

APPENDIX C - GROWTH TRENDS AND PROJECTIONS

Introduction

This Appendix summarizes the Socioeconomic Analysis and Forecasts (2014) technical report that was prepared for this General Plan and provides the basis for growth projections in population, housing, employment, and other demographic and socioeconomic characteristics. A Technical Advisory Committee comprised of community members and agencies was assembled to review and provide input on this and other technical reports for the General Plan. The following Sections provide an overview of the findings.

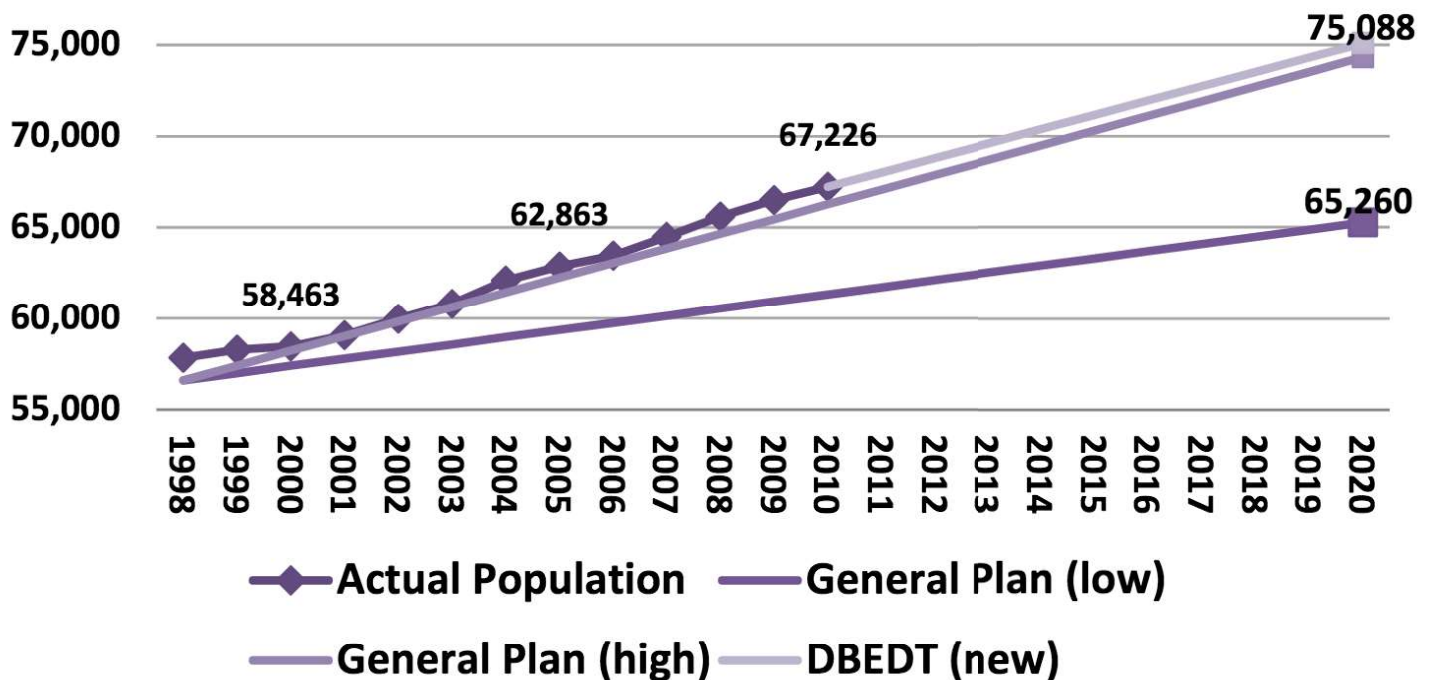
Another key technical report prepared to inform the General Plan’s growth projections was the Land Use Buildout Analysis (2015). Using the population and housing projections contained in the socioeconomic study, the land use buildout study inventoried existing land use designations and determined whether additional designated lands would be needed to accommodate projected residential, commercial, industrial, resort, and other land uses.

How the 2000 General Plan Handled Growth Projections

Projections for growth contained in the 2000 Kaua’i General Plan were derived from two technical studies: one that examined future trends based on projections of existing data from the State Department of Business, Economic Development, and Tourism (DBEDT), and a second that presented alternative, value-driven growth projections reflecting a significantly lower growth rate. The

alternative projections used the visitor population as “the most important factor in estimating Kaua’i’s future economy and population.” The projections in these two studies were presented in the 2000 General Plan as “high” and “low” growth projections for resident population, average daily visitor census, total population, and jobs. The projections were not intended to serve as targets or limits to growth, but as tools for forecasting land supply and infrastructure needs.

Figure 1. Actual vs. Projected Population Growth (1998-2010)



Population Trends and Projections Trends Since the 2000 General Plan

As shown in the figure below, the actual rate of population growth since the last count in 2010 has closely followed the “high” growth projection rate in the 2000 General Plan. The “high” projection was based on a linear projection of population data from DBEDT.

Sources of Growth

The graph in Figure 2 shows sources of population change on Kaua’i between 2000 and 2012.

Over the past 15 years, the population growth due to natural increase (rate of births to deaths) has greatly exceeded the contribution of migration.

County-Wide Projections

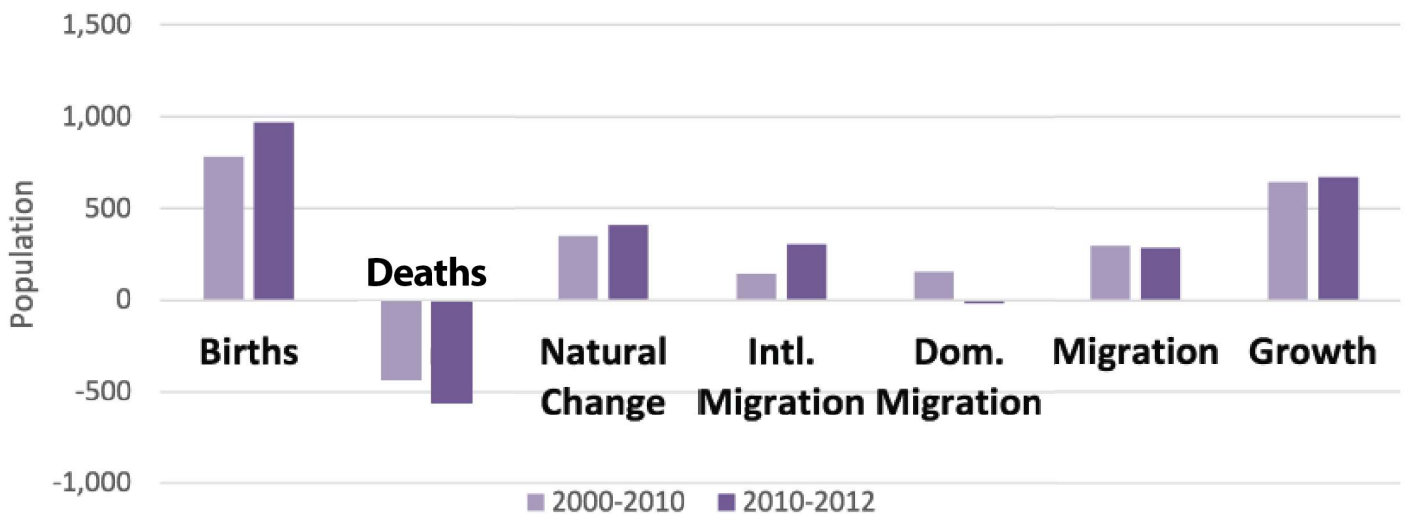
The County population forecast was developed as a linear projection from the last recorded population data released by the State Department of Business, Economic Development, and Tourism (State of Hawai’i Data Book, 2013). Historical data was taken from the State of Hawai’i Data Book published annually by the Department of Business, Economic Development, and Tourism (State of Hawai’i Data Book, 2013).

