	17.9%	0.0%	6.9%
Rural Oahu	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Oahu-district unknown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Kona to Ka'u	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	1.1%
Puna	0.0%	0.0%	0.0%	11.2%	0.0%	9.6%	6.9%
North & South Hilo	0.0%	0.0%	0.0%	22.7%	31.1%	21.4%	20.5%
North Hawai'i	0.0%	0.0%	0.0%	3.9%	0.0%	11.7%	4.2%
North Kona	0.0%	0.0%	0.0%	12.0%	0.0%	0.0%	5.3%
Hawai'i-district unknown	0.0%	0.0%	0.0%	0.0%	0.0%	19.1%	4.0%
Hana	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Makawao-Pukalani-Kula	0.0%	37.5%	0.0%	24.2%	0.0%	16.4%	16.6%
Wailuku-Kahului	0.0%	37.5%	39.7%	24.2%	0.0%	16.4%	17.8%
Pa'ia-Haiku	0.0%	0.0%	39.7%	0.0%	0.0%	18.3%	5.0%
Kihei-Makena	0.0%	0.0%	0.0%	0.0%	17.9%	0.0%	3.5%
West Maui	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Moloka'i	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	.0%
Lāna'i	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Maui-district unknown	0.0%	23.6%	0.0%	0.0%	38.0%	0.0%	9.1%
Waimea	0.0%	0.0%	0.0%	0.0%	.0%	0.0%	0.0%
Hanapepe-Eleele	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Koloa-Poipu-Kalaheo	.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lihue	0.0%	0.0%	0.0%	17.7%	0.0%	0.0%	7.8%
East Kauai	0.0%	0.0%	0.0%	17.7%	0.0%	0.0%	7.8%
North Shore Kauai	0.0%	0.0%	0.0%	0.0%	.0%	0.0%	0.0%
Kauai-district unknown	0.0%	0.0%	0.0%	0.0%	0.0%	19.1%	4.0%
Out-of-State Resident	0.0%	0.0%	0.0%	.0%	0.0%	0.0%	.0%
Refused	0.0%	0.0%	0.0%	.0%	0.0%	0.0%	.0%
Total Effective Demand Renters	214	262	214	507	1,101	394	2,692

Source: Housing Demand Survey, 2019

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Table L-11. Current and Affordable Housing Payment, County and Districts of Kaua'i, 2019

	Kaua'i County						
	Waimea	Hanapepe-'Ele'ele	Koloa-Po'ipu-Kalaheo	Līhu'e	East Kaua'i	North Shore-Kaua'i	Total
AVERAGE CURRENT MORTGAGE AMOUNT							
Single Family	$1,961	$1,645	$2,361	$2,355	$2,232	$2,237	$2,155
Multifamily	$1,550		$2,405	$2,084	$1,415	$1,880	$1,946
Other				$2,500			$2,500
AVERAGE CURRENT RENT AMOUNT							
Studio				$765	$672	$807	$731
One bedroom	$280	$1,114	$1,110	$918	$526	$1,411	$986
Two bedrooms	$725	$1,001	$1,442	$1,749	$1,859	$2,327	$1,673
Three bedrooms	$1,306	$1,604	$2,740	$2,249	$1,560	$3,300	$1,907
Four bedrooms	$2,500	$4,000	$950	$1,415	$2,377	$3,077	$2,363
Five bedrooms	$1,410		$350				$1,219
AFFORDABLE MORTGAGE PAYMENT							
Less than $500				10.1%	17.2%	4.2%	7.5%
$500 to $799			28.4%	5.7%			6.1%
$800 to $1,099			3.1%	2.5%	1.5%	4.2%	2.4%
$1,100 to $1,399				11.0%	12.3%		5.7%
$1,400 to $1,699		19.7%	11.3%	9.3%	8.9%	0.8%	8.3%
$1,700 to $1,999			23.6%	14.6%	4.6%	4.9%	9.8%
$2,000 to $2,999	1000.0%	65.7%	13.5%	38.0%	35.5%	55.8%	42.3%
$3,000 to $3,999		14.6%	200.0%	8.8%	12.0%	25.8%	15.1%
$4,000 or more					8.0%	4.2%	2.7%
AVERAGE AFFORDABLE MORTGAGE	$2,500	$2,458	$1,865	$1,896	$2,140	$2,662	$2,185
AFFORDABLE RENT PAYMENT							
Less than $300			9.5%				0.6%
$300 to $499	26.8%	15.8%		4.5%	5.0%		5.6%
$500 to $799	12.6%		6.3%	8.3%		2.2%	3.3%
$800 to $1,099				16.1%	22.6%	24.3%	17.0%
$1,100 to $1,399		7.1%		15.6%	18.2%		11.7%
$1,400 to $1,699	45.6%	24.2%	12.6%	17.6%	27.6%	14.3%	22.4%
$1,700 to $1,999				23.5%	6.6%	14.0%	10.7%
$2,000 to $2,499			30.7%	2.3%	11.8%	6.3%	8.2%
$2,500 to $2,999		13.0%			2.1%		2.0%
$3,000 to $3,999		10.3%	40.9%	8.2%	3.9%	23.7%	11.0%
$4,000 or more					2.1%		0.8%
Not sure	15.0%	29.7%		3.9%		15.2%	6.7%
AVERAGE AFFORDABLE RENT	$1,053	$1,768	$2,372	$1,525	$1,505	$2,000	$1,645

