



Commuter- adjusted Population in Hawaii

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RESEARCH AND ECONOMIC ANALYSIS DIVISION

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STATE OF HAWAII

This publication is produced by the Research and Economic Analysis Division (READ) of the Department of Business, Economic Development & Tourism (DBEDT), State of Hawaii. It was prepared by Giovanni Vila and Carlie Liddell, Research Statisticians, and Kylie Carpenter, student intern.

Interactive maps of the population changes and other related indicators can be views at <https://experience.arcgis.com/experience/1c91e4607f564b3185cf0967f6453f5c>.

The data presented in this report are based on the U.S. Census Bureau's 2018-2022 American Survey, a sample survey, and subject to sampling and non-sampling errors.

Introduction

The **commuter-adjusted population** is a measure of the number of people who are typically present in an area during normal (daytime) business hours. It includes residents and commuters from outside the area but does not include tourists, students, or shoppers coming into an area. This measure is crucial for various community planning needs, such as identifying a sustained customer base for businesses, understanding traffic flows, and allocating disaster relief resources.

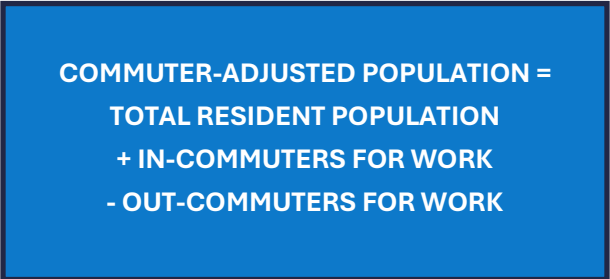
To help with these and other planning questions, we addressed the following questions in this report: *“What areas expand and contract during the daytime?”* and *“What percentage of workers commute into and out of their place of residency each day?”*

The report used data from the U.S. Census Bureau’s 2018-2022 American Community Survey. The data are five-year averages of the survey responses collected between January 1, 2018 and December 31, 2022. The impact of the Maui wildfires is not captured here, as the data predate the disaster.

To delineate areas, we use Census Designated Places (CDPs or Places), which are statistical geographies representing closely settled, unincorporated communities that are locally recognized and identified by name. Due to space limitations and large margins of error, not all places may be shown in the included tables and analysis. However, all CDPs are included in the heatmaps.

Overview of commuter-adjusted population estimates

We estimated the commuter-adjusted population by using the total resident population in an area as the base estimate then adding in-commuters and subtracting out-commuters. In-commuters are people traveling into the area for work and out-commuters are residents leaving the area to go to work. For these estimates, workers include people 16 years and over who were employed either full- or part-time and were at work during the reference week. Due to data limitations, daytime population changes caused by other groups of people, such as students, shoppers, and tourists, were not included.


$$\begin{aligned} \text{COMMUTER-ADJUSTED POPULATION} &= \\ &\text{TOTAL RESIDENT POPULATION} \\ &+ \text{IN-COMMUTERS FOR WORK} \\ &- \text{OUT-COMMUTERS FOR WORK} \end{aligned}$$

For each county, information on daytime population patterns is displayed in two tables. Table 1 includes the resident and commuter-adjusted daytime populations, as well as information about how many people are commuting into and out of a Place for work. Table 2 includes measures of daytime population change, including the percent change from the resident population, the percentage of workers living and working in the same Place, and the Employment/Working Resident (E-WR) ratio.

The Employment/Working Resident ratio takes the total number of workers working in an area and divides it by the number of workers living in that area. It acts as a proxy for the balance between the number of jobs and the number of workers in each area. An E-WR ratio of more than 1.0 indicates more jobs than workers in an area, and an E-WR of less than 1.0 indicates fewer jobs than workers in an area.

An area with a low percentage of workers living and working in the same place will have a large volume of out-commuters, resulting in a daytime population loss unless the area also offers many work opportunities to draw in-commuters. By the same token, areas with a high percentage of workers living and working in the same place will have fewer out-commuters. These areas are more likely to show a moderate to significant increase in daytime population depending on the size of the work opportunities offered.

A. Honolulu County

Most CDPs in Honolulu County experienced population decline during the normal workday. Many of the CDPs near Ewa had the largest population losses during normal working hours, with areas such as Ewa Gentry, Royal Kunia, and West Loch Estate losing about 45 percent of their total populations during the daytime. In these areas, the percentage of workers living and working in the same place was lower than 10 percent, and the Employment/Working Resident ratio was close to 0, indicating that these areas were almost exclusively residential.

Unlike most other areas near Ewa, the Kapolei CDP experienced population gain during daytime, increasing by about 5 percent due to commuting. About 19 percent of workers in Kapolei lived and worked in the same place, but there were over 10,000 in-commuters to the area on a normal workday. These in-commuters exceeded the number of workers who commuted out of the CDP, leading to an E-WR ratio of 1.1 jobs per working resident.

Workers living on the Windward side of Oahu were mostly out-commuters, with daytime population losses of at least 30 percent in Ahuimanu, Kahaluu, Maunawili, Waimanalo Beach, and Heeia. Kailua and Kaneohe had smaller daytime population losses, bolstered by a fair number of in-commuters and at least 20 percent of their workers living and working in the same place.

There were ten CDPs in Honolulu County that experienced population gain due to commuting. Among those, the island's military areas were well represented. Wheeler Air Force Base (78 percent) and Hickham Housing (66 percent) experienced the largest daytime population increases due to commuters, with both having Employment/Working Resident ratios over 2.0. Among Oahu's military areas, only Schofield Barracks and Kaneohe Base had most of their workers living and working in the same area. However, the population increases for Schofield Barracks (36 percent) and Kaneohe Base (9 percent) were smaller than the other military CDPs, suggesting that these areas had less movement of people overall during the workday.

