

4. Developing Jobs and Businesses

A healthy economy provides income to island residents and is essential to the well-being of families and a good quality of life. This chapter addresses major business sectors on Kaua‘i and essential support services.

4.1 DIVERSIFYING THE ECONOMY

Diversifying the economy is a major theme of Kaua‘i Vision 2020 (Chapter 2). The objective is to strengthen various sectors of Kaua‘i’s economy, so that Kaua‘i is less dependent on a single industry – i.e., the visitor industry.

For the foreseeable future, the visitor industry will continue to be the driving force of Kaua‘i’s economy. The visitor industry, however, is vulnerable to forces beyond the control of Kaua‘i and the State, such as the Persian Gulf War, airline strikes, and economic downturns in the United States and Asia. In order to provide some level of insulation from these outside forces, Kaua‘i needs to build an economy that has strengths other than the visitor industry. Another objective in diversifying the economy is to provide opportunities for higher-paying jobs. A major concern raised by residents is that many jobs on Kaua‘i do not generate enough income to support the island’s high cost of living

Through the Kaua‘i General Plan Update process, the Citizens Advisory Committee (CAC) has identified three developing industries as having the greatest promise for the future: agriculture, aquaculture, and high technology. These are addressed in Sections 4.3 and 4.4 below (in this plan, aquaculture is discussed as a subset of agriculture).

These inter-related sectors are also featured in the *Kaua‘i Overall Economic Development Plan, 1997-1998 OEDP Update*, along with tourism and health care (new sector). This plan, prepared by the County of Kaua‘i’s Office of Economic Development (OED) and Garden Island Resource Conservation and Development, Inc., specifies action items to support economic development on Kaua‘i.

The film industry is another source of export income. Although the number of film productions coming to Kaua‘i fluctuates, the industry generates significant direct and indirect economic benefits. While employment is short-term (typically a few months) and includes many specialists hired off-island, the presence of the production crew provides revenue to many island businesses. Between 1992 and 1997, business revenues increased from approximately \$5 million to over \$12 million annually. Using a conservative economic multiplier of 2.0 to account for secondary economic benefits, the film industry infused about \$25 million into Kaua‘i’s economy in 1997.

This discussion of economic diversification is primarily concerned with exporting goods or services to other places and bringing in “export income” to Kaua‘i. Export income is a primary source of jobs in the economy. In turn, these primary jobs generate secondary employment, as income circulates through local businesses. Sources of export income for Kaua‘i include the Pacific Missile Range Facility (PMRF) and film productions, along with tourism and agricultural exports. Major sources of secondary jobs include retail trade (excluding visitors’ purchases), health care and county government.

The Rocky Mountain Institute and other national organizations have articulated an alternative approach to economic development which relies less on attracting more export income and more on reducing imports and reducing the “leakage” of financial resources outside of the community. This approach is gaining favor among many small rural communities. Common elements include the following: buying local rather than imported products (i.e., local produce from the Sunshine Markets); reducing energy imports by producing electricity from local renewable resources (i.e., hydroelectric plants and burning of sugar waste); and supporting existing small businesses and enabling the development of new local businesses, in preference to large, mainland-based businesses. It is generally accepted that a greater proportion of the revenue generated by small businesses stays in the community and circulates, creating additional secondary employment. Such strategies should be considered when looking at the future of Kaua‘i.

In addition to the OED, agencies supporting economic diversification and small business development include the Kaua‘i Economic Development Board (KEDB), Kaua‘i Chamber of Commerce (sponsor of both the Kaua‘i Business Assistance Center and E Ho‘omohala), Kaua‘i Community College, Garden Island Resource Conservation and Development, Inc., and regional organizations such as the West Kaua‘i Community Development Corporation and, the Kapa‘a Business Association, and the North Shore Business Association.

The potential for significant employment increases in any of the three target industries is limited – there is no “silver bullet” answer. Rather, diversification and strengthening of Kaua‘i’s economy will rely on modest but steady development in various industries, taking advantage of new opportunities as they arise.

4.2 VISITOR INDUSTRY

4.2.1 Overview

The visitor industry is the most significant economic force on Kaua‘i, as it is in the state as a whole. It is estimated that about 40 percent of Kaua‘i’s jobs are dependent on the visitor industry. Therefore, the economy of Kaua‘i is to a large extent determined by the number of visitors drawn to the island, how long they stay, and how much they spend. Approximately two-thirds of visitor industry revenues are expended locally as wages and purchases of materials and services; these monies recycle within the local economy.

After reaching a peak level of about 7.0 million visitor days in 1989 and a similar number in 1991, the number of visitor days declined to about 3.0 million in 1993 following Hurricane Iniki. Still recovering at the close of the decade, Kaua‘i’s visitor industry recorded an estimated 6.3 million visitor days in 1998 and 6.7 million in 1999. Visitors’ length-of-stay on Kaua‘i is increasing – up from 5.4 days in 1989 to 6.1 days in 1999. With the growing prevalence of timeshare accommodations, length-of-stay is projected to increase.

Compared to the state as a whole, Kauai attracts a proportionately larger share of visitation from the mainland and a smaller share from Japan. In 1999, travelers from the mainland United States and Canada accounted for 88 percent of Kauai’s visitor days. While visitors from Japan accounted for 19 percent of visitor days statewide in 1999, on Kauai they accounted for only five percent.

Kaua‘i has the highest level of visitor satisfaction of all the islands – 91 percent report their visit to Kaua‘i as excellent or above average. According to the “Kaua‘i Product Assessment” prepared for the Hawai‘i Tourism Authority (HTA), the essence of Kaua‘i’s attraction to visitors lies in its natural resources rather than its developed ones.

The State of Hawai‘i sets policy for tourism, operates the Convention Center and major transportation facilities, and funds marketing and promotion. The State also funds capital improvements critical to tourism development, including highways, airports, harbors and the Convention Center. On Kaua‘i, the State Department of Land and Natural Resources manages several major state parks that are among the island’s top tourist attractions. The State reaps most of the tax revenues of the visitor industry, including the Gross Excise Tax revenues from visitor spending; the automobile rental tax; and revenues from airport and harbor operations. The State also collects the 7.25 percent Transient Accommodations Tax (TAT), 44.8 percent of which was transferred to the counties in Fiscal Years 1999 and 2000.

The Hawai‘i Tourism Authority is charged with developing the Tourism Strategic Plan, administering tourism development statewide, and overseeing the State tourism fund. Much of its \$50-60 million annual budget is committed to marketing and promotion efforts. To aid product development, HTA has awarded grants to support community festivals and sports events, as well as to study the development of new attractions, such as freshwater fishing.

The County of Kaua‘i provides basic services to the visitor industry, such as water supply, roads, fire and police protection, and operation of County parks. Tourists are heavy users of parks, especially beach parks. The County receives a portion of TAT revenues to support these services. With the advent of the HTA in 1998, however, the State cut the two-year budget for TAT revenues to the County from \$17 million to \$10 million. In response, the County discontinued its practice of making annual appropriations to the Kaua‘i Visitors Bureau (previously about \$1 million per year.) The net loss of State support to the County amounted to about \$2.5 million per year. The County also supports tourism marketing and services to visitors through the Office of Economic Development (OED).

4.2.2 Visitor Industry Growth

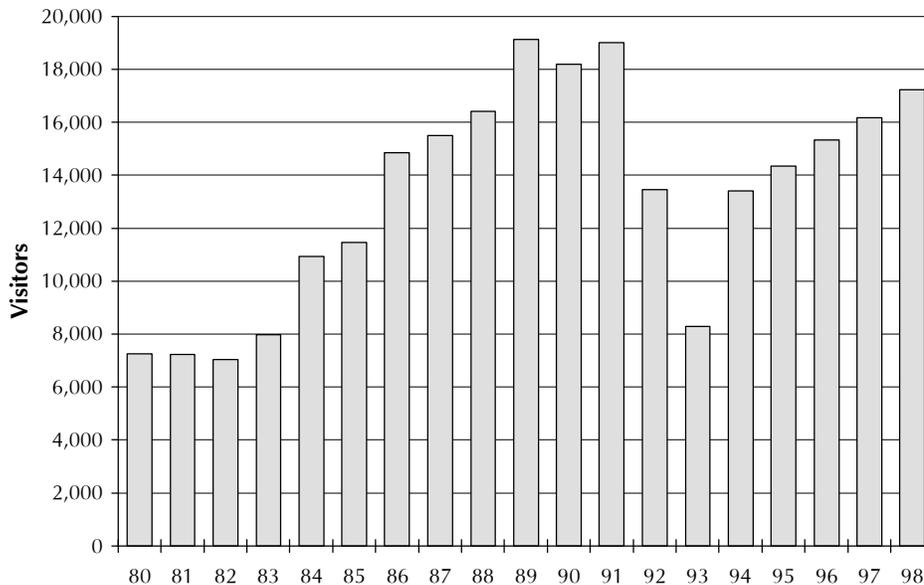
4.2.2.1 Daily Visitors

In 1998, there were approximately 17,200 visitors on Kaua‘i per day. Referred to statistically as the average daily visitor census (ADVC), this figure provides a measure not only of the overall strength of the visitor industry and prosperity of visitor-dependent businesses, but also of the potential impacts of visitors on recreation resources, traffic, and infrastructure.

During the 1980s, the average number of visitors per day on Kaua‘i trended upwards, reaching an all-time high of 19,140 in 1989 (see Figure 4-1). Since then, Kaua‘i’s visitor industry has exhibited steady signs of recovery from the devastation of Hurricane Iniki and the national recession of the early 1990s. Between 1994 and 1998, Kaua‘i’s ADVC increased at an annual growth rate of 6.4 percent.

The Planning Department’s 2020 Economic and Population Projections assume a range of 24,000 to 28,000 visitors per day on Kaua‘i. Growth is achieved by increasing either visitor arrivals or length of stay, or both. See Section 1.6 for discussion of the 2020 projections.

Figure 4-1
Average Daily Visitor Census
Kaua'i County, 1980 - 1998



Source: Hawai'i Visitors & Convention Bureau.

Although visitor industry growth within the projected 2020 range is desirable, whether it is attained or surpassed depends on many variables. Some of these variables are related to trends beyond Hawai'i, such as the economies of the US mainland and Asia and the strength of competing vacation destinations. Other variables are subject to decisions by multi-national airline and shipping companies. Those variables that can be influenced locally include the number and quality of visitor units available on Kaua'i, the quality of the visitor experience, the availability of activities and events, the timing and extent of harbor and airport improvements, and marketing and promotional efforts.

4.2.2.2 Growth in Jobs and the Economy

In 1998, about 42 percent of all jobs on Kaua'i were directly or indirectly related to the visitor industry. With such a large portion of jobs tied to the visitor industry, the number of visitors staying on Kaua'i is the single most important variable in the economy. Kaua'i Vision 2020 emphasizes diversifying the economy so that the County is not over-reliant on the visitor industry. Nevertheless, tourism is expected to remain Kaua'i's single largest industry over the next two decades. With diversification, the 2020 Economic and Population Projections show higher rates of growth in agriculture and high technology jobs (annual rate of 3-5 percent) than in overall job growth (annual rate of 1.0-1.5 percent). Kaua'i Vision 2020 foresees the visitor industry accounting for 30-35 percent of total jobs in 2020.

Visitor spending is a key variable influencing the economic benefits of increased tourism. The HTA has stated its growth goals in terms of increased visitor expenditures, which are influenced not only by the number of visitors but also by their socioeconomic status and the

amount each visitor spends per day. Its 1999 strategic plan declares, “The HTA’s focus will be on better utilization of existing facilities, value-added visitor products and experiences, and increasing yield.”

4.2.3 Future Demand for and Supply of Visitor Units

This section examines the potential demand for visitor units on Kaua‘i through 2020; the planned and proposed additions to the visitor unit supply; and the number of units planned for lands GP-designated and zoned for resort use. Visitor units are defined as all forms of transient overnight accommodations. This includes units in hotels, resort condominiums (including timeshare units), bed & breakfasts, cabins, and hostels.

4.2.3.1 Projected Demand to 2020

The average daily visitor census is used in projecting demand for visitor units. The ADVC is useful because it reflects trends in both visitor arrivals and length of stay. There are two aspects of demand: (1) effective demand, which is the number of occupied visitor units; and (2) overall demand, which is the total number of visitor units in operation – both occupied and vacant. The following is a brief description of the projections. A complete description can be found in the GP Update working paper, “Future Demand For and Supply of Visitor Units,” May 1999 (revised).