Source: Housing Demand Survey, 2019

Note. Base for Average Current Mortgage is current owners who specified the amount of their current monthly mortgage payment. Base for Average Current Rent is current renters who specified the amount of their current monthly rent payment. Base for Affordable Mortgage Payment is effective demand movers who plan to purchase their next home. Base for Affordable Rent Payment is effective demand movers who plan to rent their next home.

Table L-12. Down Payment and Real Estate Ownership, County and Districts of Kaua'i, 2019

		Kaua'i County						
		Waimea	Hanapepe-Eleele	Koloa-Poipu-Kalaheo	Lihue	East Kauai	North Shore-Kauai	Total
AMOUNT AVAILABLE FOR DOWN PAYMENT								
	None	0.0%	0.0%	0.0%	14.3%	9.8%	0.0%	5.8%
	Less than $25,000	39.1%	41.1%	27.0%	33.0%	26.0%	4.4%	25.6%
	$25,000 to $49,999	0.0%	0.0%	1.8%	12.2%	0.0%	11.7%	5.6%
	$50,000 to $74,999	24.7%	0.0%	0.0%	10.6%	0.0%	8.9%	5.3%
	$75,000 to $99,999	0.0%	4.4%	52.3%	1.5%	7.3%	18.7%	14.5%
	$100,000 to $149,999	0.0%	0.0%	12.8%	4.1%	6.6%	0.0%	4.5%
	$150,000 to $199,999	0.0%	13.3%	0.0%	5.8%	0.0%	8.0%	4.6%
	$200,000 to $299,999	0.0%	0.0%	0.0%	0.0%	9.3%	8.1%	4.0%
	$300,000 to $399,999	0.0%	14.2%	0.0%	5.1%	1.8%	8.1%	5.0%
	$400,000 or more	0.0%	0.0%	0.0%	10.8%	9.7%	25.1%	10.1%
	Don't know	36.2%	10.2%	6.1%	2.6%	29.5%	7.1%	13.0%
	Refused	0.0%	16.9%	0.0%	0.0%	0.0%	0.0%	2.0%
OWN OTHER RESIDENTIAL PROPERTY								
	Yes	13.6%	16.8%	14.6%	15.6%	11.4%	19.3%	14.7%
	No	86.4%	83.2%	85.4%	82.7%	88.6%	80.7%	84.8%

Source: Housing Demand Survey, 2019