Ko Olina, a master-planned resort community featuring four hotels, experienced the largest daytime population increase among all CDPs on Oahu. The percentage of workers living and working in the same place was only 17 percent, but Ko Olina's population increased by 182 percent during the daytime due to incoming commuters. The area offered 4.6 times more jobs than workers residing in the area. Kawela Bay, home to Turtle Bay Resort, grew by 72 percent during the daytime due to in-commuters. Almost 30 percent of Kawela Bay's working residents also worked in the CDP, and the area still had 2.5 more jobs than workers residing in the area.

Only in Urban Honolulu did the vast majority of workers, 80 percent, both live in and work in the same area. At the county's urban core, the CDP is home to a variety of different neighborhoods, with both business and residential areas. The area had an Employment/Working Resident ratio of 1.6, and the commuter-adjusted population of the Urban Honolulu CDP was 28 percent more than its resident population in the 2018 to 2022 period.

Figure A. Population change due to commuting (% of resident population), Honolulu County

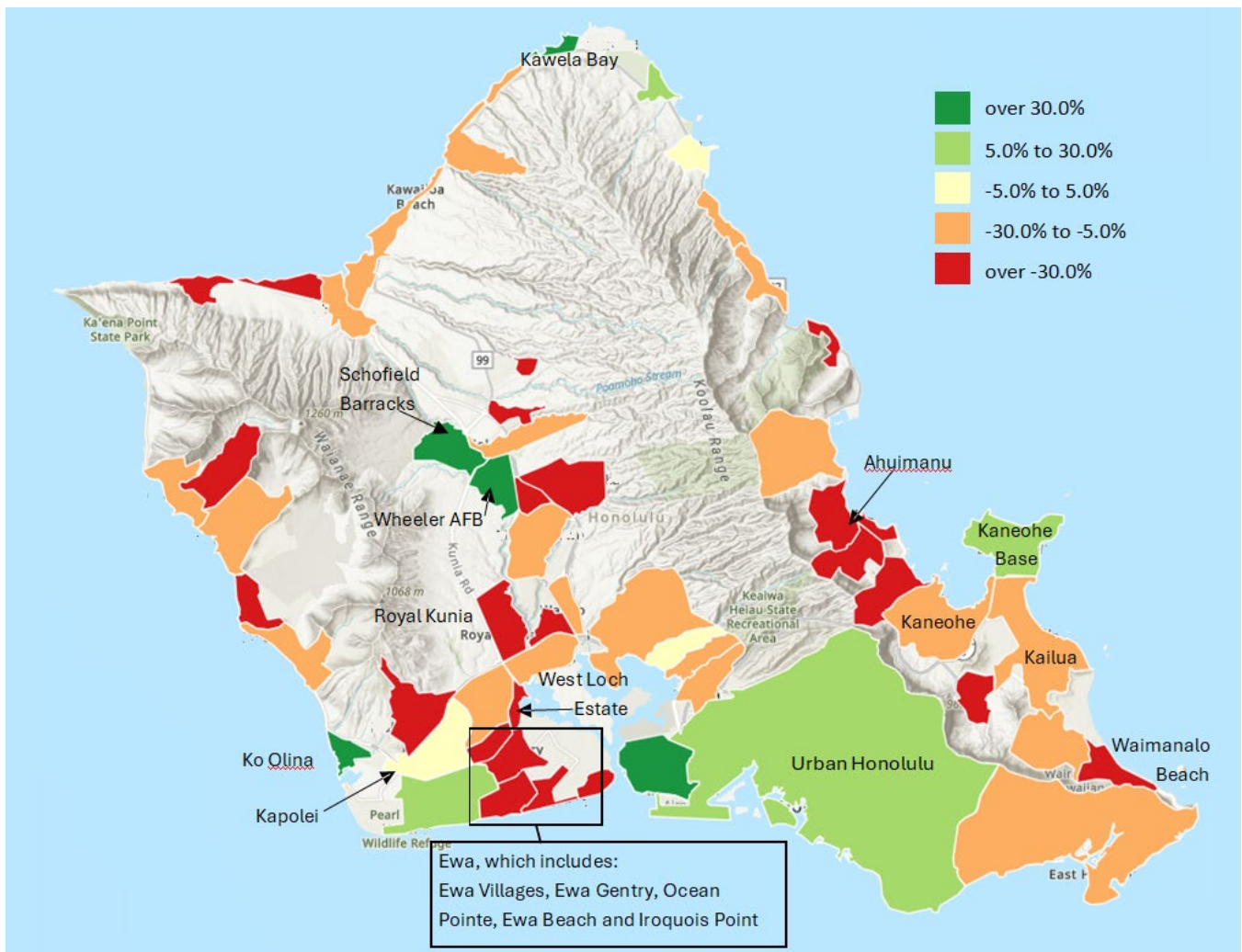


Table A-1. Commuter-adjusted population and workers by CDP, Honolulu County

Census Designated Place (CDP)	Commuter-adjusted population	Resident population	Workers living in the CDP	Workers working in the CDP	People who live & work in the same CDP	Out-commuters	In-commuters
Urban Honolulu	446,910	348,547	178,314	276,677	143,282	35,032	133,395
Pearl City	36,155	46,812	23,243	12,586	4,215	19,028	8,371
East Honolulu	35,866	49,491	23,818	10,193	6,356	17,462	3,837
Waipahu	33,328	39,873	17,945	11,400	2,650	15,295	8,750
Kailua	33,138	40,323	19,838	12,653	5,265	14,573	7,388
Kaneohe	28,509	35,493	17,321	10,337	3,854	13,467	6,483
Schofield Barracks	24,607	18,133	10,645	17,119	7,030	3,615	10,089
Kapolei	23,717	22,701	11,292	12,308	2,164	9,128	10,144
Mililani Town	19,470	27,423	13,461	5,508	1,894	11,567	3,614
Hickam Housing	15,792	9,502	4,822	11,112	2,018	2,804	9,094