Effective demand, or the number of occupied units, is influenced by several interrelated variables: visitor arrivals; the percentage of arriving visitors who do not rent overnight accommodations (people staying with relatives, cruise ship visitors, day tourists, etc.); the average length of stay; and the average number of people in a party. These factors are reflected in the average number of visitors per occupied unit. For the period 1987-1997, the average visitors per occupied unit ranged from 3.32 to 3.76. Future effective demand was estimated using 3.85 visitors per unit, assuming that the upward trend would continue because of: (1) increases in cruise ship passengers (who do not use Kaua‘i accommodations); and (2) increases in the proportion of visitors staying in timeshare accommodations. (In its draft 2025 series of projections, the State DBEDT assumes a similar ratio of 3.7 to 3.8 visitors per occupied unit.) The estimated effective demand for a given year is then calculated by dividing the projected ADVC by 3.85 visitors per occupied unit.

The overall demand or total number of visitor units is calculated by dividing the effective demand – i.e., occupied visitor units – by an assumed occupancy rate. In effect, this calculation adds the average number of vacant units to the average number of occupied units.

Historic occupancy rates on Kaua‘i between 1987 and 1997 range from 60 percent to 75 percent (these figures do not include timeshare units, whose occupancy rate is typically 85 percent or greater). The average occupancy rate for this period is 69 percent. In estimating the future overall demand for visitor units in Table 4-1, the analysis shows two assumptions for the occupancy rate: (a) the average occupancy rate of 69 percent; and (b) a targeted occupancy rate of 80 percent. The latter was suggested by visitor industry representatives.

**Table 4-1
Estimate of Overall Demand for Visitor Units in 2020**

	Scenario O	Scenario A	Scenario A/B	Scenario B
Average Daily Visitor Census	19,000	24,000	28,000	32,000
Effective Demand (Occupied Visitor Units)	4,940	6,230	7,270	8,310
Overall Demand for Visitor Units				
Using historic average occupancy rate (69%) ¹	7,150	9,030	10,540	12,050
Using targeted occupancy rate (80%)	6,170	7,790	9,090	10,390
Existing Visitor Units (1999)	7,030	7,030	7,030	7,030
Visitor Units Needed (1999 - 2020)				
Using historic average occupancy rate (69%) ¹	130	2,010	3,510	5,020
Using targeted occupancy rate (80%)	(860)	770	2,060	3,360

¹ Historic average occupancy rate is the average of the years 1987-1990 and 1995-1997.

Source: Hawai'i Visitors & Convention Bureau, *Visitor Plant Inventory*; newspaper articles in *The Garden Island*; Pahio Resorts, Inc.; State of Hawai'i Department of Business, Economic Development, and Tourism; and PlanPacific.

Table 4-1 shows the calculations for estimating the future overall demand for visitor units based on four different scenarios considered during the GP Update. Scenario A (24,000 ADVC) and Scenario B (32,000 ADVC) correspond to the alternative scenarios used in the analysis of highway and park facilities. Scenario O (19,000 ADVC) is the low end of the original growth range considered by the CAC. Scenario A/B (28,000 ADVC) is midway between Scenarios A and B. Subtracting the number of existing visitor units from the estimated overall demand yields the number of additional units needed for each scenario. The number of visitor units needed by 2020 ranges from -860 units to +5,020 units.

4.2.3.2 Existing Visitor Unit Inventory

The supply of visitor units affects availability and the number of visitors that Kaua'i is able to accommodate during peak periods. As shown in Table 4-2 below, as of 1999 Kaua'i had approximately 7,030 visitor units, ranging from first-class resorts to hostels.

Hotel rooms numbered about 3,250 and account for nearly one-half of the islandwide total inventory. Almost two-thirds of all units were located in two areas: Kōloa-Po'ipū-Kalāheo and Kawaihau. The West Side, which does not have a Visitor Destination Area, had approximately 70 units or about one percent of Kaua'i's total unit count.

**Table 4-2
Visitor Units by Area and Type, 1999**

District	Hotel	Condo Hotel	Other ¹	Timeshare ²	Area Total	
					Units	Percent Islandwide of Total
North Shore	250	540	150	350	1,300	18%
Kawaihau	1,180	350	190	380	2,110	30%
Līhu‘e	750	100	20	320	1,190	17%
Kōloa-Po‘ipū-Kalāheo	1,010	970	130	240	2,360	34%
West Side	50	–	20	–	70	1%
ISLANDWIDE TOTAL	3,250	1,970	510	1,300	7,030	100%
Percent of Total	46%	28%	7%	18%	100%	

¹ Includes the following unit types: individual vacation unit, bed & breakfast, hostel, apartment/hotel, and other. It is estimated that there are 100-200 more B&Bs and individual vacation rentals than shown in the statistics.

² Figures are for registered timeshare units (those which have been designated for sale as timeshare). Timeshare units were not included in the hotel, condo/hotel, and other categories to avoid double counting.

Source: Hawai‘i Visitors & Convention Bureau, *Visitor Plant Inventory*; newspaper articles in *The Garden Island*; Paho Resorts, Inc.; and PlanPacific.

4.2.3.3 Planned Projects and Land Supply

An inventory of planned and proposed projects is shown in Appendix C and summarized in Table 4-3. A project is considered “planned” if it is designated for resort use on the General Plan Land Use Map. Planned projects have been further classified according to whether they have permits and zoning, zoning only, or neither. The table shows estimated potential units either as a resort project or a multi-family project. Resort projects are expected to be comprised entirely of visitor units. Multi-family projects are located within a Visitor Destination Area and could potentially include owner-occupied units or long-term residential rentals. For purposes of this analysis, it was assumed that 65 percent of the units in multi-family projects will be visitor units.¹

Lands zoned for resort use can accommodate over 5,500 visitor units, and lands designated Resort but not yet zoned would accommodate approximately 800 additional units. This includes about 2,840 units in the major resort destinations of the North Shore and Kawaihau. In the Kōloa-Po‘ipū-Kalāheo area, lands zoned for resort use would accommodate a total of 2,500 planned units. Finally, the total includes approximately 600 units on the West Side, comprised of 100 units with zoning and 500 units in two areas proposed for re-designation through the GP Update.

¹ Based on 1997 multi-family unit data from the Kaua‘i County Planning Department, 1997 visitor unit data from the Hawai‘i Visitors and Convention Bureau, and existing multi-family development data from Princeville Development Corporation.

**Table 4-3
Summary of Potential Visitor Units, by Status and Area ¹**

Status and Geographic Area	Estimated Potential Units ²		
	Resort Projects ³	Multi-Family Projects ⁴	Total
Planned Projects with Zoning & Previously Approved Permits	1,660	0	1,660
North Shore	230	0	230
Kawaihau	1,030	0	1,030
Līhu‘e	400	0	400
Planned Projects with Zoning Only (No Permits)	2,590	1,310	3,900
North Shore	620	250	870
Kawaihau	350	80	430
Kōloa-Po‘ipū-Kalāheo	1,520	980	2,490
West Side	100	0	100
Planned Projects on GP Map Only (No Zoning or Permits)	500	280	780
North Shore	0	280	280
Līhu‘e	n.d.	n.d.	n.d.
West Side	500	0	500
ISLANDWIDE TOTAL	4,750	1,590	6,340

¹ See Appendix C for list of projects. “Planned Projects” include facilities closed by hurricane damage but expected to be repaired or rebuilt.

² “Estimated Potential Units” based on current or past proposals. Does not include potential additional B&B, vacation rental, or other alternative lodging units.

³ Projects known to be 100 percent resort units.

⁴ For multi-family projects located within a Visitor Destination Area, it was assumed that 65% of the units will be used as visitor units.

n.d. = number of units not determined for vacant resort sites at Nukoli‘i.

Source: Kaua‘i County Planning Department; and various landowners and developers.

While the supply of Resort-designated land is greater than the projected demand under the 2020 scenarios discussed above, it is unlikely that all of the potential growth will occur. Growth in Kaua‘i’s visitor unit inventory depends on strong market demand and specific investment decisions by individual landowners and developers. Simply because a certain property is planned and zoned for resort use does not mean that it will be developed within the planning period. Some sites which have been zoned for resort development for 20 years or more remain vacant today. On the other hand, an adequate supply of land distributed among the different regions of the island stimulates competition.

Given the existing supply of Resort-designated land, there is no cause to make major re-designations through the General Plan Update. The addition of the two West Side sites provides a potential for visitor industry development not previously available in that region.

4.2.4 Visitor Unit Development, by Area

Projected development of visitor units is based on historic development trends and the estimated overall demand for 2020 – i.e., the total number of units needed, assuming historic and targeted occupancy rates. This section discusses future development and the distribution of additional visitor units among the districts of Kaua‘i.

4.2.4.1 Historic Trends

Over the past 20 years, about 3,800 additional visitor units were developed on Kaua‘i. About three-quarters of that amount, however, was built during the 1980s; and only one-quarter – about 950 units – was built during the 1990s. Two Po‘ipū projects – the Hyatt Regency and the Embassy Vacation Resort account for 800 of the new units. The slowdown may be ascribed at least in part to the effects of Hurricane Iniki in 1992. However, it is also important to recognize that, since 1990, tourism growth has slowed throughout the State.

Real estate development is dependent on many factors, particularly the availability of capital. The majority of resort projects built in the ‘80s and ‘90s were financed by Japanese investment capital. Such an infusion of Asian capital seems unlikely to occur again. From the standpoint of real estate investment, a slower rate of development should be projected for the next 20 years – probably in the range of 2,000-3,000 additional visitor units. This compares closely to the 2,010 and 3,510 visitor units needed between 1999 and 2020 under Scenarios B and C, respectively (assuming an occupancy rate of 69 percent).

4.2.4.2 North Shore

In recent years, North Shore occupancy rates have generally matched the islandwide average, trending up slightly in 1997 and 1998 to 70 percent. If the upward trend improves, it could stimulate additional visitor unit development. Princeville has a substantial supply of land planned and zoned for resort, which, if developed according to current proposals would accommodate about 1,100 additional visitor units. Lands not yet zoned but designated “Resort” on the General Plan Land Use Map would accommodate another 280 units. Princeville Corporation operates private water and sewer utilities and undertakes incremental expansions to support new development.

As of 1999, the North Shore had approximately 1,300 visitor units, with Princeville accounting for the large majority. The greatest number – over 600 units – were added during the 1970s, with slightly less than 500 added during the next decade. Additions in the 1990s amounted to less than 100 units. The North Shore also has a large number of Bed-and-Breakfast (B&B) units and houses used as “vacation rentals.”

4.2.4.3 Kawaihau

Occupancy rates for Central Kaua‘i average about 60 percent, consistently five points below the islandwide average. Rates ran higher in 1999, however – possibly the start of an upward trend. No new visitor units have been built since Pono Kai in 1980. With the lowest room prices and the lowest occupancy rate in recent history, there has been little incentive to build new units. While there is sufficient land zoned to accommodate 1,500 additional units, much of it is leasehold and therefore less attractive to developers. Coco Palms, closed since Hurricane Iniki, is expected to redevelop. Substantial growth appears unlikely. Wastewater treatment plant capacity has been reserved for future development of the resort sites at

Waipouli. As of 1999, water supply was adequate to serve some new resort development. To complete development of all vacant resort properties, however, water and sewer improvements would be needed.

4.2.4.4 Līhu‘e

Approximately 1,000 units were developed in the Līhu‘e region during the 1980s. This figure, however, includes almost 600 units at the Marriott which was originally constructed as the Kaua‘i Surf about 20 years previous. The only substantial new addition was the Outrigger/Beach Villas at Nukoli‘i which added about 400 units in the 1980s. Lower occupancy rates for this area probably reflect the Nukoli‘i units more than the Marriott resort. New growth in the Līhu‘e district is most likely to occur at the “Running Waters” site, the only significant vacant parcel zoned for resort use. That site is projected to receive 350-400 hotel units.