The total population for the County of Kaua’i is projected to increase from 67,091 in 2013 to 88,013 in 2035. That represents a total growth of 31.2% between 2010 and 2035, or about 1.10% per year.

*SMS Research Kaua’i 2035 General Plan:
Socioeconomic Analysis and Forecasts (2014)*

Table 1 and Figure 3 show the population forecast for the County of Kaua’i through 2035. The line in Figure 3 tracks the population, while the bars indicate the annual population growth rate. The model assumed a moderate growth rate of 1.10% per year between 2010 and 2035.

Figure 2. Components of Population Change (2000-2012)



*Bars for 2000-2010 and 2010-2012 show average change per year.

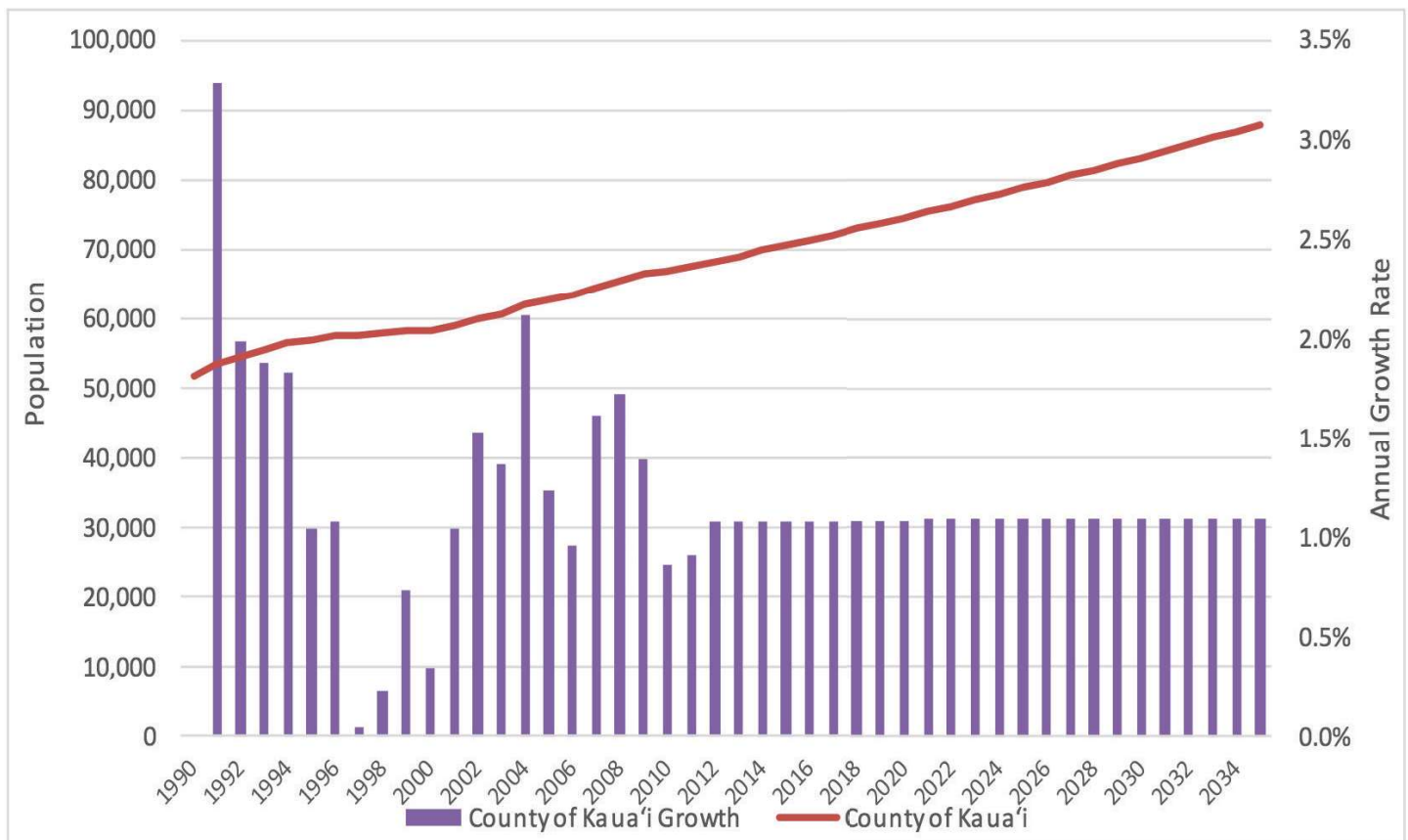
Intl. means International.

Dom. means Domestic.

Table 1. Kaua'i County Population (1990-2035)

Year	1990	2000	2010	2020	2030	2035
County of Kaua'i	51,676	58,463	67,091	74,693	83,328	88,013
Average Annual Growth Rate		1.24%	1.39%	1.08%	1.10%	1.10%

Figure 3. Kaua'i County Population (1990-2035)



Population Projections by Planning District

As shown on Table 2 and Figure 4, a great majority of population growth is planned to occur in the Līhu'e and South Kaua'i districts (Kōloa-Po'ipū-Kalāheo). The Līhu'e district had 21.9 percent of Kaua'i's population in 2010 and is expected to house 26.6 percent in 2035. The Kōloa-Po'ipū-Kalāheo area had 17.4 percent of the County population in 2010 and will have up to 18.5 percent on 2035.

Policies and actions to address this anticipated growth are reflected in the Community Plans for the Līhu'e and South Kaua'i Districts that were completed and adopted in 2015. The percentage of the County's population in each of the remaining districts will decrease slightly by 2035.

The Līhu'e District is expected to absorb nearly half of the island's population growth through 2035, in keeping with the County's policy of designating Līhu'e as the island's main center of population and employment.