Wahiawa	15,601	17,400	8,031	6,232	1,736	6,295	4,496
Ewa Gentry	14,797	27,198	14,390	1,989	765	13,625	1,224
Waimalu	13,392	13,932	7,499	6,959	1,217	6,282	5,742
Mililani Mauka	13,324	21,546	11,944	3,722	1,436	10,508	2,286
Halawa	13,274	14,411	7,238	6,101	649	6,589	5,452
Kaneohe Base	12,762	11,683	7,674	8,753	4,506	3,168	4,247
Makakilo	12,105	21,055	10,649	1,699	1,355	9,294	344
Waianae	11,765	13,749	5,222	3,238	922	4,300	2,316
Ocean Pointe	11,104	16,173	8,129	3,060	997	7,132	2,063
Waipio	10,518	11,138	5,675	5,055	561	5,114	4,494
Ewa Beach	9,906	15,167	7,415	2,154	451	6,964	1,703
Nanakuli	9,360	12,370	4,593	1,583	470	4,123	1,113
Maili	8,090	12,114	4,590	566	297	4,293	269
Aiea	7,939	9,571	4,609	2,977	589	4,020	2,388
Makaha	7,759	10,042	3,299	1,016	546	2,753	470
Royal Kunia	7,680	13,919	7,566	1,327	698	6,868	629
Ahuimanu	5,316	9,177	4,504	643	455	4,049	188
Laie	5,285	5,411	2,675	2,549	1,329	1,346	1,220
Ko Olina	5,268	1,871	933	4,330	159	774	4,171
Waimanalo	4,648	5,743	2,666	1,571	413	2,253	1,158
Waikele	4,516	7,551	4,815	1,780	391	4,424	1,389
Ewa Villages	4,477	6,550	3,025	952	189	2,836	763
East Kapolei	4,366	5,026	2,477	1,817	140	2,337	1,677
Haleiwa	4,134	4,708	2,393	1,819	516	1,877	1,303
Wheeler AFB	3,957	2,219	1,268	3,006	270	998	2,736
Iroquois Point	3,827	5,921	2,433	339	215	2,218	124
Pupukea	3,776	5,130	2,354	1,000	600	1,754	400
West Loch Estate	3,571	6,469	3,158	260	108	3,050	152
Kalaeloa	3,505	2,971	1,464	1,998	212	1,252	1,786
Kahaluu	3,395	5,065	2,439	769	496	1,943	273
Heeia	3,259	4,786	2,523	996	328	2,195	668
Waimanalo Beach	3,023	4,475	1,957	505	193	1,764	312
Waipio Acres	2,861	5,393	2,672	140	130	2,542	10
Hauula	2,630	3,593	1,419	456	225	1,194	231
Whitmore Village	2,490	3,909	1,613	194	48	1,565	146
Kahuku	2,388	2,274	879	993	182	697	811
Waialua	2,342	3,053	1,426	715	258	1,168	457

*The statistics in the table are based on a sample survey and subject to sampling and non-sampling errors.

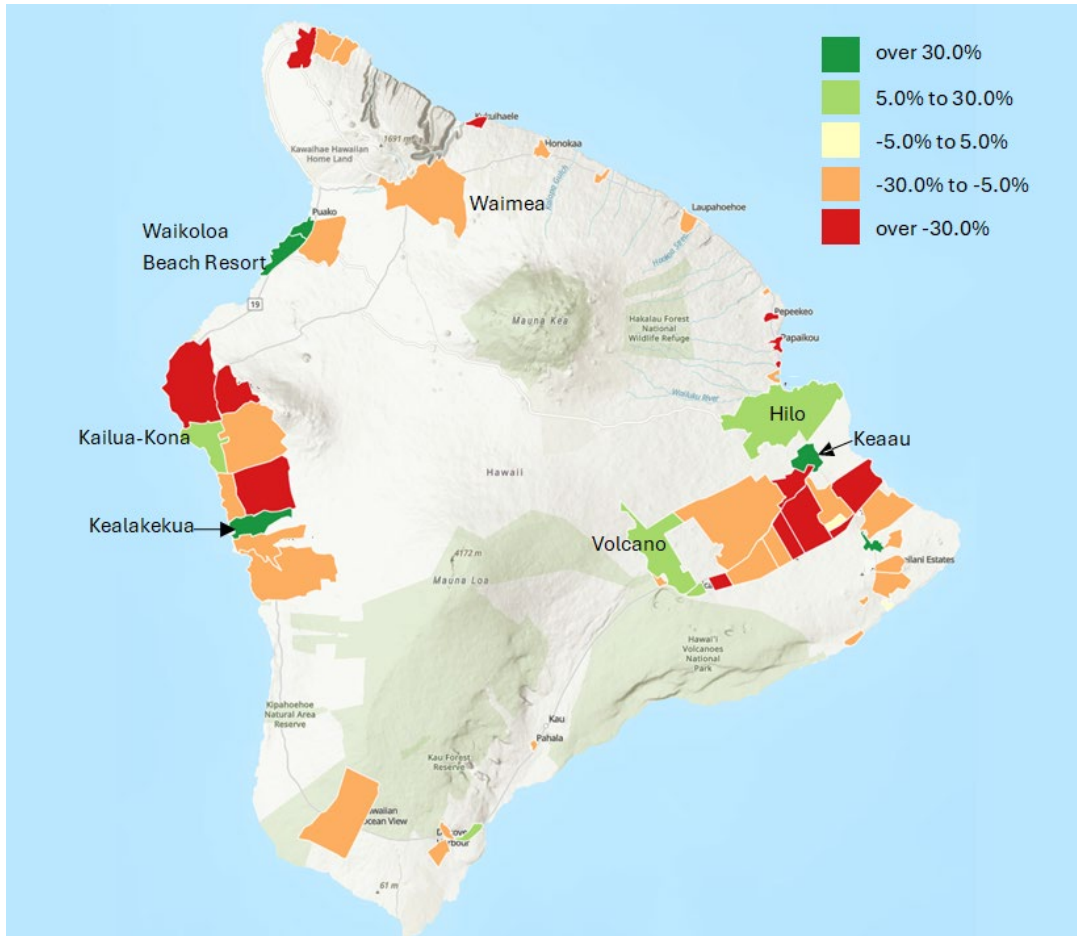
Table A-2. Characteristics of population change by CDP, Honolulu County