4.2.4.5 Kōloa-Po‘ipū-Kalāheo

Kōloa-Po‘ipū (South Kaua‘i) has consistently posted the highest occupancy rates among Kaua‘i resort regions. With 2,360 visitor units, this region accounts for one-third of the island’s visitor inventory. Kōloa-Po‘ipū has grown consistently over the past 40 years. In the short term, anticipated renovation of the Waiohai property will add about 230 timeshare units to the inventory. Future rehabilitation of the Po‘ipū Beach Hotel would restore another 129 units. Other zoned sites, if developed, could add 2,000 units more. This includes 500 timeshare units and 200 hotel units at Alexander & Baldwin’s Kukui‘ula project. Kukui‘ula has constructed a major wastewater plant and is developing water sources, but other resort developments in the area will require expansion of County water supply and private wastewater facilities. Future resort use has also been proposed at Māhā‘ulepū.

4.2.4.6 West Side

The 2020 Vision specifically calls for development of additional “residential-style” visitor units on the West Side. This represents a change in County policy to encourage a certain kind of resort development on the West Side, which currently has only 70 visitor units (one percent of the island total). The intent is twofold: (1) to broaden economic opportunities on the West Side, which has suffered job losses with the decline of Kekaha Sugar Company; and (2) to expand the distribution of visitor accommodations by offering a distinctly low-key, residential-style experience on the West Side. While current zoning would only accommodate an additional 100 units, both Kīkīaola Land Company and the Robinson Family Partners have proposed that additional lands be designated for resort use on the General Plan Land Use Map. As of 1999, their proposals each called for about 250 units. The Robinson project will have its own water and wastewater facilities. Resort expansion at Kīkīaola, however, depends on expansion of County water and wastewater facilities serving Waimea. Robinson Family Partners has also proposed future resort use on two additional shorefront parcels in Makaweli.

4.2.5 Alternative Visitor Programs and Facilities

The Hawai‘i Tourism Authority has adopted a strategy to develop programs based on special themes, including agriculture, culture, education, health and wellness, nature, sports, and science and technology. The intent is to broaden the range of experiences and activities

offered to visitors, cultivate niche markets, and create entrepreneurial opportunities.² The HTA has provided product development grants for freshwater fishing, technology-related activities, and various other product concepts that could benefit Kaua‘i.

The Draft Tourism Strategic Plan (TSP) also advocates allowing alternative visitor accommodations within agricultural lands, as one part of a strategy for supporting agriculture-based tourism.³ The concept is that visitors could enjoy an agricultural setting, providing revenue to enable the landowner to maintain large land areas in less profitable agricultural use. Small country inns, for example, are popular in many rural areas on the mainland. The TSP notes that “Agri-Tourism” can be bundled with other themes, such as Ecotourism and Health & Wellness Tourism.

Visitor activities are in fact expanding in number and variety, typically using private, agriculture-zoned lands. Examples include various commercial hiking and bicycling tours, horseback tours, and van tours to special sites such as Kilohana Crater. A “Sugar Corridor” tour explores the history and culture of the sugar industry on the West Side.

In addition, several organizations and individuals have expressed the need for zoning regulations that would allow visitor accommodations as part of a retreat center, horse ranch, health and wellness center, lodge, country inn, or other small-scale, activity-related complex. These ideas were raised both in the General Plan Planning District meetings and at the 1998 Future Fair. Such facilities are generally located outside of visitor destination areas. The Kōke‘e Lodge (12 units) and Kahili Mountain Park (29 units) are examples of small-scale accommodations that are located far from urban resort areas.

Ideas expressed by community members include the following:

- Kaua‘i’s Association of the Healing Arts promoted the concept of retreat centers offering health and wellness programs. Such centers would be created as small self-contained pockets within agricultural lands, secluded from major roads and developed areas. They would have lodging units, meeting facilities, and food service facilities.
- Another concept calls for a conference/retreat center set within a hardwood tree farm and managed forest. The two activities would be mutually-supporting: The retreat center would provide cash revenues to support forest maturation, while the forest would provide an ideal setting for a visitor experience. Such a center is envisioned to have the full complement of facilities – lodging units, meeting rooms, and food service facilities.
- One proposal calls for an educational center with camping facilities and a minimum number of buildings. Such a center would provide educational programs about the natural history of Kaua‘i.
- A less formal concept is for a “country inn” located in a secluded area, which might offer agriculture- and nature-based activities but not a full daily

² State of Hawai‘i, Hawai‘i Tourism Authority, *Draft Tourism Strategic Plan*,” p. 15, June 29, 1999.

³ State of Hawai‘i, Hawai‘i Tourism Authority, *Draft Tourism Strategic Plan*,” p. D-2, June 29, 1999.

program. Visitors could choose a country inn as an alternative to hotel or resort condominium accommodations.

One group submitted a petition with 805 signatures supporting “Environmental, Educational, Cultural, Arts, Wellness and Retreat Centers.” The petition calls on the County to revise the Comprehensive Zoning Ordinance to “facilitate the establishment of such constructive centers” in the Open and Agriculture zoning districts.

These concepts have several elements in common:

- Offering unique tourism experiences that are based around health and wellness and education.
- Occupying a secluded site, not visible from the highway.
- Providing lodging and food service. Presumably, the center would be self-sufficient and would not require County water, sewer or refuse collections services.
- Using revenue-producing inns or retreat centers to support the retention of surrounding lands in active agricultural use or simply as open space.

The chief obstacle to such facilities, as noted by all the proponents, is the existing land use regulations – particularly the State regulations. Under the State Land Use Law (HRS Chapter 205), such uses are not allowed the State Agriculture District. The State law controls County zoning in the Agriculture District.

If the State law and the County CZO were amended to allow such facilities in the Agriculture District, they would need to specify development standards and a permitting process. Development standards should address the following:

- Maximum size of the facility in terms of floor area and/or visitor beds or lodging units.
- Location and impacts, including visibility from public roads and buffering from neighboring land uses.
- Linkage to preservation of agricultural lands, activities, and/or natural/open space features.
- Adequate water, sewer and other facilities.
- Access via an adequate public road.

Such facilities should require a discretionary permit from the Planning Commission, with a public hearing.

4.2.6 Alternative Lodging: B&Bs and Vacation Rentals

Since the 1980s, there has been a large increase in the number of bed and breakfast operations (B&Bs) and single-family transient vacation rentals on Kaua‘i. Alternative

lodgings are found in existing single-family residences located in single-family residential neighborhoods or in agricultural subdivisions. The County estimates that there are over 200 B&Bs and single-family vacation rentals presently operating on the island, though the number could be much higher. Providing an alternative lodging experience, B&Bs and single-family vacation rentals allow visitors to learn about Hawaii’s culture and environment from a community setting.

4.2.6.1 Benefits of Alternative Lodging

Kaua‘i Vision 2020 (Chapter 2) foresees increasing interest in small-scale alternative forms of lodging: “Vacation rentals, inns, and bed and breakfasts provide alternative visitor accommodations. They are licensed and monitored by professional associations, which promote cooperative relationships with neighbors.” The last sentence suggests that this home-based industry is primarily self-managing and has developed ways of minimizing neighborhood impacts.

As locally-owned small businesses, alternative accommodations such as B&Bs keep a large share of their revenues within the County and the State. For example, the B&B or vacation rental owner is likely to buy equipment and supplies from local businesses. Similarly, the B&B owner will typically spend net income (profit) on Kaua‘i. As money is spent and re-spent, more local businesses and job-holders benefit.

4.2.6.2 County Policy and Zoning Regulations

There is a need to develop a clear policy regarding B&Bs and vacation rentals. Based on these policies, the County should make specific amendments to the Comprehensive Zoning Ordinance (CZO) and, if necessary, the County tax code.

The 1984 General Plan is silent concerning alternative lodging units. The Comprehensive Zoning Code (CZO) does not define “Bed-and-Breakfasts” (B&Bs) as a specific use. The CZO only defines “transient vacation rentals” in the context of multi-unit buildings (i.e., condominiums) within a “Visitor Destination Area;” it is silent on single-family vacation rentals. In the absence of specific direction, the Planning Department has developed in-house policies for addressing both uses.

The lack of clear regulations has created a climate of uncertainty and hesitation on the part of operators. Should they apply for permits? Of the estimated 100-200 B&Bs operating on Kaua‘i today, only eight have obtained Planning Commission-approved Use Permits. Single-family vacation rental operators claim that since the CZO is silent on the issue of single-family vacation rentals, they need not apply for use permits in areas zoned for residential, agriculture, and open space. While it has not adopted a formal interpretation, the Planning Department has generally not required use permits for vacation rentals.

Alternative lodging units may be defined as follows:

- A **“Bed-and-Breakfast”** is the use of a portion of a residence, an additional dwelling unit or a cottage for transient rental (less than 30 days) on a property where the owner resides in the principal residence.
- A **“Single-Family Vacation Rental”** is a single-family dwelling that is used as a transient rental.

A single party of visitors (a couple, a family, or a group of friends) occupying a single-family vacation rental or a single B&B unit will generally have little traffic or noise impact. For the B&B home, it would be similar to having houseguests or boarders. A neighbor could speak directly to the B&B owner if the visitor party created a nuisance.

A single-family vacation rental houses the same number of people as it would if rented out long-term. If occupied by a single party, a vacation rental would also be expected to have relatively little traffic or noise impact. Unlike the B&B, however, the vacation rental has no resident owner who can relate to the neighbors or deal directly with neighbors' concerns.

Over the years, the Planning Department has received complaints about both B&Bs and single-family vacation rentals in residential neighborhoods. Complaints have mostly concerned B&Bs with multiple units for rent and impacts of traffic, parking, and signs.

Another concern relates specifically to large concentrations of vacation rentals in certain communities – particularly beach communities such as Hanalei and Hā'ena. In public meetings on the North Shore, residents reported that many Hā'ena houses were used primarily as vacation rentals and that the character of the area had changed. The neighborhood is affected not only by the continual turnover of vacation renters, but also by the lack of full-time residents.

Single-unit uses could be permitted in a fashion similar to the current permitting of a home business – i.e., through a Class I or II Use Permit, which is granted administratively. The problem of an over-concentration of SFVRs needs further study and may warrant limits on the number of such uses in a given neighborhood.

Development standards should require: (1) a single unit with an exterior entry, and interior access to all parts of the unit; (2) one additional parking space; and (3) clearance for use of the sewer system or individual wastewater system. A residential or agricultural property would not be allowed to have both an ADU and a B&B (or SFVR) unit. The owner of a property which already had a residence and an ADU could convert the ADU to a B&B unit, but could not develop a B&B in addition to an ADU.

Some owners wish to operate multiple B&B or SFVR units on a single Residential- or Agriculture-zoned property. Providing lodging for more than one party, however, increases the potential for impacts. Such a use becomes more of a commercial enterprise than a home occupation and should require more detailed review with the opportunity for public comment. Specific development standards should be developed for multi-unit B&Bs and SFVRs addressing at least the following factors:

- Buffering of adjacent properties in order to prevent noise impacts and visual impacts. Related factors are the size of the property and the location of the visitor units relative to adjacent properties.
- Access to adequate public roads.
- Parking for employees and patrons.
- Adequate wastewater treatment and disposal.

- The total number of vacation rentals in the area and the cumulative impacts on the neighborhood.

Multi-unit SFVRs would require a Class IV Use Permit, involving a public hearing and decision by the Planning Commission.

4.2.7 Visitor Impact on Parks and Natural Resource Areas

In assessing Kaua‘i as a visitor destination, a report prepared for the Hawai‘i Tourism Authority states:

Kaua‘i’s extraordinary resources, and the ability of visitors to participate in resource-based activities, are considered the prime reasons for Kaua‘i’s success as a resort destination. Many of the existing State and County parks and resource areas cannot accommodate current demands for access and are not being adequately maintained. In the eyes of County residents and officials, the principal concerns with respect to tourism’s future on Kaua‘i center around whether or not it will be possible to meet the anticipated visitor demand for use of parks and wilderness areas and at the same time:

- Ensure an appropriate level of resident access without incurring any major conflicts with visitor access;
- Adequately maintain the facilities being used; and
- Manage use in a manner that will sustain a high quality user experience and avoid any significant degradation of the natural resources.⁴

While an increase in the daily number of visitors to Kaua‘i translates into job growth and an overall healthy economy, growth in Kaua‘i’s visitor industry also has a significant impact on the island’s infrastructure systems, public resources, and quality of life. With increasing visitors, there is more traffic congestion, parks and wilderness areas are crowded, and conflicts arise between commercial recreation activities and the enjoyment and use of resources by residents. As discussed in Section 1.6, visitors are accounting for an increasing share of Kaua‘i’s daily population. According to the HTA, Kaua‘i has the second highest proportion of visitor to resident population of all the islands.