Table 2. Kaua'i County Population, Island-wide and By District (1990-2035)

Year	1990	2000	2010	2020	2030	2035
County of Kaua'i	51,676	58,463	67,091	74,693	83,328	88,013
Līhu'e	11,169	12,507	14,683	18,017	21,595	23,456
South Kaua'i	9,600	10,545	11,696	13,623	15,737	16,855
Hanapēpē-'Ele'ele	3,873	4,362	6,157	6,463	6,860	7,094
Waimea-Kekaha	4,698	5,660	5,561	5,901	6,323	6,566
North Shore	5,913	6,605	8,002	8,286	8,686	8,933
East Kaua'i	16,192	18,784	20,992	22,403	24,128	25,110

Jobs Trends Since the 2000 General Plan

The 2000 General Plan used a high and low estimate for jobs, as a factor of population growth. Figure 5 shows that number of actual jobs on Kaua'i in 2010

was higher than the high estimate predicted in the last General Plan. However, the rate of job growth, indicated by the slope of the lines on the graph, is closer to the low estimate contained in the 2000 General Plan. This slower rate of growth means that if the 2000 GP estimates are projected beyond 2020, the job numbers would likely to be closer to the low estimate provided in the 2000 General Plan.

County-Wide Job Projections

According to the 2014 Socioeconomic Analysis and Forecasts technical report prepared for the GP Update, average annual job growth for the County of Kaua'i is expected to equal 0.79% between 2015 and 2020. Between 2020 and 2030, job growth is expected to occur at an average annual rate of 0.66%. The rate is expected to dip again to 0.53% during the period between 2030 and 2035, adding less than 1,000 jobs. Economic opportunity is a key issue for Kaua'i moving forward, to ensure that Kaua'i's residents not only have access to jobs, but can earn a living wage that can support housing and transportation needs.

Job Projections by Planning District

The Līhu'e Planning District has historically been the main job center on Kaua'i. With the policy to direct the majority of future growth to Līhu'e, that trend is expected to continue for the next 20 years, with

more jobs and a higher growth rate. The South Kaua'i and the East Kaua'i Districts have the next highest volumes of jobs in the County.

Between 2010 and 2035, average annual job growth for Kaua'i's six planning districts is expected to range from 1.23 percent for Līhu'e to 0.37 percent for the

Figure 4. Population by Planning District (1990-2035)

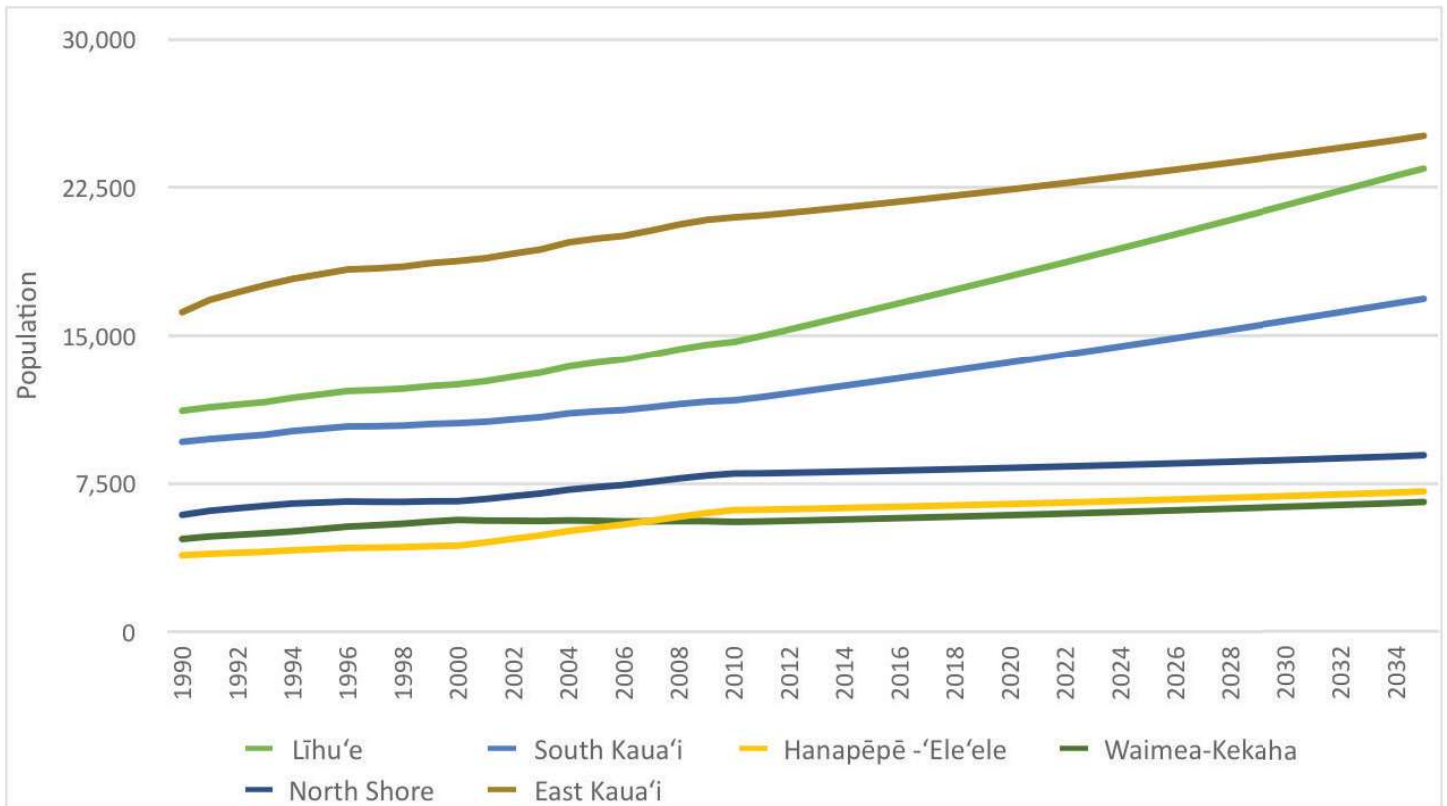


Figure 5. Actual vs. Projected Job Growth (1990-2011)