Census Designated Place (CDP)	Daytime population change due to commuting (% of resident population)	Workers living & working in the same CDP (% of working residents)	Employment/ Working Resident (E-WR) ratio
Ko Olina	181.6%	17.0%	4.6
Wheeler AFB	78.3%	21.3%	2.4
Hickam Housing	66.2%	41.8%	2.3
Schofield Barracks	35.7%	66.0%	1.6
Urban Honolulu	28.2%	80.4%	1.6
Kalaeloa	18.0%	14.5%	1.4
Kaneohe Base	9.2%	58.7%	1.1
Kahuku	5.0%	20.7%	1.1
Kapolei	4.5%	19.2%	1.1
Laie	-2.3%	49.7%	1.0
Waimalu	-3.9%	16.2%	0.9
Waipio	-5.6%	9.9%	0.9
Halawa	-7.9%	9.0%	0.8
Wahiawa	-10.3%	21.6%	0.8
Haleiwa	-12.2%	21.6%	0.8
East Kapolei	-13.1%	5.7%	0.7
Waianae	-14.4%	17.7%	0.6
Waipahu	-16.4%	14.8%	0.6
Aiea	-17.1%	12.8%	0.6
Kailua	-17.8%	26.5%	0.6
Waimanalo	-19.1%	15.5%	0.6
Kaneohe	-19.7%	22.3%	0.6
Makaha	-22.7%	16.6%	0.3
Pearl City	-22.8%	18.1%	0.5
Waialua	-23.3%	18.1%	0.5
Nanakuli	-24.3%	10.2%	0.3
Pupukea	-26.4%	25.5%	0.4
Hauula	-26.8%	15.9%	0.3
East Honolulu	-27.5%	26.7%	0.4
Mililani Town	-29.0%	14.1%	0.4
Ocean Pointe	-31.3%	12.3%	0.4
Ewa Villages	-31.6%	6.2%	0.3
Heeia	-31.9%	13.0%	0.4
Waimanalo Beach	-32.4%	9.9%	0.3
Kahaluu	-33.0%	20.3%	0.3
Maili	-33.2%	6.5%	0.1
Ewa Beach	-34.7%	6.1%	0.3
Iroquois Point	-35.4%	8.8%	0.1
Whitmore Village	-36.3%	3.0%	0.1
Mililani Mauka	-38.2%	12.0%	0.3
Waikele	-40.2%	8.1%	0.4
Ahuimanu	-42.1%	10.1%	0.1
Makakilo	-42.5%	12.7%	0.2
West Loch Estate	-44.8%	3.4%	0.1
Royal Kunia	-44.8%	9.2%	0.2
Ewa Gentry	-45.6%	5.3%	0.1
Waipio Acres	-46.9%	4.9%	0.1

B. Hawaii County

Like all counties in Hawaii, most of Hawaii County's CDPs experienced population decline during the daytime. Given the large size of Hawaii Island, the CDPs with population loss often surrounded one or two CDPs with population gain, suggesting localized in-flow and out-flow of commuters.

Figure B. Population change due to commuting (% of resident population), Hawaii County



On the east side of the island, there were daytime population increases in Keeau (188 percent), Pahoa (63 percent), Hilo (16 percent), and Volcano (13 percent), with all surrounding CDPs losing daytime population. The percentage of workers living and working in Hilo was 78 percent, and the CDP had 1.4 jobs for every worker living in the

area. Nearby Keaau, though, only had 21 percent of workers living and working in the area. It had an E-WR ratio of 5.4, with about 2,800 workers commuting into the CDP during a normal workday.

On the west side of the island, there were daytime population increases in Kealakekua (59 percent) and Kailua-Kona (29 percent). Like Hilo, most workers living in Kailua-Kona also worked there (62 percent), and the area had a modest E-WR ratio of 1.6 workers for every worker living in the area. Kealakekua, to the south of Kailua-Kona, had a larger daytime population increase and an E-WR ratio of 2.4 workers per working residents. About 30 percent of workers both worked and lived in the Kealakekua.

Two CDPs in the northwest, Waikoloa Beach Resort and Puako, had some of Hawaii County's largest daytime population growth due to in-commuting. Waikoloa Beach Resort grew by 241 percent and had 15.5 jobs for every worker living in the area. Additionally, over half of the CDP's working residents both lived and worked in the area. Puako, to the north of Waikoloa Beach Resort, experienced an 80 percent daytime population growth, increasing its population from about 300 people to 530 people due to in-commuting.