More and more visitors are seeking ecotourism, defined as “nature-based travel.” Typically, it involves hiking, bicycling, kayaking, or boating to a scenic and/or wilderness land destination. It may include camping. It also includes ocean-based tours and recreation (windsurfing, snorkeling, etc.). Many small commercial businesses are renting equipment or providing tours to this market. Among visitors to the state, Kaua‘i’s tend to be those who are most interested in ecotourism and outdoor recreation.

State parks are based around special natural resource areas; consequently, they attract a high level of ecotourist activity. Among all the islands in the State, Kaua‘i has the largest acreage of State parks, and these parks – i.e., Kōke‘e, Waimea Canyon, Nā Pali, and Wailua River –

⁴ State of Hawai‘i, Hawai‘i Tourism Authority, *Hawaii Tourism Product Assessment, Vol II - Technical Reports*, “Kaua‘i Public Land Use Policies and Plans,” p. F-3, April 1999.

comprise a valuable set of natural and cultural resources. All four of the main State parks have the size and resource quality that rate them as being exceptional. The State Parks Division, however, does not have personnel or funding comparable to those of national parks, such as Haleakalā National Park or Hawai‘i Volcano National Park.

Kaua‘i’s resource parks – Hā‘ena State Park, Kōke‘e State Park, Nā Pali Coast State Park, Polihale State Park, Wailua River State Park, Waimea Canyon State Park, and Kīlauea Point National Wildlife Refuge – are heavily patronized by visitors to Kaua‘i. (upwards of 80 percent of daily patrons). In 1998, these parks collectively received approximately 2.2 million visitors. In every case except Polihale, tourists accounted for 80-95 percent of patronage. At these parks, the wilderness ambiance is especially susceptible to degradation with increasing numbers of park users and vehicles on the roadways.

County beach parks are also heavily used by both residents and visitors. As reported by the Parks Division, the most heavily-used were Po‘ipū Beach Park, Lydgate Park, and Salt Pond Park. Other parks used by visitors include ‘Anini Beach Park, , Hanalei Beach Park, Anahola Beach Park, Nāwiliwili Beach Park and Kekaha Beach Park. Expanded beach parks are needed to meet the demand. On the operational side, the County faces increasing challenges to provide adequate restrooms, maintenance and lifeguard staff.

Section 1.6 reports the results of a survey of parks managers, who projected future patronage based on alternative growth scenarios. They indicated that five of the 11 major sites could not sustain significant additional patronage without making improvements and providing greater funding for operations. Another five sites could sustain increased patronage to the level of Scenario A, but would require significant investment to handle patronage above that level. Approximate estimates for needed capital improvements for all parks and related forest reserves range from \$15 million to \$81 million.

The Visitor Industry Task Group expressed serious concern over the condition and funding of State and County parks, as well as State boating facilities. Members were especially concerned that Kaua‘i is being marketed as an ecotourism destination, but parks managers have had to limit hiking and camping permits and close some roads and trails. The Task Group brainstormed about secure sources of increased funding for State Parks. User fees were suggested as a viable source of income, but only if the revenues could be set aside for parks improvements.

4.2.8 Policy

4.2.8.1 Supply of Visitor Units and Location of Resort Development

- (a) Encourage and support resort development on lands planned and zoned for resort use, primarily at Princeville, Kapa‘a-Wailua, and Po‘ipū.
- (b) Plan for a limited number of visitor accommodations on the West Side, to be provided in residential- and inn-style buildings. The intent is that, over the long term, the West Side should have about five to ten percent of the island’s total visitor units.

4.2.8.2 Alternative Visitor Accommodations

- (a) The County of Kaua‘i shall recognize alternative visitor accommodations, such as B&Bs, vacation rentals, inns, cabins, and retreat centers.

- (b) The County shall enact clear standards and permit processes for regulating alternative visitor accommodation structures and operations in Residential, Agriculture, Open, and Resort zoning districts.
- (c) County development standards and permit processes shall be scaled to the size and potential impact of the use:
 - (1) Single-unit B&Bs and vacation rentals should be allowed with development standards and a use permit requiring administrative review, and opportunity for public input.
 - (2) Multi-unit B&Bs and vacation rentals, retreat centers, and inns should be regulated through a set of development standards and a permit process requiring a public hearing and a decision by the Planning Commission.
 - (3) Development of a retreat center or country inn in an Agriculture district should be linked to an ongoing, active program to conserve agricultural land and operations.
- (d) Permitting processes should consider the cumulative impact that a large concentration of alternative visitor units can have on a residential neighborhood.

4.2.8.3 Visitor Activities, Parks and Natural Areas

Some of the following policy statements apply not only to the County but also to the State government. In certain areas, only the State has the authority and means to carry out the policy.

- (a) Encourage the development of public-private partnerships involving the County and the Department of Land and Natural Resources in order to manage and improve Kaua‘i’s valuable parks and natural areas.
- (b) Simplify zoning and permitting procedures for the operation of outdoor recreational activities on private lands. Clarify the definition of outdoor recreation, to include but not be limited to bicycle and horseback riding, hiking, off-road sightseeing, fishing, tent-camping, and other such uses, which are dependent on open lands. Such uses shall not displace agricultural use and shall not involve unrelated retail or services. Establish clear permitting standards and eliminate unnecessary procedures. (County and State)
- (c) Manage beach parks, resource parks, rivers, beaches and other natural areas according to the following policies, in order of priority (County and State):
 - (1) Conserve resources.
 - (2) Provide for use by the general public – i.e., individuals, families, ohanas.
 - (3) Allow for group use (including commercial tours and equipment rentals) within conservation limits.
- (d) To enhance the visitor’s experience of Kaua‘i and to provide meaningful jobs and income to Kaua‘i residents, the County shall develop or support development of the following programs by Federal, State, or private agencies:

- (1) Regional visitor centers to provide guidance and assistance to visitors, as well as information about the region, its history and culture.
 - (2) First-person interpretation of natural areas, historic and archaeological sites, traditional agricultural and cultural practices, towns and communities.
 - (3) Study and practice of Native Hawaiian and other ethnic cultural traditions and languages, including the development of cultural learning centers.
- (e) Improve facilities, maintenance, and management of activities at State and County parks. Specific actions include:
- (1) Commit the necessary resources to ensure adequate levels of park maintenance, repair, and hygiene and to improve signage and interpretation of natural and cultural features.
 - (2) In resource parks that receive heavy visitation, such as Kōkeʻe, Hāʻena and Wailua, plan and improve specific areas to support larger numbers of visitors; manage other areas for moderate or low use, based on conservation objectives. Prepare and update master plans for major parks.
 - (3) Clearly define roles responsibilities in managing commercial recreation activities among County and State agencies, in order to provide efficient and effective licensing and regulation. Eliminate overlap between State and County agencies, or between State DLNR divisions, and streamline management by making a single State or County administrative unit primarily responsible for all activities within a specific park, whether conducted on water, shore or land.
- (f) Expand and improve State small boat harbor facilities in order to accommodate local fishermen, recreational boating, and commercial boat tours and charters.
- (g) State and County agencies should work together to provide efficient and effective management, licensing and regulation of commercial recreation activities within public lands and waters. Specific objectives include the following:
- (1) Clarify the purposes of licensing and regulatory activities; revamp procedures to match the purposes and provide more efficient service to the public.
 - (2) Realign agency responsibilities in order to reduce the problems associated with overlapping jurisdictions and to improve efficiency and accountability. Wherever possible, empower a single administrative unit with the primary management and/or regulatory authority over a given geographic area.
 - (3) Wherever possible, use the more broad and direct powers of land ownership and control of territorial waters to regulate activities, rather than using land use regulations. For example, regulate use of a beach by requiring a permit to enter the beach park or beach right-of-way for the purpose of conducting a commercial activity.
- (h) To pay for better parks maintenance and needed improvements to programs and facilities, the State should develop dedicated tax or user fee income from out-of-State

visitors, commensurate with the proportion of their use of the parks, trails and other facilities. Such income should be restricted for use in State parks and recreational facilities. Such funds should be reserved for the purpose of improving State parks and facilities.

- (i) To pay for expanded small boat harbor facilities and services and for improved regulation of boating and ocean recreation, the State should increase its licensing and leasing income from operations serving out-of-State visitors, commensurate with the proportion of their use of the facilities and the costs of effective regulation.
- (j) To secure adequate long-term funding for major resource parks such as the Waimea Canyon-Nā Pali Coast complex, the State should explore the feasibility of securing federal funds to support major parks or transferring parks to the National Park Service.

4.2.9 Implementing Actions

4.2.9.1 Parks and Natural Areas

- (a) The State should adopt legislation amending Chapter 205, HRS, to make outdoor recreation activities a permitted use in the State Agricultural District; or, alternatively, to delegate such authority to the counties.
- (b) The County Planning Department shall prepare an amendment to the CZO setting standards for outdoor recreation uses in the Agricultural and Open zones and streamlining permit requirements. Standards should include the following: a large acreage (e.g., minimum of 100 acres) located away from residences; vehicular access from a highway, arterial or collector road, not from a neighborhood road; and limited improvements. Proposals meeting these standards shall be reviewed through the Class III Zoning Permit process.
- (c) The County Department of Public Works shall develop a comprehensive park permit system for regulating organized group activities in County parks. Activities to be regulated shall include entry into a beach park or other park property by a business or other organization collecting a fee for service. The system shall provide for permit fees, as appropriate. Fee revenues should be used to support effective enforcement and to improve the parks where they were collected.

4.2.9.2 Alternative Visitor Accommodations

- (a) The Planning Department shall prepare amendments to the Comprehensive Zoning Ordinance setting development standards and permit processes for regulating alternative visitor accommodation structures and operations in Residential, Agriculture, Open, and Resort districts.
- (b) The Planning Department shall prepare CZO amendments to facilitate the permitting of existing, nonconforming alternative visitor accommodations.
- (c) In preparing the CZO amendments, the Planning Department shall consult with the Kaua‘i B&B and vacation rental trade organizations, community associations, and the Finance Department.

- (d) The Planning Department shall consult with the State Office of Planning to interpret existing State statutes with regard to permitting alternative visitor accommodations within the State Agricultural District under a Special Use Permit. If necessary, the County shall propose an amendment to HRS Ch. 205.
- (e) These Implementing Actions relating to Alternative Visitor Accommodations shall be a top priority and shall be initiated forthwith by the Planning Department.

4.3 AGRICULTURE

4.3.1 Overview

Diversified agriculture, defined as products other than sugar and pineapple, is an industry that has strong potential to be a major force in the pursuit of the 2020 Vision for economic diversification. It is a particularly important time to encourage further development of the industry since the closure of Amfac’s Līhu‘e and Kekaha sugar plantations is not a matter of “if” but a matter of “when”. Further development of this industry is highly desirable because it keeps valuable agricultural lands in productive use. It also has the added benefit of preserving rural lands from development.

4.3.2 Land Supply

Kaua‘i has only 14,600 acres in the State Urban District – approximately four percent of the island’s total land area. Ten times that amount, or about 140,800 acres, lies in the State Agriculture District (see Table 4-4). As described below, the major portion of Kaua‘i’s important agricultural lands have been preserved, and there is an ample supply of good land to support increased agriculture and aquaculture enterprise.

Table 4-4 Kaua‘i’s Agricultural Lands (acres)	
Kaua‘i Total Land Area	353,900
Land in State Agricultural District	140,800
Agricultural Lands of Importance to the State of Hawai‘i (ALISH):	
Prime, Unique, and Other Important lands ¹	83,040
Prime ¹	54,920
University of Hawai‘i Land Study Bureau (LSB) Lands:	
Lands Rated “A”, “B”, and “C” ²	68,980
Lands Rated “A” and “B” ²	40,440
Lands in Crop Production ³	38,100

¹ Prime ALISH indicates the most potentially productive lands and assumes availability of sufficient rainfall or irrigation water.

² The LSB ratings indicate the productivity of lands, with “A” being the best. The “A”, “B”, and “C” ratings indicate lands with very good to fair productivity potential for most crops.

³ Unofficial figure from the State Department of Agriculture. Does not include pasture/grazing lands.

Source: State of Hawai‘i Department of Agriculture.