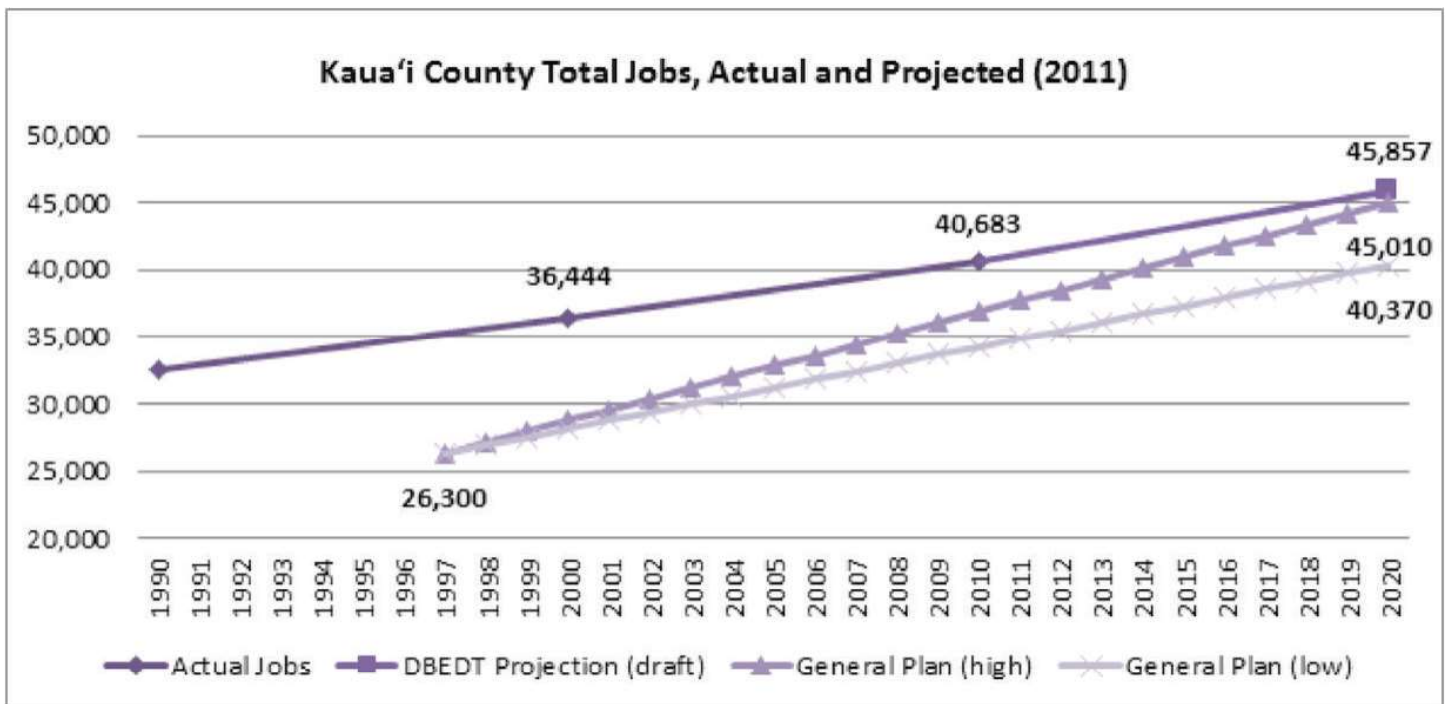


Table 3. Kaua'i County Jobs By District (1990-2035)

Year	1990	2000	2010	2020	2030
County of Kaua'i	30,350	28,150	31,900	34,000	34,900
Līhu'e	12,473	12,554	14,519	15,820	16,403
South Kaua'i	5,299	5,027	5,617	5,892	6,003
Hanapēpē-'Ele'ele	999	695	779	821	838
Waimea-Kekaha	1,888	1,791	1,986	2,064	2,094
North Shore	4,143	3,513	3,801	3,839	3,839
East Kaua'i	5,548	4,570	5,199	5,565	5,724

North Shore district. From approximately 2016-2020, Līhu'e is expected to have an average annual job growth rate of 1.06 percent. In the following decade, this rate is projected to be slightly lower (0.90% per year) and between 2030 and 2035, Līhu'e's anticipated annual growth rate for jobs is 0.74 percent.

Over the two decades preceding this General Plan, a substantial number of jobs were generated within the visitor industry (arts, entertainment, recreation, accommodations, and food services). While Līhu'e has had fewer of these jobs than the rest of the County (20% vs. 22% in 2010), the difference is not large. On the other hand, Līhu'e District has had larger shares of non-visitor industry jobs in several areas, including retail trade (18% vs. 12%); transportation, warehousing, and utilities (8% vs. 5%); finance insurance and real estate (7% vs. 5%); public administration (7% vs. 5%); wholesale trade (3% vs. 2%); and the information industry (3% vs. 1%). Most of the types of jobs projected by DBEDT to increase are included in the job types listed above. Thus, it is assumed that Līhu'e will continue to hold its position as the center for employment in the County and to increase the percentage of new jobs compared to other districts.

Households

The number of households⁵³ in the County is a function of the population in any given year and the average household size. The Census equates a household with an occupied housing unit.

Historical data for the number of households on Kaua'i was taken from the U.S. Decennial Census for Hawai'i in 1990 and 2000, and from the American Community Surveys for 2008 through 2011. Data from the Hawai'i Housing Planning Study, 1992, 1997, 2003, 2006, and 2011 were used to supplement this historical data. The same sources provide figures for household size and persons living in group quarters.⁵⁴ Persons per household data were obtained from the Decennial Census for 1990 and 2000. American Community Survey data was included for 2008 through 2011.

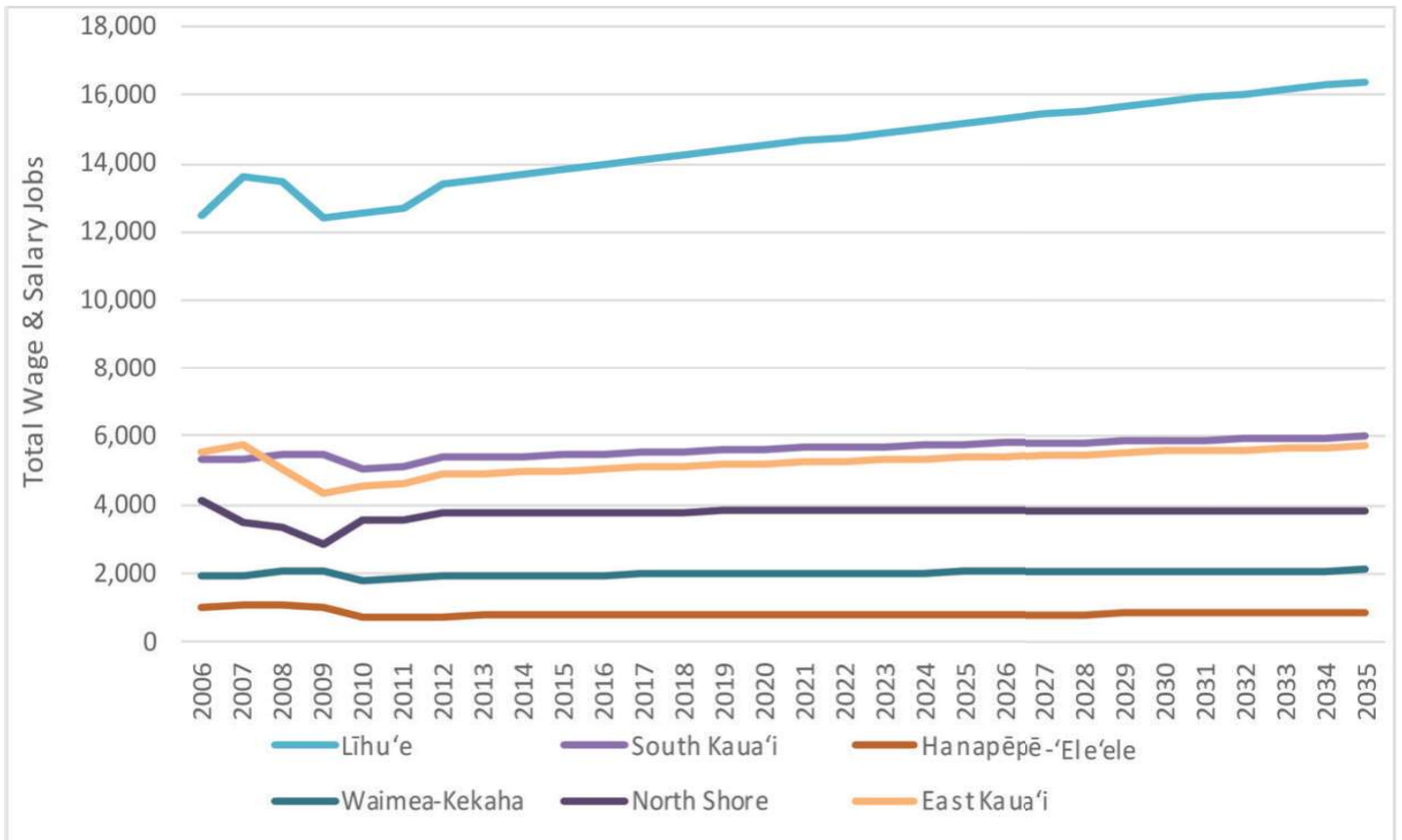
The forecast method for households employed three steps:

1. Determine the number of persons per household, defined as the ratio of total persons in the population to total households.
2. Forecast the persons per household.
3. Divide the persons living in households by the

⁵³ The U.S. Census Bureau defines a household as those persons who reside in a residential housing unit. Residents are defined as persons who report that the residence is their usual place of residence, sleep there most of the time, and take their meals there. Persons who reside at the housing unit for less than five months of the year are not considered part of the household. Households may be family households or non-family households, which can include some unrelated individuals. The household size is the number of individuals who reside in a given housing unit.

⁵⁴ Persons who do not live in households are classified as "In Group Quarters." Their number includes persons in institutionalized settings (hospitals, prisons, dormitories, nursing homes, etc.) and groups of unrelated individuals occupying a housing unit.

Figure 6. Jobs by Planning District (2006-2035)



average household size to arrive at the number of households.

County-Wide Projections

Table 4 and Figure 7 show the household forecast for the County of Kaua'i through the year 2035. The forecast is based on an assumption that the ratio of persons to households will modestly increase from 2.89 in 2010 to 2.90 in 2035. The line in Figure 7 tracks the household counts and the bars indicate the annual growth rate.

The total number of households in the County of Kaua'i is projected to increase from 23,984 in 2013 to 30,349 in 2035. That represents a total growth of 31.2 percent between 2010 and 2035, or about 1.07 percent per year.

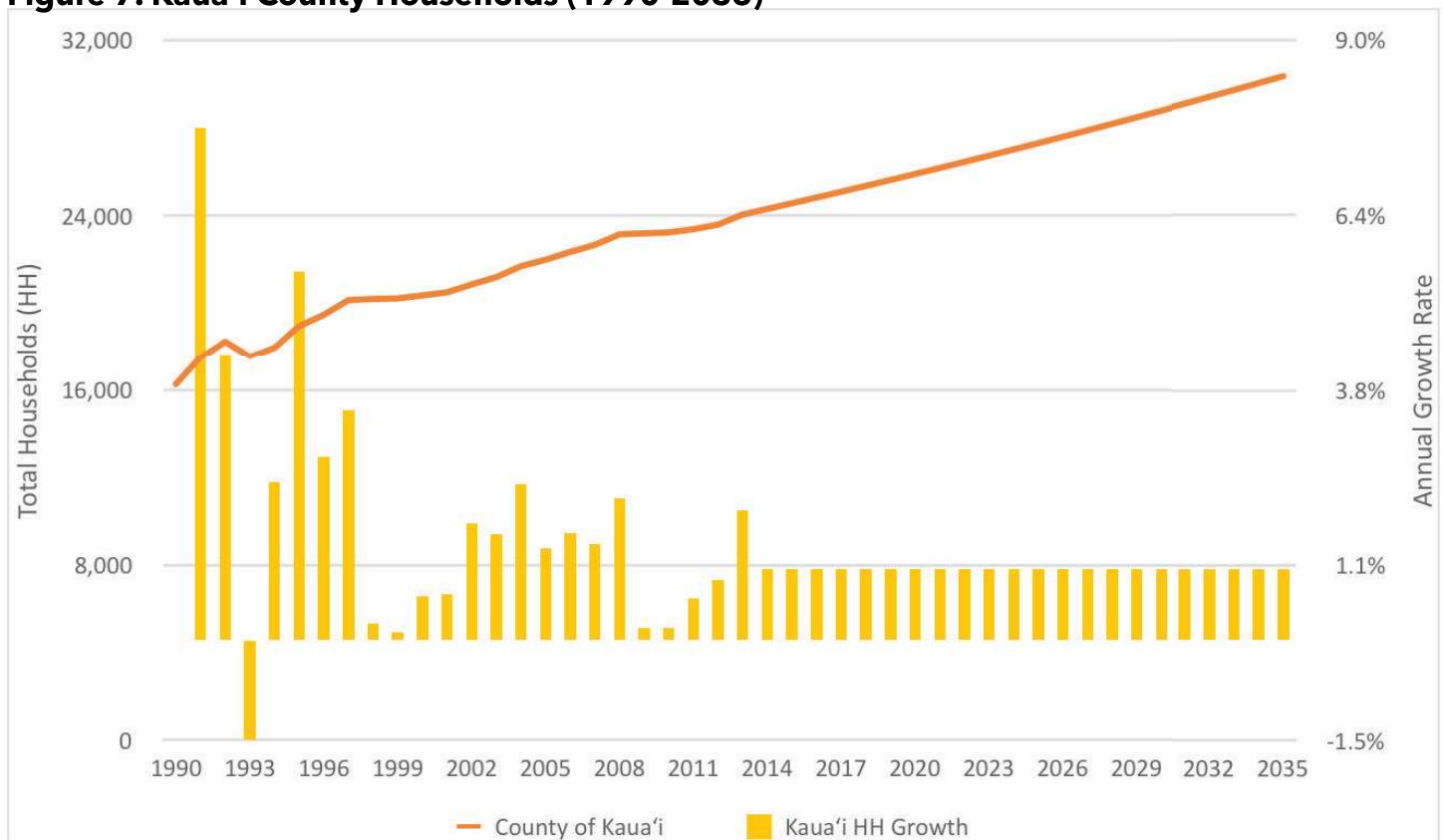
Projections by Planning District

Table 5 and Figure 8 show the forecast number of households by planning district. As with population, the Līhu'e Planning District is planned for the largest increase in total households. Līhu'e is identified by the General Plan policy as a growth center, and is expected to increase its number of households by 48 percent during the next 25 years. This equates to an average annual increase of 1.7 percent. South

Table 4. Kaua'i County Households (1990-2035)

Year	1990	2000	2010	2020	2030	2035
County of Kaua'i Households	16,253	20,370	23,240	25,902	28,788	30,349
Average Annual Growth Rate		0.66%	0.18%	1.06%	1.10%	1.06%

Figure 7. Kaua'i County Households (1990-2035)



Kaua'i (1.2 percent) is the only other district expected to exceed the County's average annual growth rate of 0.8 percent for households between now and 2035. The remaining districts are anticipated to have average annual growth rates of 0.7 percent or less.