Table B-1. Commuter-adjusted population and workers by CDP, Hawaii County

Census Designated Place (CDP)	Commuter-adjusted population	Resident population	Workers living in the CDP	Workers working in the CDP	People who live & work in the same CDP	Out-commuters	In-commuters
Hilo	55,205	47,627	20,565	28,143	16,072	4,493	12,071
Kailua-Kona	27,609	21,449	10,539	16,699	6,530	4,009	10,169
Waimea	8,562	10,458	4,996	3,100	1,769	3,227	1,331
Kaiminani	8,001	11,731	6,050	2,320	1,253	4,797	1,067
Hawaiian Paradise Park	7,483	13,041	6,267	709	643	5,624	66
Waikoloa Village	6,599	7,418	3,320	2,501	899	2,421	1,602
Kahaluu-Keauhou	5,278	7,001	2,902	1,179	591	2,311	588
Keaau	3,711	1,290	545	2,966	113	432	2,853
Kealahou	3,467	2,188	928	2,207	275	653	1,932
Hawaiian Beaches	3,462	3,879	994	577	281	713	296
Captain Cook	3,058	4,135	1,836	759	453	1,383	306
Mountain View	2,721	3,627	1,261	355	119	1,142	236
Ainaloa	2,676	3,832	1,335	179	179	1,156	0
Hawaiian Ocean View	2,543	3,587	1,117	73	69	1,048	4
Hawaiian Acres	2,360	3,484	1,510	386	386	1,124	0
Honaunau-Napoopoo	2,295	2,764	1,340	871	352	988	519
Holualoa	2,273	3,083	1,351	541	430	921	111
Waikoloa Beach Resort	2,257	662	110	1,705	61	49	1,644
Pahoa	2,238	1,372	540	1,406	213	327	1,193
Kurtistown	1,998	2,896	1,140	242	154	986	88
Honokaa	1,867	2,290	1,034	611	97	937	514
Orchidlands Estates	1,829	2,400	755	184	111	644	73
Pahala	1,721	1,897	593	417	247	346	170
Kapaau	1,455	1,972	1,005	488	116	889	372
Fern Acres	1,223	1,781	578	20	20	558	0
Nanawale Estates	1,204	1,666	535	73	46	489	27
Leilani Estates	1,167	1,611	534	90	69	465	21
Naalehu	1,079	890	281	470	93	188	377
Mauna Loa Estates	1,019	812	280	487	189	91	298
Kaloko	970	1,527	674	117	33	641	84
Pepeekeo	966	1,462	625	129	83	542	46
Hawi	933	1,383	567	117	93	474	24
Volcano Golf Course	926	996	405	335	335	70	0
Discovery Harbour	903	1,241	393	55	55	338	0
Laupahoehoe	809	954	310	165	79	231	86
Papaikou	742	1,096	577	223	71	506	152
Wainaku	727	1,023	437	141	73	364	68
Volcano	685	608	284	361	77	207	284
Halaula	675	959	342	58	39	303	19
Eden Roc	662	920	258	0	0	258	0
Fern Forest	578	824	266	20	20	246	0
Honalo	577	981	522	118	112	410	6
Puako	529	294	85	320	20	65	300
Royal Hawaiian Estates	489	958	552	83	83	469	0
Paauilo	416	548	219	87	21	198	66

*The statistics in the table are based on a sample survey and subject to sampling and non-sampling errors.

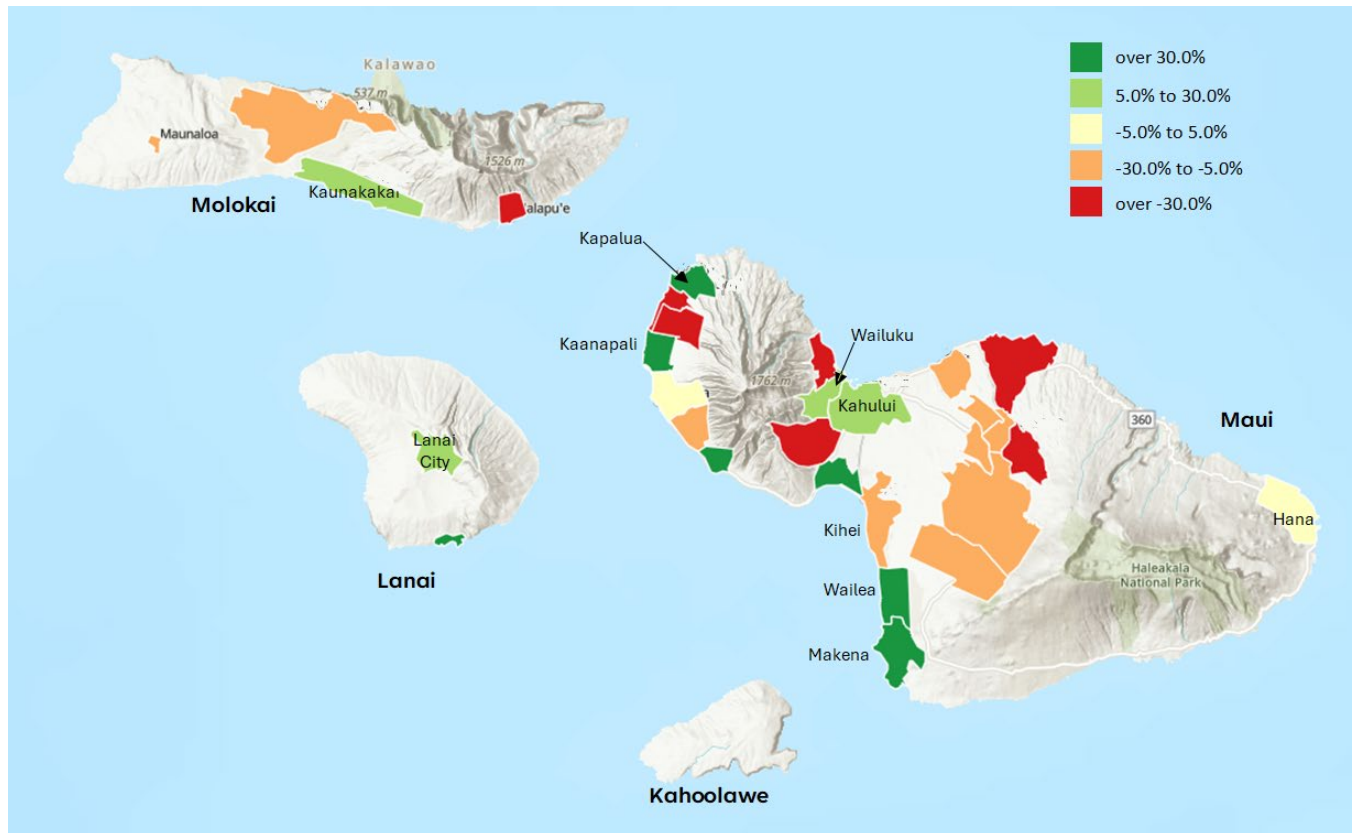
Table B-2. Characteristics of population change by CDP, Hawaii County