Kaua‘i had approximately 54,900 acres of prime agricultural lands, as determined about two decades ago by the Agricultural Lands of Importance to the State of Hawai‘i (ALISH) study. Prime ALISH indicates the most potentially productive lands and assumes availability of sufficient rainfall or irrigation water. While a small amount of these lands has been developed in non-agricultural uses during the intervening 20 years, it is estimated that at least 50,000 acres of prime ALISH lands remain available for cultivation.

Aside from lands in crop production, there remain about 30,900 acres of fallow agricultural lands that have very good to fair productivity potential for most crops. More agricultural lands would become available should Amfac/JMB end sugar production and close Līhu‘e Plantation and Kekaha Plantation. An additional 60,000 to 85,000 acres of poorer quality land lie within the State Agricultural District and are zoned Agriculture or Open by the County.

In the latter part of the 1980s, the Hawaii Land Evaluation and Site Assessment (LESA) Commission developed a land rating system to identify Important Agricultural Lands. The LESA system built upon other ratings systems including ALISH and LSB systems. Factors considered in rating lands under the LESA system included natural physical characteristics such as topography, soil type and climate, as used to determine ALISH and LSB ratings, as well as location and socio-economic characteristics. Lands throughout the state were rated and mapped. For the island of Kaua‘i, lands identified as Important Agricultural Lands of High Quality are mostly concentrated along the southwest, south, and east shores. Major areas are from Barking Sands Beach to Kekaha, between Waimea and Hanapēpē, the Wahiawa Gulch area to west of Po‘ipū, and north of Līhu‘e just mauka of Kalepa Ridge.

4.3.3 Irrigation Systems

Though agricultural lands have been preserved to a great extent, the irrigation systems serving them have decayed. Many reservoirs and ditches are poorly maintained, and some – primarily on the north and east sides of the island – have been taken out of use or abandoned. Some systems have been interrupted by land subdivisions, so that the reservoir may be owned by one entity while the ditches are divided among multiple owners.

On the North Shore, some former Kīlauea Plantation systems no longer function due to ownership or operational problems. On the east side, former systems are falling into disrepair in areas such as Kapa‘a and Keālia where Līhu‘e Plantation has abandoned cultivation and is selling off lands. In contrast, on the south and west sides of the island, large sugar, seed corn, and coffee plantations continue to use and maintain their irrigation systems. Without irrigation, the potential for intensive agriculture is severely diminished, if not lost. The State Department of Agriculture, Agriculture Development Corporation, recognizes the threat and is undertaking an assessment of the condition of major irrigation systems on all islands.

In many areas, irrigation reservoirs and ditches also serve to retain and channel stormwater away from settled areas. If these systems are disrupted or allowed to fall into disrepair, it could increase the risk of flooding on surrounding lands.

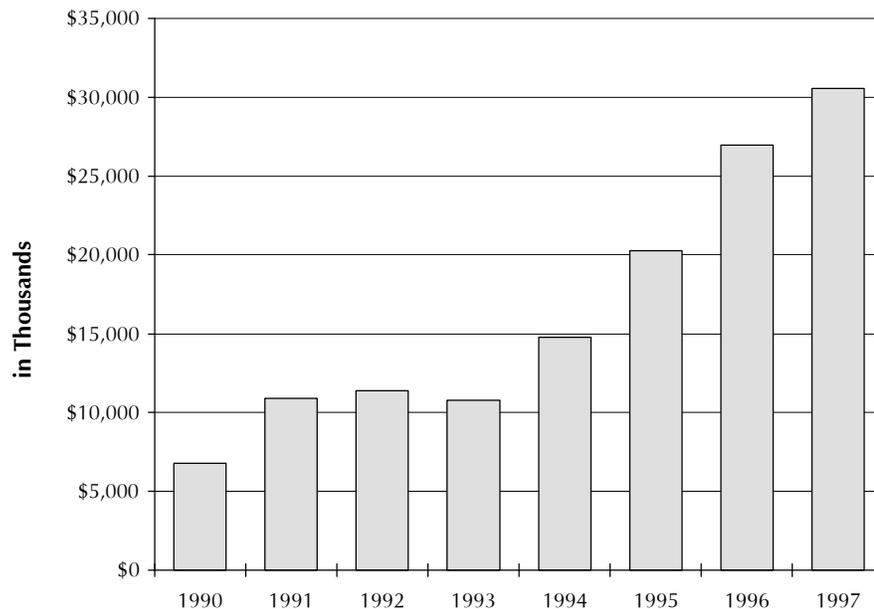
4.3.4 Growth in Jobs and the Economy

In 1998, Kaua'i County had approximately 800 wage and salary jobs in agriculture, or about 3.2 percent of the island's total wage and salary jobcount of 24,900. The majority of agriculture wage and salary jobs are supported by the island's two remaining sugar plantations. In 1998, Gay & Robinson and Amfac Sugar Hawai'i employed 288 and 460 full-time workers, respectively.

In addition to wage and salary jobs, the agriculture industry has a relatively large share of farmers operating as self-employed sole proprietors along with their unpaid family members. In 1998, according to the State Department of Agriculture, Kaua'i County had 200 self-employed farm operators and 100 unpaid workers.

Between 1990 and 1997, sales of diversified agriculture crops (farmgate value) have more than quadrupled from \$6.8 million in 1990 to \$30.6 million, as shown in Figure 4-2. Most of this growth can be attributed to coffee, and to a lesser extent, papaya, flowers and nursery products, and tropical specialty fruits.

Figure 4-2
Value of Crop Sales, Excluding Sugar
Kaua'i County, 1990 - 1997



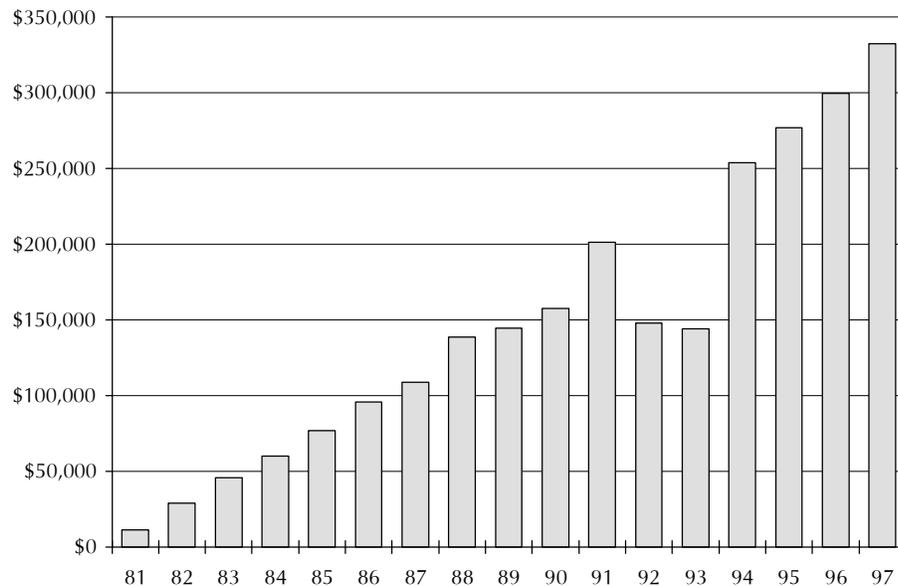
Source: State of Hawai'i, Department of Business, Economic Development, and Tourism, *Hawai'i State Data Book*, various years.

Another indicator of the growth in diversified agriculture are reported sales at the County's Sunshine Markets. This program enables farmers to sell directly to the public. As of 1999, the Sunshine Market operates once a week in Līhu'e, Kapa'a, Kalāheo, Kekaha, and Kīlauea, and twice a week in Kōloa. There is also a West Kaua'i farmers market in Po'ipū that is open six days a week. While the Sunshine Markets have proven to be a successful and cost

effective program, growth in crop values and employment come mainly from export markets and corporate farm operations.

As shown in Figure 4-3, reported income has increased from in \$11,300 in 1981, when only the Līhu‘e and Kapa‘a markets were held, to \$332,700 in 1997, when all six markets were open. Although these represent only income that is reported, it does indicate that diversified agriculture has grown substantially over the last 16 years. In 1997, Kapa‘a and Līhu‘e had a 37 percent and 40 percent share of the total reported income of the six weekly markets held, respectively. Between 1981 and 1997, reported sales at these two markets increased at an annual growth rate of 21 percent. Farmers’ markets are an important venue for increasing import replacement and keeping money within the community. This is distinctly different than export crop sales which brings new money into Kaua‘i’s economy. Both types of sales help to strengthen the local economy.

Figure 4-3
Reported Sunshine Market Sales
Kaua‘i, 1981-1997



Source: County of Kaua‘i, Office of Economic Development.

The above illustrates that there is strong potential for long-term development of Kaua‘i’s diversified agriculture industry. Further development can be achieved in two ways: (1) increase agricultural self-sufficiency for residents and the visitor industry (import replacement); and (2) increase the amount of produce exported. The latter needs to be achieved if the 2020 Vision of diversified agriculture being a major economic force on Kaua‘i is to be realized. By 2020, Kaua‘i is projected to have between 2,200 and 3,100 jobs in agriculture and aquaculture.

4.3.5 Support for Agriculture Industry

The state and federal governments are the primary sources of government support for agriculture. Federal and state programs include crop research, pest and disease control, promotion and marketing, development of irrigation systems and agricultural parks, extension services, and farm loans. The State also owns substantial amounts of agricultural land, which it leases to private farmers for cultivation.

The County's most important and most costly support program consists of a property tax incentive to retain land in agricultural use. To calculate property taxes, the County values agricultural land based on the value of crops it can produce. Taxes for all other lands are based on real estate market value. The tax savings for agricultural lands range upward to 90 percent. Corporate farm businesses that benefit most from such subsidies also provide the greatest number of agricultural jobs.

The Water Board provides another direct subsidy in the form of reduced water rates for bona fide agricultural businesses. Required to document farm income through annual tax returns, about 300 farmers benefit from the agricultural water rate reduction (1998 data).

Other than the property tax and water rate incentives, the County plays a secondary role in supporting agriculture. One very successful County program, as described earlier, is the Sunshine Markets. With the large amount of land currently available, entrepreneurial activity is the key to increasing agricultural businesses and employment.

4.3.6 Aquaculture

Although aquaculture has been in existence since the early Hawaiians harvested seafood from coastal fish ponds, it is being reinvented as a high technology, high-value industry. The opening up of former sugar plantation lands, the trend of agriculture farmers diversifying into aquaculture, and advances in technology point toward an increase in aquafarms and production. In addition to creating new jobs on Kaua'i, the further development of Kaua'i's aquaculture industry will also promote high technology and continue the practice of an important Hawaiian tradition. Enthusiasm for aquaculture, however, should be balanced by caution in importing new aquatic species. Some exotic species, if released, could negatively affect native aquatic species and agriculture.

In 1997, Kaua'i County had 11 aquafarms on approximately 30 acres of land. The island's aquaculture industry is comprised mainly of small, family-run backyard farms of between one and two acres in size. Families that operate these farms typically have income from multiple sources. In 1997, the industry supported about ten and six full-time and part-time jobs, respectively. Kaua'i's small-scale aquafarmers sell their products (prawns, tilapia, catfish, and ornamental fish) to island residents. Buyers of local aquaculture products also include Kaua'i's resorts and restaurants.

The size of the island's aquaculture industry changed dramatically in 1998 with the introduction of a major corporate venture – Controlled Environment Aquaculture Technology Inc. (Ceatech). The company is the newest aquaculture operator on Kaua'i. Ceatech presently leases about 100 acres at Kekaha for production of genetically improved shrimp has 45 employees. With the addition of Ceatech, Kaua'i's aquaculture industry in 1998 employed a total of 61 workers on about 130 acres of land.

According to the State of Hawai'i Aquaculture Development Program (ADP), there is extremely strong demand for Hawai'i's aquaculture products. This is in large part due to the high consumption of seafood in the Islands – over 60 million pounds annually – by residents and visitors alike. The ADP also expects research and educational activities related to aquaculture to accelerate as new technological improvements are developed.

Aquaculture start-ups on Kaua'i are anticipated to be mostly small-scale, family operated enterprises. As mentioned earlier, most of these aquafarmers will have multiple sources of income. Aquaculture as a backyard operation is ideal for many families because it: (1) does not require a large amount of land; (2) involves products which do not require a high level of expertise, e.g., tilapia; (3) can be worked on without leaving home; (4) does not have significant time demands, except during harvest; and (5) can provide hundreds of pounds of product for family consumption. Despite Kaua'i's numerous opportunities for aquaculture development and strong market demand for seafood products from both local and out-of-state sources, the aquaculture industry will not be a significant source of full-time jobs on the island unless several large operations are added.