Visitor Arrivals

Visitor arrivals are defined as the total number of individuals arriving from domestic and international points of departure by air and sea during a calendar year. Their number includes men, women, and children visiting from all ten of Hawai'i's major market areas (MMAs). Total visitor arrivals include both day-trippers and overnight or longer visitors. By convention, visitors staying for more than 365 days are considered temporary residents.

Historical data was taken from Hawai'i Tourism Authority, Annual Visitor Research Reports, 2000 to 2011 and the DBEDT Data Book historical database for years before 2000. DBEDT also has a long-range forecast for visitor arrivals at the State and County levels⁵⁵.

Trends Since the 2000 General Plan

Historically, visitor arrivals have been volatile on Kaua'i. Hurricane 'Iniki devastated the tourism infrastructure on Kaua'i, causing a deep rift in 1993 and a lengthy recovery period. At the next peak in 1999, Kaua'i had regained less than 90 percent of its former visitor count. After another drop following September 11, 2001, the count grew to its second peak in 2007, then fell sharply again in 2008-2009 and has been climbing out at a slower pace than the post-Iniki recovery.

The 2000 Kaua'i General Plan included low and high estimates for projected visitor growth, defined in Figure 9, actual ADVC growth has been variable, but as of 2010 was below the low General Plan estimate. Draft projections by the State Department of Business, Economic Development and Tourism (State of Hawai'i Data Book, 2013) predict that ADVC growth will closely track the 2000 General Plan's low estimate at least until 2020.

to 2040, DBEDT 2040 Series, Research and Economic Analysis Division, Department of Business, Economic Development and Tourism (March 2012)

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Table 5. Households by Planning District (1990-2035)

Year	1990	2000	2010	2020	2030	2035
County of Kaua'i	16,253	20,370	23,240	25,902	28,788	30,349
Līhu'e	3,542	4,187	4,983	6,051	7,281	7,923
South Kaua'i	3,208	3,862	4,250	4,946	5,699	6,096
Hanapēpē-'Ele'ele	1,035	1,491	1,987	2,084	2,207	2,279
Waimea-Kekaha	1,460	1,893	1,962	2,165	2,253	2,306
North Shore	2,070	2,552	2,881	2,998	3,123	3,201
East Kaua'i	4,937	6,385	7,177	7,658	8,224	8,545

County-Wide Projections

Table 6 and Figure 10 show total visitor arrivals by air for the County of Kaua'i through the year 2035. The line in Figure 10 tracks visitor numbers and the bars indicate the average annual rates of change.

Figure 11 represents visitors to Kaua'i as the Average Daily Visitor Census (ADVC). This is an alternate way to assess the volume of visitors to the County.

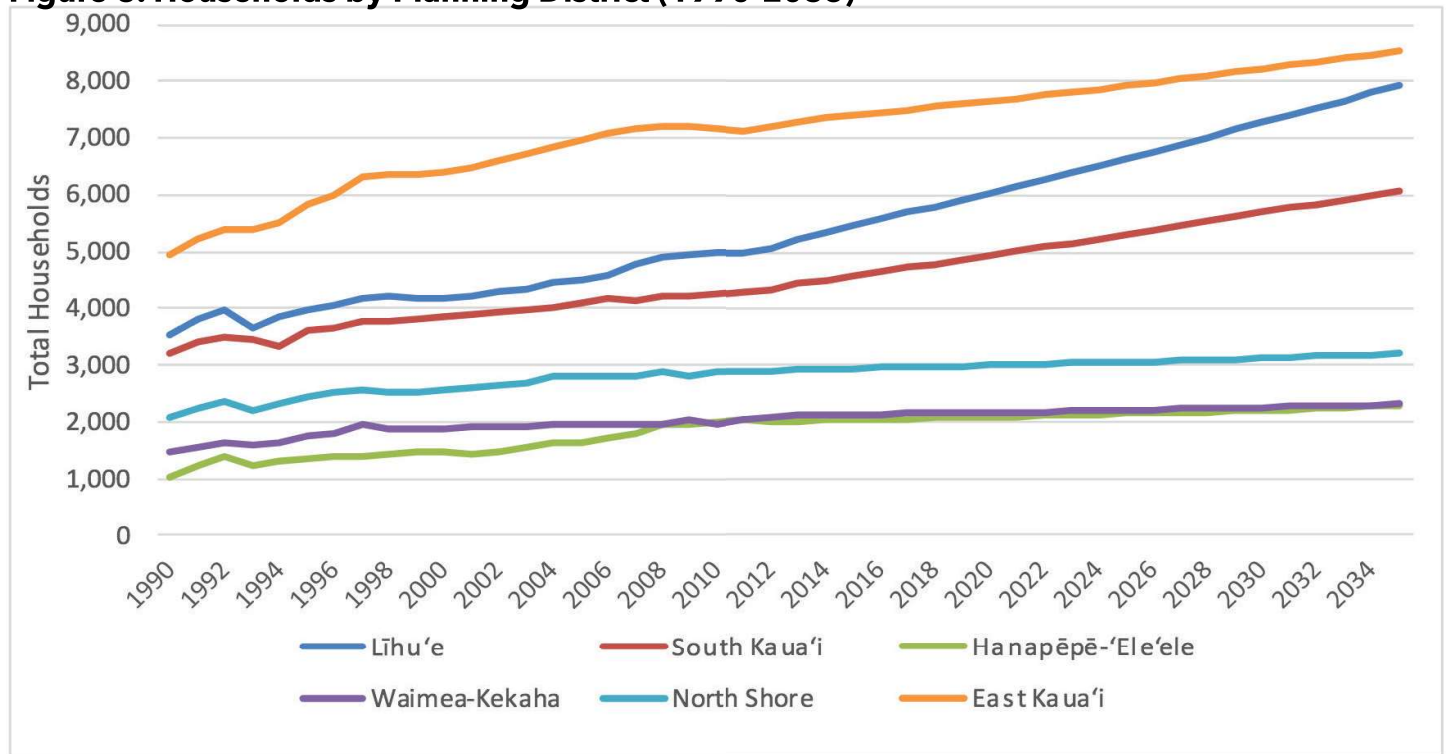
The projections show an overall growth rate of about one percent per year between 2010 and 2035, with a very slight decrease across that period. Based upon historical data, some volatility can be expected year to

year in the form of a disrupting event once every five to ten years.⁵⁶

The average length of stay (LOS) for a visitor party in Kaua'i was 7.51 days in 2011. Visitor LOS on Kaua'i was at its lowest point in 1990 at 6.14. The LOS rose to 6.8 in 2004 and then fell to 6.24 in 2007. Length of stay has increased steadily for Kaua'i visitors since 2007.