Census Designated Place (CDP)	Daytime population change due to commuting (% of resident population)	Workers living & working in the same CDP (% of working residents)	Employment/ Working Resident (E-WR) ratio
Waikoloa Beach Resort	240.9%	55.5%	15.5
Keaau	187.7%	20.7%	5.4
Puako	79.9%	23.5%	3.8
Pahoa	63.1%	39.4%	2.6
Kealahou	58.5%	29.6%	2.4
Kailua-Kona	28.7%	62.0%	1.6
Mauna Loa Estates	25.5%	67.5%	1.7
Naalehu	21.2%	33.1%	1.7
Hilo	15.9%	78.2%	1.4
Volcano	12.7%	27.1%	1.3
Volcano Golf Course	-7.0%	82.7%	0.8
Pahala	-9.3%	41.7%	0.7
Hawaiian Beaches	-10.8%	28.3%	0.6
Waikoloa Village	-11.0%	27.1%	0.8
Laupahoehoe	-15.2%	25.5%	0.5
Honaunau-Napoopoo	-17.0%	26.3%	0.7
Waimea	-18.1%	35.4%	0.6
Honokaa	-18.5%	9.4%	0.6
Orchidlands Estates	-23.8%	14.7%	0.2
Paauilo	-24.1%	9.6%	0.4
Kahaluu-Keauhou	-24.6%	20.4%	0.4
Mountain View	-25.0%	9.4%	0.3
Captain Cook	-26.0%	24.7%	0.4
Kapaau	-26.2%	11.5%	0.5
Holualoa	-26.3%	31.8%	0.4
Discovery Harbour	-27.2%	14.0%	0.1
Leilani Estates	-27.6%	12.9%	0.2
Nanawale Estates	-27.7%	8.6%	0.1
Eden Roc	-28.0%	0.0%	0.0
Wainaku	-28.9%	16.7%	0.3
Hawaiian Ocean View	-29.1%	6.2%	0.1
Halaula	-29.6%	11.4%	0.2
Fern Forest	-29.9%	7.5%	0.1
Ainaloa	-30.2%	13.4%	0.1
Kurtistown	-31.0%	13.5%	0.2
Fern Acres	-31.3%	3.5%	0.0
Kaiminani	-31.8%	20.7%	0.4
Hawaiian Acres	-32.3%	25.6%	0.3
Papaikou	-32.3%	12.3%	0.4
Hawi	-32.5%	16.4%	0.2
Pepeekeo	-33.9%	13.3%	0.2
Kaloko	-36.5%	4.9%	0.2
Honalo	-41.2%	21.5%	0.2
Hawaiian Paradise Park	-42.6%	10.3%	0.1
Royal Hawaiian Estates	-49.0%	15.0%	0.2

C. Maui County

At 32 percent, Maui County had the highest percentage of workers who lived and worked in the same CDP. This is due, in part, to the unique geography of the county. The county is made up of three inhabited islands, with the largest island, Maui, having many discrete centers of population. In some of the more isolated areas, most residents worked where they lived. These CDPs included Lanai City on Lanai (80 percent), Hana on Maui (73 percent), and Kaunakakai on Molokai (57 percent).

Figure C. Population change due to commuting (% of resident population), Maui County



On the west side of Maui Island, Kaanapali and Kapalua CDPs saw the largest daytime population increases in the county, each increasing over 350 percent. In both areas, at least a third of working residents both lived and worked in the area. Kaanapali CDP, which is a planned resort community, had 14.2 jobs for every working resident. Kapalua, another resort area in West Maui, had an E-WR ratio of 9.6 jobs per working resident. It is likely that many of the area's in-commuters came from the nearby residential CDPs of Napili-Honokowai and Mahinahina, which each lost about 40 percent of their populations due to out-commuting.

Several of the CDPs near Kihei on Maui Island had large population increases during normal work hours, with Maalaea, north of Kihei, growing by 229 percent during the daytime, and Wailea and Makena CDPs, south of Kihei, growing by 60 and 189 percent, respectively. Kihei itself saw modest population declines during the daytime, losing 13 percent of its population. Although 39 percent of Kihei's working residents

both lived and worked there, the area had less than one job (0.8) for every working resident, leading to 7,400 out-commuters from the county's second most populated CDP.

Kahului and Wailuku, the county's other most populated CDPs, had modest population increases during the day. This was due to around 40 percent of their working residents living and working in the same place and slightly more jobs than working residents, with E-WR ratios of 1.3 to 1.4.