4.3.7 Policy

“Agriculture” or “agricultural enterprise” as discussed here also includes aquaculture.

Section 5.2 sets forth the policy for Agricultural lands, as designated on the General Plan Land Use Map. The policy calls for preserving important agricultural lands as an essential resource base. It also calls for conserving irrigation systems for existing and potential future agricultural use. This chapter addresses other policies and actions to support agricultural enterprise on Kaua'i.

- (a) The County shall provide property tax incentives to support agricultural enterprise and activities and conservation of agricultural land.
- (b) Through tax incentives and land use regulations, the County shall encourage landowners to make land available to small farmers.
- (c) The County and the State shall take measures to maintain viable irrigation systems – both government- and privately-owned – and to support the supply of irrigation water to farmers at reasonable prices. Measures should include tax relief and other incentives.
- (d) The County shall promote and support the marketing of Kaua'i agriculture and food products within Kaua'i and to out-of-state markets.
- (e) Recognizing the need to furnish and coordinate a wide variety of direct assistance programs and appropriate land use, water use, environmental and tax policies, the County shall actively collaborate with federal, state, and private farm organizations to expand and diversify agricultural enterprise on Kaua'i.
- (f) State and federal agencies should expand direct financial and tax assistance to agricultural enterprise as well as increase funding for programs that support agricultural development and marketing programs on Kaua'i.

4.3.8 Implementing Actions

- (a) The Finance Department shall examine the feasibility of revising the agricultural property tax to increase incentives to lease land to small farmers and shall prepare an ordinance or rule amendments, as appropriate.
- (b) The Planning Department shall prepare and submit to the Planning Commission an amendment to the CZO that would eliminate the requirement to subdivide in order to grant a long-term lease for agricultural use only (no dwelling use).
- (c) Through the Office of Economic Development, the County shall operate an agriculture development and support program, leveraging County resources and policy tools by working collaboratively with state and federal agencies, and private business and farm organizations.
- (d) The County shall support the Sunshine Markets and other means of marketing Kaua'i agricultural and food products to Kaua'i residents, businesses and visitors.
- (e) The OED shall pursue opportunities to link visitor industry marketing with marketing of Kaua'i agricultural products.
- (f) The State Department of Agriculture and the Department of Land and Natural Resources should conduct an assessment of State-owned irrigation systems and develop a plan and funding for maintaining or rebuilding viable systems.
- (g) The Planning Department shall prepare and submit to the Planning Commission an amendment to the Subdivision Ordinance that would require preservation of viable irrigation systems.
- (h) The State DLNR should make available tracts of State-owned agricultural lands to small farmers under long-term leases with affordable rents. Lands could be leased unimproved, without incurring large capital expenditures for improved agricultural parks.
- (i) The University of Hawai'i's College of Tropical Agriculture and Kaua'i Community College should develop more programs to prepare Kaua'i's youth for future careers in diversified agriculture and aquaculture, with additional emphasis on business skills.

4.4 HIGH TECHNOLOGY

4.4.1 Overview

Historically, the Pacific Missile Range Facility (PMRF) has been the driving force behind the establishment of technology-based business on Kaua'i. PMRF is the largest instrumented, multi-environment testing and training ocean range in the world. It is the only test range where underwater, surface, and air activities can be monitored simultaneously. The facility is one of the largest employers on Kaua'i with a total workforce of approximately 870. Between 1993 and 1999, more than \$335 million in federal funds has been spent at PMRF to upgrade infrastructure systems and ensure that the range remains on the leading edge of technology. Federal appropriations in FY2000 amounted to \$124 million.

Long-range plans for PMRF include (1) upgrading of existing radar, telemetry, optics, electronic warfare, differential global positioning system, and other instrumentation facilities; and (2) construction and operation of additional missile launch sites, sensor and instrument facilities, and a missile storage building.

In the near term at least, PMRF's continued vitality is critical if Kaua'i is to have a sizable high technology industry. In the long term, innovations will furnish other opportunities. Continued advances in telecommunications provide a set of opportunities for non-manufacturing high technology businesses. In addition to electronic technology, there will also be the need for manufacturing technology as farmers who have diversified into medicinal and other crops are ready to bring their goods to the market. Value-added manufacturing techniques for steaming, grinding, pressing, freeze drying, and countless other ways of processing plant products will be needed to support Kaua'i's farmers. High technology and diversified agriculture are also directly linked by the development of "high technology" farms. Examples include Ceatech's genetically improved shrimp farm and the applied research on seed corn being done by Pioneer Hi-Bred and Novartis.

4.4.2 Growth in Jobs and the Economy

Further development of the island's high technology sector would not only create new jobs, but would also provide Kaua'i residents with, on average, higher paying jobs. Kaua'i's high cost of living and dependence on the relatively low-paying service sector, increases the attractiveness of developing a strong high technology industry.

According to a survey a done by the State of Hawai'i, High Technology Development Corporation (HTDC), jobs in high technology generally pay more than jobs in other fields. According to the 1996 survey, salaries statewide for high technology jobs averaged \$50,000. For comparison purposes, the State of Hawai'i Department of Labor and Industrial Relations reported 1996 annual average wages (includes all sectors) of \$24,100 and \$27,400 for Kaua'i County and the State as a whole, respectively.

As of 1999, there were about 1,160 high technology jobs on Kaua'i – about 3.6 percent of all jobs. About 950 of Kaua'i's high technology jobs were related to PMRF. "High technology jobs" are those that fall within one or more of the following five areas of high technology activity: (1) products/manufacturing (chemicals and allied products, industrial machinery and equipment, electronic and other electronic equipment, transportation equipment, and instruments and related products); (2) telecommunication services; (3) computer and software services; (4) science/research and development services; and (5) engineering services and support services. This estimate of high technology jobs should be considered conservative since it does not include home-based high technology businesses.

Between 2000 and 2020, high technology jobs are projected to increase at a faster pace than total jobs. In 2020, Kauai is anticipated to have between 2,400 and 2,800 high technology jobs, an increase of 1,200 to 1,600 jobs above the current number.

4.4.3 Policy

- (a) Encourage the development of the high technology business sector on Kaua'i, in order to diversify the economy and provide higher-paying jobs.

- (b) Support high technology businesses by zoning appropriately located lands for high technology uses and by providing County infrastructure.
- (c) Build upon Kaua‘i’s existing resources in high technology, such as the Pacific Missile Range Facility and the fiber optic cable service that stretches from Mānā to Wainiha, connecting Kaua‘i with O‘ahu, the U.S. mainland, and, via routing, to practically every industrial center in the world.
- (d) Promote export markets for Kaua‘i’s high technology products and services.
- (e) In education, increase exposure to high technology subjects and equip students with basic skills in information technology.
- (f) Identify and target niche markets in technology, such as those related to diversified agriculture, aquaculture, and the film industry.

4.4.4 Implementing Actions

- (a) The University of Hawai‘i should develop a high technology curriculum at the Mānoa campus and at Kaua‘i Community College, in order to provide students the knowledge and practical skills needed for an entry-level high technology job.
- (b) Kaua‘i schools should increase exposure to high technology in grades K-12 curricula, in order to foster the long-term growth of technology-based businesses on Kaua‘i.

4.5 SUPPORTING BUSINESSES AND JOBS FOR KAUA‘I RESIDENTS

The Vision for Kaua‘i 2020 states that, “Small business is the foundation of Kaua‘i’s economy, employing the largest percentage of the population.” The federal government defines a “small business” as any business that has 500 employees or less. Under this definition, all but three or four companies on Kauai are small businesses. Between 1995 and 1997, more the one-half of all business establishments on Kaua‘i had between one to four employees. All but four percent of Kaua‘i’s businesses have less than 50 employees.

Equally important is the ability of Kaua‘i residents to obtain employment that allows them to earn a livelihood. The Community Values statement in Chapter 2 calls for: “Diverse job and business opportunities so that people of all skill levels and capabilities can support themselves and their families.” Often, however, people hired into jobs on Kaua‘i are from off-island. Through improving the public education system and providing job-related curricula through Kaua‘i Community College, the community needs to prepare youth for good employment. The County should work with businesses to assure that Kaua‘i residents get hired into jobs. In particular, the County and KCC should work with new businesses, such as a new resort, to identify and train local job candidates before the business opens.

In order to support continued growth of Kaua‘i’s existing businesses and to encourage the start-up of new enterprises, policies and implementing actions in the following section should be adhered to.

4.5.1 Policy

- (a) Support and encourage the development of a wide range of small businesses, including home-based businesses.
- (b) Eliminate unnecessary land use and other regulations, clarify regulatory requirements, and reduce the time for processing permit applications wherever possible.
- (c) Support small business by providing needed infrastructure to towns and urban centers.
- (d) Develop and support business and technical assistance programs.
- (e) Strengthen the public education system in order to equip Kaua'i's children, teens, college students, and adults with the knowledge and skills needed to obtain a well-paying job or start a business.
- (f) Work with employers to provide career opportunities and training for local youth. Seek commitments from new or expanding businesses that they will actively recruit and train Kaua'i residents for new jobs.

4.5.2 Implementing Actions

- (a) The County shall fund and operate an economic development program, which shall work collaboratively with other organizations such as the Kaua'i Economic Development Board, the Kaua'i Visitor and Convention Bureau, and the Chamber of Commerce, to pursue economic development opportunities and to provide support to Kaua'i businesses.
- (b) The economic development program shall develop public-private partnerships to provide business and technical assistance programs.
- (c) In granting zoning and permits for new resorts and other businesses, the County shall seek commitments that businesses will actively recruit and train Kaua'i residents to fill new jobs.
- (d) Recommend that the University of Hawai'i develop Kaua'i Community College into a four-year undergraduate program. Alternatively, KCC should be developed as a center for employment-focused education in the fields of high technology, communications, business, agriculture, and culinary arts.
- (e) Recommend that the University of Hawai'i broaden its undergraduate and graduate course offerings and degree programs through interactive video connection.

4.6 LAND SUPPLY FOR COMMERCIAL & INDUSTRIAL USES

Having land available to develop new business facilities is essential to the well-being of the economy. This section reviews the availability of land for commercial and industrial development.

4.6.1 Commercial Development

Commercial development includes space in shopping centers, office buildings, and other commercial establishments. As of 1999, Kaua‘i has a total of 14 shopping centers that serve both residents and visitors (see Table 4-5).

District/Shopping Center	Year Built	Orientation	Gross Leasable Area
North Shore			107,190
Ching Young Village	1981	Visitor	41,000
Princeville Center	1983	Resident	66,190
Kawaihau			290,310
Coconut Marketplace	1975	Visitor	65,500
Kapa‘a Shopping Center	1961	Resident	57,270
Kaua‘i Village	1990	Resident	112,000
Waipouli Town Center	1980	Resident	55,540
Līhu‘e			555,950
Anchor Cove Shopping Center	1989	Visitor	20,650
Kukui Grove Center	1982	Resident	314,700
Kukui Marketplace	1994	Resident	145,810
Pacific Ocean Plaza	1978	Resident	30,600
Rice Shopping Center	1973	Resident	44,190
Kōloa-Po‘ipū-Kalāheo			60,490
Old Kōloa Town Center	1984	Visitor	23,490
Po‘ipū Shopping Village	1985	Visitor	37,000
West Side			59,940
‘Ele‘ele Shopping Center	1955	Resident	59,940
ISLANDWIDE TOTAL			1,073,890
Visitor Oriented			187,640
Resident Oriented			886,250

Source: *Hawai‘i Business*, July 1998; and Chaney Brooks, 1998.

About 83 percent of shopping center space on Kaua‘i is oriented towards residents, with the remaining 17 percent catering primarily to visitors. Līhu‘e has about one-half of the island’s shopping center space, including Kukui Grove Center, the island’s only regional shopping mall. Some of the shopping centers on Kaua‘i, such as the Kukui Grove Center, Coconut

Marketplace, and Anchor Cove Shopping Center, have benefited from growth in the cruise ship industry. These centers provide shuttle service and one-day shopping tours for cruise ship passengers arriving at Nāwiliwili Harbor.

Not included in the shopping center inventory is the Walmart store in Līhu‘e, which by itself has more floor area than most of the island’s shopping centers. Walmart and the K-Mart store in Kukui Grove Shopping Center are Kaua‘i’s two “big-box” warehouse stores.