⁵⁶ Kaua'i General Plan Update: Visitor Updates, SMS Research, October 2017

Figure 8. Households by Planning District (1990-2035)



Visitor Projections by Planning District

Līhu'e has both the airport and the harbor, so all visitor "arrivals" technically occur there. Visitor accommodation units as reported in the Hawai'i Tourism Authority's (HTA) Visitor Plant Inventory were used to estimate each District's share of visitors. Table 7 and Figure 12 show the results of that method.

South Kaua'i has the highest number of visitor units and thus the largest share of visitors. East Kaua'i and the North Shore closely track one another in current and projected visitor volumes. Līhu'e District's visitor population is lower, with fewer visitor accommodations, and very few visitors stay in Waimea-Kekaha. None were assigned to the Hanapēpē-'Ele'ele District.

Figure 9. Actual vs. Projected Visitor Growth (1990-2010)

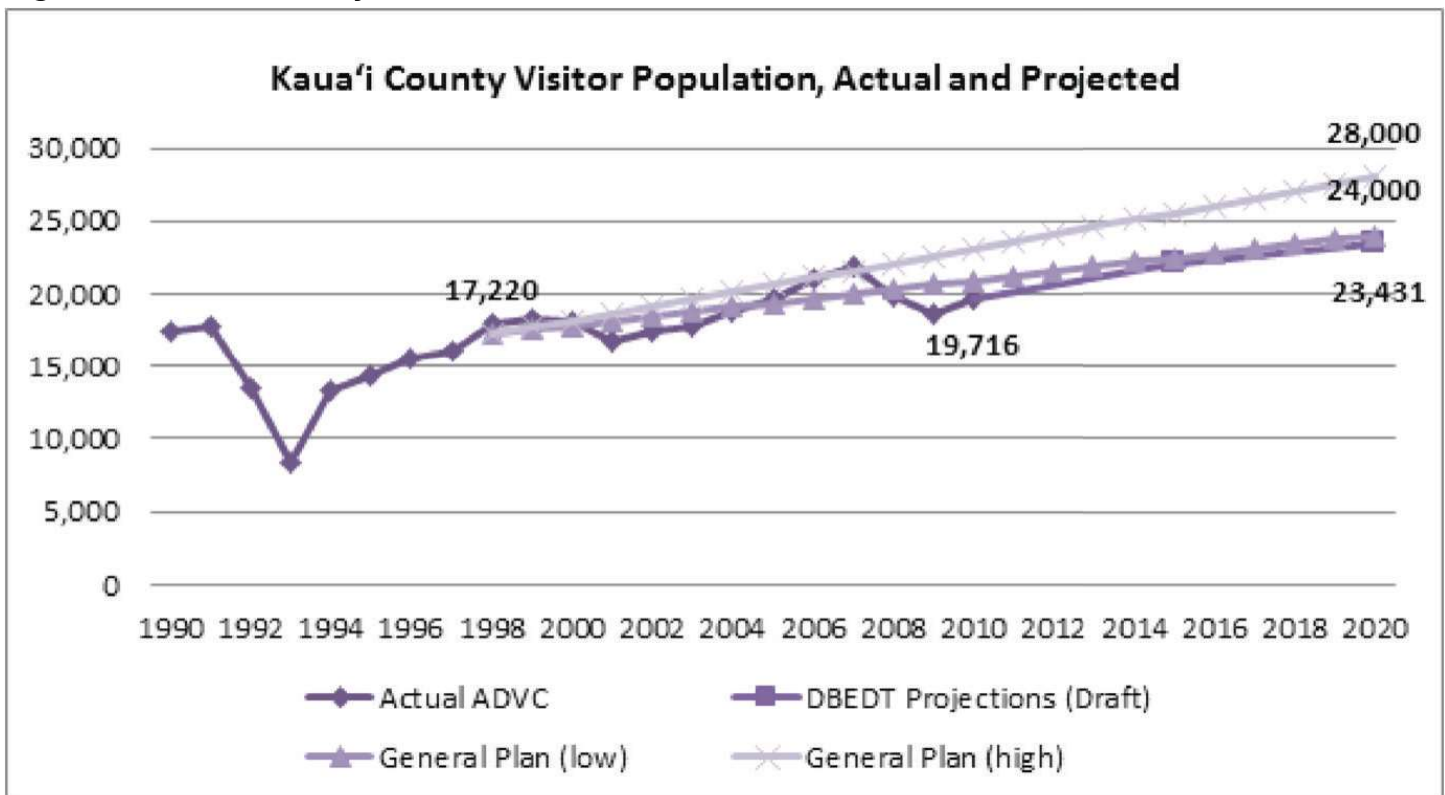


Table 6. Kaua'i County Visitor Arrivals (1990-2035)

	Year					
	1990	2000	2010	2020	2030	2035
County of Kaua'i Visitor Arrivals (x1,000)	1,229	1,075	955	1,302	1,418	1,480
Average Annual Growth Rate		-1.25%	-1.11%	3.64%	0.89%	0.87%

Figure 10. Visitor Arrivals to Kaua'i County (1990-2035)