Table C-1. Commuter-adjusted population and workers by CDP, Maui County

Census Designated Place (CDP)	Commuter-adjusted population	Resident population	Workers living in the CDP	Workers working in the CDP	People who live & work in the same CDP	Out-commuters	In-commuters
Kahului	31,579	27,233	13,012	17,358	4,858	8,154	12,500
Wailuku	19,992	16,590	7,945	11,347	3,162	4,783	8,185
Kihei	19,459	22,247	12,108	9,320	4,701	7,407	4,619
Lahaina	12,501	12,906	6,819	6,414	2,848	3,971	3,566
Wailea	10,436	6,517	2,843	6,762	1,297	1,546	5,465
Waihee-Waiehu	6,440	11,029	5,115	526	247	4,868	279
Haiku-Pauwela	6,057	9,245	4,256	1,068	645	3,611	423
Kaanapali	5,963	1,227	359	5,095	194	165	4,901
Makawao	5,883	7,704	3,537	1,716	754	2,783	962
Kula	5,767	6,578	2,746	1,935	1,044	1,702	891
Pukalani	5,672	7,930	4,344	2,086	900	3,444	1,186
Napili-Honokowai	4,176	6,779	3,976	1,373	763	3,213	610
Kaunakakai	4,143	3,553	1,318	1,908	755	563	1,153
Lanai City	3,402	3,174	1,687	1,915	1,356	331	559
Waikapu	2,431	3,887	1,952	496	112	1,840	384
Keokea	2,014	2,872	1,211	353	113	1,098	240
Paia	1,895	2,211	1,235	919	373	862	546
Kualapuu	1,889	2,157	789	521	257	532	264
Kapalua	1,798	392	163	1,569	55	108	1,514
Haliimaile	781	1,077	399	103	46	353	57
Hana	754	731	337	360	246	91	114
Maalaea	705	214	79	570	22	57	548
Olinda	669	1,018	576	227	167	409	60
Mahinahina	635	1,116	646	165	98	548	67
Launiupoko	587	649	275	213	115	160	98
Makena	456	158	44	342	7	37	335

*The statistics in the table are based on a sample survey and subject to sampling and non-sampling errors.

Table C-2. Characteristics of population change by CDP, Maui County

Census Designated Place (CDP)	Daytime population change due to commuting (% of resident population)	Workers living & working in the same CDP (% of working residents)	Employment/ Working Resident (E-WR) ratio
Kaanapali	386.0%	54.0%	14.2
Kapalua	358.7%	33.7%	9.6
Maalaea	229.4%	27.8%	7.2
Makena	188.6%	15.9%	7.8
Wailea	60.1%	45.6%	2.4
Wailuku	20.5%	39.8%	1.4
Kaunakakai	16.6%	57.3%	1.4
Kahului	16.0%	37.3%	1.3
Lanai City	7.2%	80.4%	1.1
Hana	3.1%	73.0%	1.1
Lahaina	-3.1%	41.8%	0.9
Launiupoko	-9.6%	41.8%	0.8
Kula	-12.3%	38.0%	0.7
Kualapuu	-12.4%	32.6%	0.7
Kihei	-12.5%	38.8%	0.8
Paia	-14.3%	30.2%	0.7
Makawao	-23.6%	21.3%	0.5
Haliimaile	-27.5%	11.5%	0.3
Pukalani	-28.5%	20.7%	0.5
Keokea	-29.9%	9.3%	0.3
Olinda	-34.3%	29.0%	0.4
Haiku-Pauwela	-34.5%	15.2%	0.3
Waikapu	-37.5%	5.7%	0.3
Napili-Honokowai	-38.4%	19.2%	0.3
Waihee-Waiehu	-41.6%	4.8%	0.1
Mahinahina	-43.1%	15.2%	0.3

D. Kauai County

During the period from 2018 to 2022, Kauai County had four CDPs in which most of the workers who lived there also worked there. These were Princeville, Hanalei, Lihue, all at 69 percent, and Haena at 50 percent. With a resident population of 300 people, Hanalei was one of the county's least populated places. Less than thirty percent of residents there were workers. The area, which features several resorts, had 9.4 jobs for every working resident. Its daytime population grew by 233 percent on an average workday due to in-commuting. Neighboring Princeville, another north shore area with many resorts, grew by 42 percent due to in-commuting.

Lihue, the county's second largest CDP, almost doubled its population during normal working hours due to in-commuting. The CDP had 3 jobs for every working resident, bringing in 9,000 commuters each day for work, many of whom likely came from Hanamaulu and Puhi, neighboring CDPs that lost population to out-commuting.

Places in East Kauai, which are generally more residential than commercial, lost daytime population to commuting. Wailua Homesteads and Anahola lost over 30 percent of their populations each workday. The areas had E-WR ratios of almost 0. Kapaa, the county's most populated CDP, had the highest E-WR ratio for the region, at 0.7 jobs per working resident. It lost about 15 percent of its population due to out-commuting.

On Kauai's south shore, only Koloa and Poipu CDPs had population gains during the day. In these areas, the percentage of workers living and working in the same place was about 35 percent, and the Employment/Working Resident ratio was around 2.8.

Figure D. Population change due to commuting (% of resident population), Kauai County