Existing commercial development on Kaua‘i (as of 1994) and projected 2020 development (based on the Planning Department’s 2020 Projection) is summarized in Table 4-6. (The product of a Planning Department inventory, the 1994 figures for commercial and industrial space are the most comprehensive available.) Between 1994 and 2020, Kaua‘i is projected to add approximately 1.3 million square feet of commercial space. The greatest increases are expected to occur in the Līhu‘e and Kōloa-Po‘ipū-Kalāheo Districts.

**Table 4-6
Capacity of Vacant Commercial Zoned Lands**

District	Development		Supply of Vacant Land (Square Feet) ¹			
	1994 Existing	2020 Projected	Total Build-Out Capacity ²	Needed for Projected 2020 Develop.	Needed as a % of Build-Out Capacity	Surplus (Deficit) Capacity of Vacant Lands
North Shore	221,900	364,100	72,500	142,200	> 100%	(69,700)
Kawaihau	681,800	785,700	39,000	103,900	> 100%	(64,900)
Līhu‘e	1,769,300	2,368,500	624,400	599,200	96%	25,200
Kōloa-Po‘ipū-Kalāheo	262,200	520,700	72,500	258,500	> 100%	(186,100)
West Side	326,100	517,000	100,300	190,900	> 100%	(90,600)
ISLANDWIDE TOTAL	3,261,300	4,556,000	908,700	1,294,700	> 100%	(386,000)

¹ Potential square feet of floor area is calculated using an average floor area ratio for commercial properties on Kaua‘i.

² Does not include potential additional development on previously-developed parcels. An adjustment was made to account for the recent Kukui‘ūla zone change (57,935 commercial square feet added).

Source: State of Hawai‘i, Department of Transportation, County of Kaua‘i, Department of Public Works, and County of Kaua‘i, Planning Department (prepared by Austin Tsutsumi & Associates, Inc.), *Kaua‘i Long-Range Land Transportation Plan*, May 1997; County of Kaua‘i, Department of Water; and PlanPacific.

As of 1999, vacant commercial zoned lands can support approximately 908,700 square feet of commercial space, about 386,000 square feet short of what is need for the projected 2020 development. The greatest deficit is in the Kōloa-Po‘ipū-Kalāheo District where additional zoned lands are needed to support approximately 186,100 square feet of commercial space. Only Līhu‘e has sufficient vacant commercial zoned lands to support projected 2020 development.

4.6.2 Industrial Development

Existing industrial acreage on Kaua‘i (as of 1994) and projected 2020 acreage (based on the Planning Department’s 2020 Projection) is shown in Table 4-7. The majority of warehouses and industrial space on Kaua‘i is located in Līhu‘e and the Puhi area. As of 1994, Līhu‘e had approximately 258 acres of developed industrial zoned land. There are also some existing warehouses in Port Allen and Kapa‘a.

Kaua‘i is projected to develop approximately 129 acres of industrial zoned land between 1994 and 2020. The majority of growth, nearly 60 percent, is expected to occur in Līhu‘e, followed by the West Side and Kawaihau Districts.

As of 1999, there was approximately 223 acres of vacant industrial zoned lands on Kaua‘i, with the majority of it in Līhu‘e. On an islandwide basis, this is more than enough to meet the projected 2020 development. However, at the district level, some areas are projected to have a surplus of vacant industrial zoned lands, while other areas are expected to have a deficit. Līhu‘e, which is projected to develop about 75 acres of industrial land over the next two decades, will have a surplus of over 100 acres in 2020. The greatest deficit is in the Kawaihau District, where approximately nine acres of industrial zoned lands are needed to support the projected 2020 development. As of 1999, the Kōloa-Po‘ipū-Kalāheo District had no vacant zoned industrial lands.

**Table 4-7
Capacity of Vacant Industrial Zoned Lands**

District	Development		Supply of Vacant Land (Acres)			
	1994 Existing	2020 Projected	Total Build-Out Capacity ¹	Needed for Projected 2020 Develop.	Needed as a % of Build-Out Capacity	Surplus (Deficit) Capacity of Vacant Lands
North Shore	13.58	19.92	5.05	6.34	> 100%	(1.29)
Kawaihau	15.24	29.85	5.51	14.61	> 100%	(9.10)
Līhu‘e	257.87	332.92	186.43	75.05	40%	111.38
Kōloa-Po‘ipū-Kalāheo	10.34	10.78	0.00	0.44	na	(0.44)
West Side	27.17	59.42	25.82	32.26	> 100%	(6.44)
ISLANDWIDE TOTAL	324.19	452.89	222.81	128.70	58%	94.11

¹ Does not include potential additional development on previously-developed parcels.

Source: State of Hawai‘i, Department of Transportation, County of Kaua‘i, Department of Public Works, and County of Kaua‘i, Planning Department (prepared by Austin Tsutsumi & Associates, Inc.), *Kaua‘i Long-Range Land Transportation Plan*, May 1997; County of Kaua‘i, Department of Water; and PlanPacific.

4.6.3 Policy

- (a) The County supports commercial and industrial development on appropriately zoned lands by providing the necessary infrastructure and services.

- (b) Develop vacant lands with existing commercial and industrial zoning, to the extent feasible, before approving new commercial and industrial zoning.
- (c) Concentrate commercial and industrial development, particularly new shopping centers which attract a large amount of vehicular traffic, in Kaua'i's major towns and job centers in order to minimize highway traffic and avoid urban sprawl and strip development.
- (d) Concentrate commercial development in Līhu'e, other urban centers, and in town centers.
- (e) The County shall strive for a balance between meeting community shopping needs with new commercial development and supporting local small businesses in older business areas.

4.6.4 Implementing Actions

- (a) The County shall revitalize and improve central Līhu'e and Kaua'i's small town commercial areas by upgrading sewer and water facilities, increasing the amount of public parking, and improving streets and sidewalks.
- (b) Develop a collaborative planning partnership among County agencies, community and business organizations, private entities, the State Highways Division to design highway and road improvements in a manner that supports commercial activity in Kaua'i's business areas.
- (c) The County shall place high priority on deterring strip development and urban sprawl when making strategic decisions on new commercial zoning or recommendations to the State Highways Division on highway development.

4.7 AIRPORTS

The State Department of Transportation, Airports Division, operates two facilities on Kaua'i: Līhu'e Airport, the primary air terminal for the island; and Pt. Allen Airport, a general aviation airport with minimal facilities.

4.7.1 Līhu'e Airport

4.7.1.1 Description

The Līhu'e Airport, located about one mile east of Līhu'e Town, serves as Kaua'i's primary gateway for all arriving and departing residents and visitors. The Airport was modernized in 1986 with a new, expanded terminal and a second runway. All overseas passenger service, interisland commuter service, and cargo service uses Līhu'e Airport. In addition, helicopter operations are centralized at Līhu'e, with heliport facilities located adjacent to the commuter terminal. The Airport encompasses approximately 834 acres of land and is owned and operated by the State of Hawai'i as part of the statewide airport system.

4.7.1.2 Status of Long-Range Plan

The most current long-range planning document for the Līhu‘e Airport is the *Līhu‘e Airport Master Plan Environmental Impact Statement Preparation Notice* (October 1998). As of 1999, the State DOT is in the process of reviewing the ten-year old *Līhu‘e Airport Master Plan* (October 1989) to update future airport development needs. In 2000, DOT-Airports is expected to publish a master plan update report and EIS addressing future improvements.

In the future, the total number of passengers (enplaned and deplaned) at Līhu‘e Airport is projected to increase from approximately 2.6 million in 1997 to 3.8 million by 2020, an overall increase of about 49 percent.⁵ Interisland travel will continue to account for the majority of the passengers. These projections were based on the State Department of Business Economic Development & Tourism’s official 2020 economic and population projections.

Based on the forecast aviation demand projections and other anticipated facility requirements, several improvements are proposed through the year 2020. The most significant proposed improvement is extension of Runway 17-35 from 6,500 feet to 8,500 feet. The master plan and EIS will also address the potential future extension of the runway to 10,000 feet, should demand warrant. Extension of the runway to 8,500 feet would accommodate unrestricted non-stop airline service to the Mainland West Coast from Kaua‘i. Aircraft could also operate at a 75 percent load factor to the Far East with an 8,500 foot runway, depending upon certain conditions. A runway length of 10,000 feet would allow unrestricted aircraft departures to the Far East and to U.S. Mainland destinations beyond the West Coast.

Other improvements are proposed for the airport’s terminal area, roadways, and support facilities. The Līhu‘e Airport Master Plan is proposed to be implemented in two phases: Phase I (2000-2005) and Phase II (2006-2020). The extension of Runway 17-35 is part of Phase I.

4.7.1.3 Airport Expansion Debate

The proposed runway extension has fueled an intense debate around the question of whether to support or limit Kaua‘i’s future economic and population growth.

The new runway could result in airlines adding capacity and more passenger seats being available into and out of Kaua‘i. Increased non-stop West Coast service could contribute to making Kaua‘i a more attractive destination. In addition to potential increases in passenger seats, more airlift capacity would allow for direct shipping of agricultural products to the mainland. Better cargo service could make Kaua‘i agricultural exports more attractive to buyers and agricultural businesses more economically viable.

Business and farm advocates support the 8,500-foot runway as needed to secure even a moderate rate of growth. Some argue that, given trends in airline travel and tourism, the extension may be needed for Kaua‘i to stay even with competing visitor destinations in the state and around the Pacific. Trends include a growing number of attractive destinations

⁵ State of Hawai‘i, Department of Transportation, Airports Division; and U.S. Department of Transportation, Federal Aviation Administration (prepared by Wilson Okamoto & Associates, Inc.). *Līhu‘e Airport Master Plan, Environmental Impact Statement Preparation Notice*. (October 1998).

(Mexico, Australia, etc.); price competition (Hawai‘i tends to be more expensive); and changes in the airline industry relating to the economics of Hawai‘i-Mainland routes and the requirements of newer, more efficient aircraft.

Opponents of the runway extension fear a tourism boom fueled by the strong U.S. economy and affluent baby-boomers nearing retirement. They are concerned about the potential effects of too much growth on Kaua‘i’s rural environment, natural resources and road infrastructure. Limiting the size of the airport is one way of limiting potential future growth.

As stated above, the state’s economy – and the visitor industry in particular – are subject to complex economic and social forces that are beyond the County’s or the State’s control. Airport capacity is only one of the ingredients needed for successful development of tourism or agriculture. In some ways, Kaua‘i’s economy is as fragile as its physical environment.

During the General Plan Update, the Citizens Advisory Committee and its Visitor Industry Task Group engaged in spirited discussion about the appropriate range for the visitor population in 2020. Some CAC members favored a range of 19,000 to 24,000 visitors; others advocated a range of 24,000 to 32,000 visitors; and others chose a middle range. The CAC remains divided on the level of visitor industry growth.

The Planning Commission recommended using the higher figure of 32,000 visitors per day for the purpose of planning facilities at Kauai’s main airport. However, the Council adopted a final range of 24,000 to 28,000. It is preferable to plan for a larger capacity than to risk potential inadequacies.

To address the question of the runway extension, the Kaua‘i County Council initiated a facilitated study group process with the assistance of the State Center for Alternative Dispute Resolution. The study group, composed of representatives of identified organizations and interests, was initiated with the purpose of seeking the highest level of consensus possible on the issues related to the runway extension.

As of late 1999, the Airports Division announced that it was deferring plans to extend runways at both Maui’s and Kaua‘i’s main airports, owing to lack of support from the airlines.

4.7.2 Port Allen Airport

4.7.2.1 Description

Port Allen Airport is a single runway, general aviation airport with minimal facilities. It is located on Pū‘oloPoint at the western edge of Hanapēpē Bay. The facility is also known as Burns Field by local residents and is one of four general aviation airports within the statewide airport system. The facility is owned by the State of Hawai‘i.

The small airfield has had minimal use since Līhu‘e Airport replaced it as the island’s primary airport in 1950. Currently, Port Allen serves the needs of west Kaua‘i for general aviation, emergency helicopter operations, and helicopter air tour flights. The majority of activity at Port Allen is recreational pleasure flying. The facility also has two helicopter landing and take-off pads that are used by helicopter tour operators. Port Allen Airport

currently lacks the physical facilities or buildings to adequately accommodate the needs of the helicopter operators.