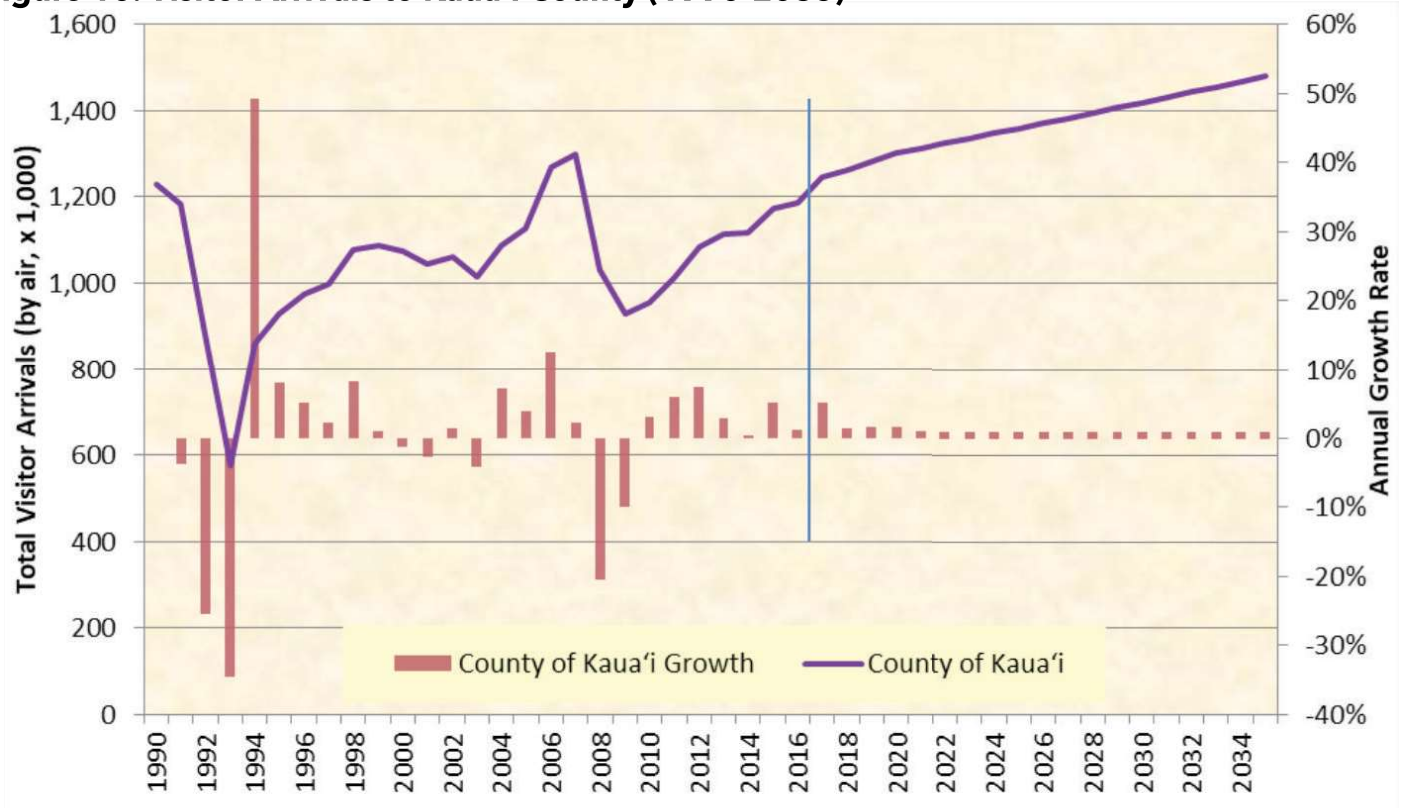


Figure 11. Average Daily Visitor Census in Kaua'i County (1990-2035)

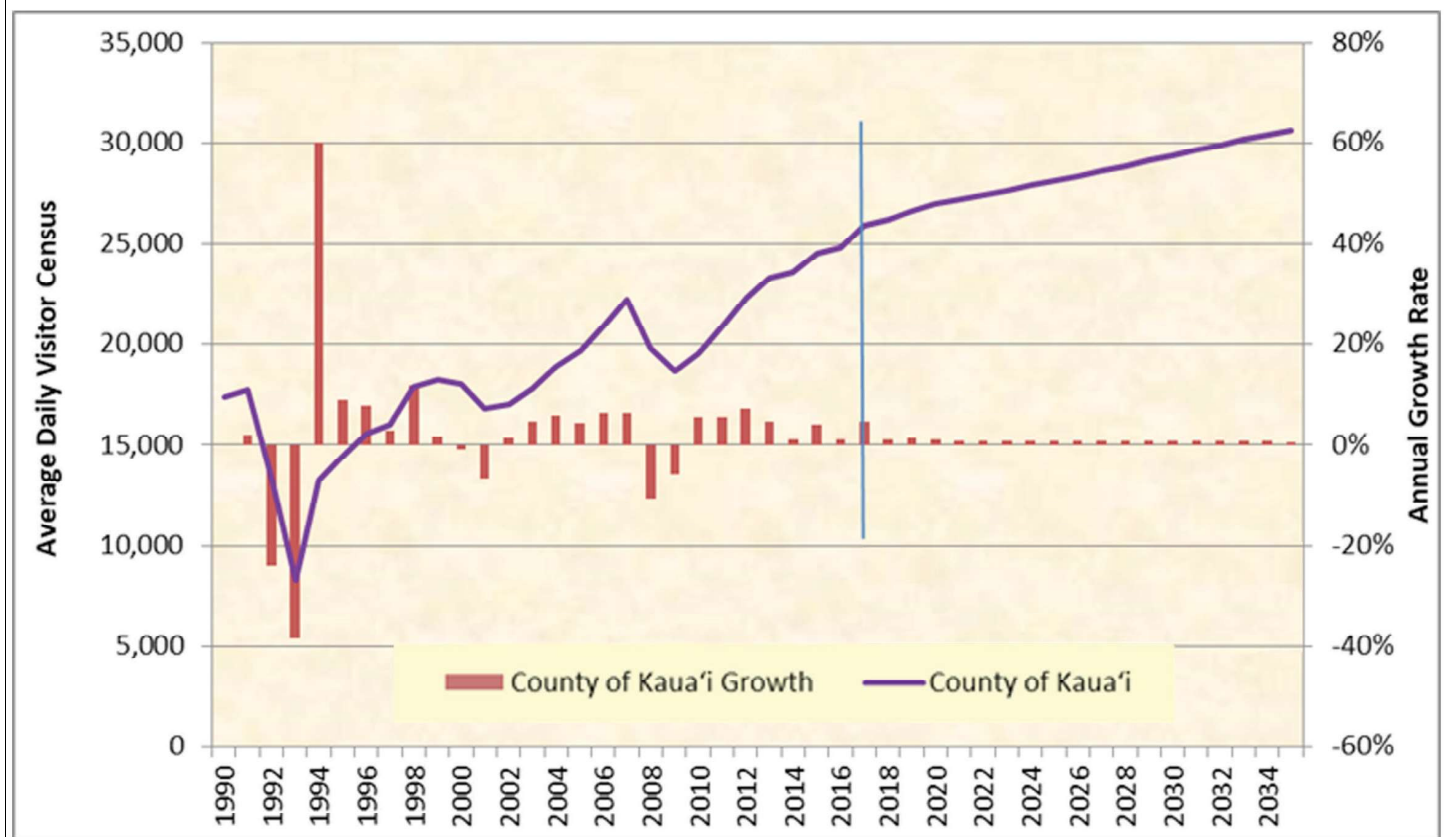


Table 7. Kaua'i County Visitor Arrivals by District (1998- 2035)

	Year					
	1998	2000	2010	2020	2030	2035
County of Kaua'i	1,078	1,075	955	1,302	1,418	1,480
Līhu'e	186	182	166	199	214	222
South Kaua'i	353	355	349	487	527	548
Hanapēpē-'Ele'ele	-	-	-	-	-	-
Waimea-Kekaha	12	15	12	21	18	15
North Shore	204	236	221	332	348	357
East Kaua'i	324	287	207	310	330	341

Figure 12. Visitor Arrivals by Planning District (1998-2035)