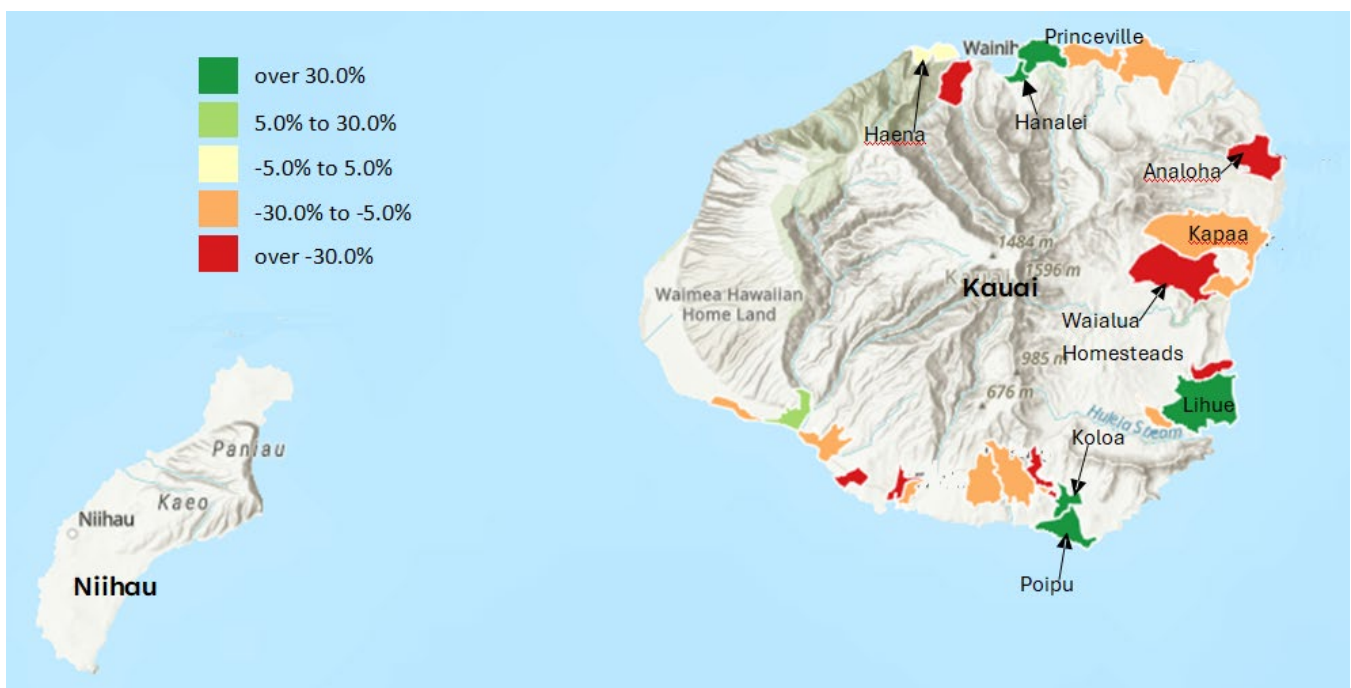


Table D-1. Commuter-adjusted population and workers by CDP, Kauai County

Census Designated Place (CDP)	Commuter-adjusted population	Resident population	Workers living in the CDP	Workers working in the CDP	People who live & work in the same CDP	Out-commuters	In-commuters
Lihue	16,756	8,649	4,031	12,138	2,762	1,269	9,376
Kapaa	9,248	10,846	5,660	4,062	1,781	3,879	2,281
Wailua Homesteads	4,699	7,189	3,358	868	688	2,670	180
Koloa	4,207	2,281	1,033	2,959	362	671	2,597
Kalaheo	3,733	4,651	1,925	1,007	385	1,540	622
Puhi	3,205	3,961	1,809	1,053	188	1,621	865
Kilauea	2,875	3,386	1,655	1,144	522	1,133	622
Princeville	2,854	2,007	746	1,593	514	232	1,079
Hanamaulu	2,741	4,628	2,193	306	101	2,092	205
Kekaha	2,698	3,149	1,323	872	228	1,095	644
Lawai	2,301	2,902	1,078	477	212	866	265
Waimea	2,259	1,951	1,027	1,335	394	633	941
Wailua	1,970	2,438	1,059	591	100	959	491
Poipu	1,936	1,085	481	1,332	177	304	1,155
Anahola	1,913	2,853	1,047	107	84	963	23
Eleele	1,687	2,255	1,091	523	71	1,020	452
Hanapepe	1,396	2,242	1,228	382	84	1,144	298
Hanalei	999	300	83	782	57	26	725
Omao	941	1,414	640	167	96	544	71
Kaumakani	772	1,498	820	94	38	782	56
Haena	480	501	153	132	76	77	56

*The statistics in the table are based on a sample survey and subject to sampling and non-sampling errors.

Table D-2. Characteristics of population change by CDP, Kauai County

Census Designated Place (CDP)	Daytime population change due to commuting (% of resident population)	Workers living & working in the same CDP (% of working residents)	Employment/ Working Resident (E-WR) ratio
Hanalei	233.0%	68.7%	9.4
Lihue	93.7%	68.5%	3.0
Koloa	84.4%	35.0%	2.9
Poipu	78.4%	36.8%	2.8
Princeville	42.2%	68.9%	2.1
Waimea	15.8%	38.4%	1.3
Haena	-4.2%	49.7%	0.9
Kekaha	-14.3%	17.2%	0.7
Kapaa	-14.7%	31.5%	0.7
Kilauea	-15.1%	31.5%	0.7
Puhi	-19.1%	10.4%	0.6
Wailua	-19.2%	9.4%	0.6
Kalaheo	-19.7%	20.0%	0.5
Lawai	-20.7%	19.7%	0.4
Eleele	-25.2%	6.5%	0.5
Anahola	-32.9%	8.0%	0.1
Omao	-33.5%	15.0%	0.3
Wailua Homesteads	-34.6%	20.5%	0.3
Hanapepe	-37.7%	6.8%	0.3
Hanamaulu	-40.8%	4.6%	0.1
Kaumakani	-48.5%	4.6%	0.1

Conclusion

The commuter-adjusted population is largely a function of the residential population, with most areas experiencing relatively modest changes in daytime population due to commuting. Each county, however, had areas that more than doubled during the daytime due to commuting. Many of those areas were associated with the tourism industry, suggesting that the true daytime population was larger than that which can be captured by looking commuter data alone. Further refinement of the daytime population would require additional data sources, like geolocation data of visitor movement and information about school and daycare locations. Analysis of the commuter-adjusted population, however, provides a baseline from which other analysis may be performed and supports crucial planning needs like roadway network planning, allocation of disaster relief resources, and business planning.