4.7.2.2 Status of Long-Range Plan

In 1990, the State DOT completed the *Port Allen Airport Master Plan* and the *Port Allen Airport Environmental Assessment*. Due to concerns by local residents and the County of Kaua'i over the scale of the proposed development, DOT elected not to proceed with the project.

Current proposed improvements for the facility are described in the *Port Allen Airport Final Environmental Assessment* (October 1999). Over the next two decades, Port Allen Airport is projected to experience minimal growth. Between 1992 and 2020, annual aircraft operations are expected to increase from 13,390 to about 20,000.⁶ Increases in operations would most likely be from commercial helicopter tour operators.

Of the proposed improvements, the most significant is the development of four lease lots as sites for private hangars and the construction of aprons for helicopter operations. Other improvements include two fixed wing tie-down areas with an associated taxi-lane; public comfort station; maintenance station; public and employee parking; associated infrastructure improvements; runway lights for emergency use; and landscaping for beautification and dust control.

According to the DOT, the proposed improvements would allow the airport to accommodate existing and forecast operations, particularly to provide facilities for helicopter operations. Lacking hangar facilities, operators must truck their helicopters to and from the Airport for each use.

The proposal has garnered both support and opposition from community members participating in the EIS process. Opponents cite the proximity of the Airport to the historic Salt Ponds, and the potential for increased helicopter operations and increased noise on the West Side.

Given its unique natural and cultural features, Pū'olo Point has good potential to be developed as a resource park. Looking ahead to phasing out airfield use and converting the area to a park, Pū'olo Point is designated Open on the General Plan Land Use Map (see policy in Chapter 6, Section 6.5).

4.7.3 Policy

- (a) Support improvements to Līhu'e Airport as necessary to provide for the desired level of visitor industry development and the export of agricultural products to the mainland.
- (b) Support centralization of State-owned helicopter facilities and operations at Līhu'e Airport.

⁶ State of Hawai'i, Department of Transportation, Airports Division (prepared by Edward K. Noda and Associates, Inc). *Port Allen Airport, Draft Environmental Assessment and Anticipated Finding of No Significant Impact*. January 1998.

4.8 COMMERCIAL HARBORS

Kaua‘i’s two commercial harbors, Nāwiliwili Harbor and Port Allen, are owned by the State of Hawai‘i and operated by the State Department of Transportation (DOT), Harbors Division.

4.8.1 Nāwiliwili Harbor

4.8.1.1 Description

Located near Līhu‘e and major commercial and industrial facilities, Nāwiliwili Harbor serves as the primary commercial harbor for Kaua‘i. Facilities include three piers for the handling of both overseas and inter-island general and containerized cargo. The harbor is also used for charter boat fishing and recreational boating, and has become an increasingly popular port-of-call for passenger cruise ships.

Since Kaua‘i is the western-most major Hawaiian Island, Nāwiliwili is frequently the first point-of-entry into the State for passenger cruise ships. In 1998, nine foreign-flagged vessels made 42 stops at Nāwiliwili Harbor. American Hawai‘i Cruises, the only company providing interisland service, made 52 visits to Kaua‘i.

Typically, cruise ships arrive at Nāwiliwili Harbor in the morning, dock at Pier 2, and leave in the evening. Pier 2 is also used by regularly scheduled container barges, fuel ships, and other large vessels. Pier 3 serves as an additional berth during days when two ships arrive at the Harbor. The nearest visitor-oriented destination is a small shopping mall about three-quarters of a mile from the Harbor. Most destinations, including Līhu‘e Town, are not within convenient walking distance and typically require car, bus, or taxi transport.

The *S.S. Independence* has a passenger capacity of approximately 1,000. Two new cruise ships being constructed for Hawai‘i interisland service will each have the capacity to carry 2,000 passengers. Statewide, the number of cruise ship passengers is expected to increase from 106,500 in 1998 to 496,500 in 2020. In terms of economic benefit, it is estimated that the cruise ship industry will generate 1,700 jobs on Kaua‘i by 2020.⁷

4.8.1.2 Status of Long-Range Plan

The *2010 Master Plan for Nāwiliwili Harbor* (1987) provides a general, long-range guide for growth, improvement, and efficient consolidation of land usage at Nāwiliwili Harbor. The *Master Plan* was updated in 1993 in response to Hurricane Iniki. The Harbors Division is currently revising the Nāwiliwili Master Plan as part of preparing *Commercial Harbors Plan 2025*.

In 1999, DOT-Harbors published the *Statewide Cruise Facilities Study* (Final, January 1999). Anticipating the growth in the cruise market, the study examined facilities throughout the state and will be used in developing the final 2020 harbor plans. Its proposals for Nāwiliwili are congruent with the updated 2010 Master Plan.

⁷ State of Hawai‘i, Department of Transportation, Harbors Division (prepared by Leo A Daly). *Statewide Cruise Facilities Study*. Final, January 1999.

The Plan designates Piers 1 and 3 for inter-island container operations and inter-island barge operations, respectively, and Pier 2 for cruise vessel and general cargo operations. Pier 3 is also used to berth a second cruise ship. Pier extensions are proposed at the west end of Pier 2 and the north end of Pier 3 to close the west corner of the Harbor basin and provide an additional 500-600 lineal feet of berth space at Pier 2. The Cruise Facilities Study also proposes two new passenger terminals and ground transportation facilities for Nāwiliwili. The initial phase of improvements is scheduled for completion by 2004. According to the Cruise Facilities Study, Nāwiliwili Harbor shows the highest return on investment among all proposed cruise facility improvements statewide.

4.8.2 Port Allen Harbor

4.8.2.1 Description

Port Allen Harbor, Kaua‘i’s second commercial harbor, is situated off of Hanapēpē Bay on the east side of the Hanapēpē River. The deepwater port has a single pier and complements the primary harbor facilities at Nāwiliwili on the east side of the island. Present waterfront activities at Port Allen include U.S. Naval vessels supporting activities of the Pacific Missile Range Facility, petroleum shipments, general cargo, commercial fisheries and other maritime activities. The U.S. Navy continues to be the primary user of the pier, with recent use by Nā Pali coast tour operators who were displaced from the Hanalei River. Port Allen Harbor is also used as an alternative port-of-call for smaller passenger vessels.

Increased activity from the Nā Pali coast tour operators has led to overcrowded conditions at both the commercial and small boat harbor facilities. The casual parking arrangement at Port Allen is not capable of handling the increased traffic, and boat companies are forced to provide off-site parking and to bus or walk people to the boats. The restrooms are inadequate for large groups of visitors, and there is insufficient tour boat loading space.

4.8.2.2 Status of Long-Range Plan

A long-range plan for Port Allen Harbor was prepared in 1987 and updated in 1994. The report, *Master Plan Update for Port Allen Harbor, 1993 Edition* (April 1994) shows future projects to include: extending the pier structure to accommodate longer vessels; acquiring additional lands to expand the capability of the harbor; improving the shoreline on both sides of the pier to accommodate small commercial vessel moorings; and repairing the breakwater.

According to the 1999 *Statewide Cruise Facilities Study*, Port Allen Harbor is susceptible to surge action and is therefore not recommended as a cruise port. Instead, the Study recommends improving Kīkīaola Small Boat Harbor to receive launches from cruise ships moored off of the Waimea coast.

4.8.3 Policy

- (a) Develop capital improvements to Nāwiliwili Harbor to support the future needs of cruise ships and cargo vessels.
- (b) Develop ground transportation facilities, pedestrian circulation improvements, and terminal facilities at Nāwiliwili Harbor that will accommodate 2,000-passenger cruise ships.

- (c) Develop shuttle and other transportation improvements to move people out of the Nāwiliwili Harbor area to various recreation, shopping and cultural attractions.
- (d) Integrate planning for commercial facilities and Nāwiliwili Beach Park with the harbor master plan.

4.8.4 Implementing Action

The County Planning Department and Department of Public Works shall coordinate closely with the State Harbors Division in planning for Nāwiliwili Harbor, particularly with regard to ground transportation for cruise ship passengers and vehicular and pedestrian circulation.

4.9 SMALL BOAT HARBORS

4.9.1 Overview

Kaua‘i has four small boat harbors, Nāwiliwili, Port Allen, Kīkīaola and Kukui‘ula. These facilities are owned by the State of Hawai‘i and are managed by the State Department of Land and Natural Resources (DLNR), Division of Boating and Ocean Recreation (DOBOR). In addition, DOBOR manages various boat launching ramps. The Wailua Marina is privately-operated.

Ocean touring and recreation comprise a key component of the visitor industry. Unlike the other major islands, Kaua‘i lacks a small boat harbor that is configured primarily to serve charters and tours. Kaua‘i also lacks a small boat harbor north of Wailua. Since commercial boat operations at the Hanalei River mouth were terminated in 1998, there is no launching point for ocean tours on the North Shore. Most tours have migrated to Nāwiliwili and Port Allen, where operations have increased.

DOBOR has close-ended funding. It does not receive State General Fund support and must pay operating expenses out of its revenues. Revenues include fees from rental of boat slips and commercial boat license fees. These are considered to be low in comparison to the value of the harbor leases and licenses, and in comparison to fee structures in other states. Some 95 percent of gross revenues are consumed by payments to the Office of Hawaiian Affairs, debt service for harbor improvements, utility costs, and transfer payments to the State for administrative and enforcement support. This leaves only four percent of DOBOR revenues available to pay for staff. (See policies in Section 4.2.8, concerning additional funding for parks and small boat harbors.)

DOBOR is pursuing long-range plans for various facilities statewide, including one for expansion of Kīkīaola Small Boat Harbor. While the State has expressed the intention of developing a small boat harbor for the North Shore, as of 1999 no plan has been advanced.

4.9.2 Harbor Facilities

4.9.2.1 Nāwiliwili Small Boat Harbor

The Nāwiliwili Small Boat Harbor is located two miles southwest of Līhu‘e. The 32-acre facility has 48 berths, 12 moorings, two ramps, two piers, and a harbor office and restroom. It is located adjacent to the commercial harbor.

4.9.2.2 Port Allen Small Boat Harbor

The Port Allen Small Boat Harbor is located on the eastern shore of Hanapēpē Bay on the south shore of Kauaʻi. Originally constructed by the State in 1962, it is an aging, modestly-sized facility. This 12-acre small boat harbor has a two-lane 30-foot wide launch ramp, 34 berths, six moorings, one pier, a fish hoist, restrooms, a harbor office, and a parking area.

The Small Boat Harbor has experienced overcrowded conditions since Nā Pali commercial boat operators were displaced from the Hanalei River. Most commercial tours operate from the commercial harbor's main pier. When the fuel barge is in the commercial harbor, however, the tour boats load passengers at the small boat harbor, where they compete for space with local fishermen and recreational users. Parking and restroom facilities needed improvement and expansion.

4.9.2.3 Kīkīaola Small Boat Harbor

Kīkīaola Small Boat Harbor is located two miles west of the Waimea River mouth and close to the town of Kekaha on the Kauaʻi's southwest shore. It serves mainly as a small vessel launching facility for local commercial and pleasure craft. The harbor is used by trailer boat users, owners of boats requiring moored slips, and charter and tour boat operators. The harbor occasionally accommodates tenders serving cruise ships moored off the coast. Kīkīaola Small Boat Harbor is about 16 acres in size and has 8 moorings and one ramp.

Working with the U.S. Army Corps of Engineers, the State has prepared a plan to expand Kīkīaola Harbor. The expansion, dredging and breakwater improvements are intended to provide not only for anticipated expansion in recreational and commercial boating, but also expansion in cruise ship calls on the West Side.

The current plan guiding the long-term development of Kīkīaola Harbor is the *Kīkīaola Light Draft Harbor Berthing and Facilities Master Plan* (December 1998). The plan calls for Kīkīaola Harbor to serve as an anchorage tendering port for the multitude of passenger cruise ships that are anticipated to visit Kauaʻi in the future. Improvements to the harbor include plans by the U.S. Army Corps of Engineers to realign and strengthen the breakwater, and dredge the entrance and access channels. Plans also call for improvements to the inner harbor and development of shoreside facilities to accommodate the increase in commercial and recreational activity. Improvements include a floating dock system, a pavilion with restroom facilities, car and trailer parking, roads and utilities, launch ramps, and shoreside dock space. Completion of all improvements is scheduled for the early part of 2005. Total project cost is approximately \$7.3 million.

4.9.2.4 Kukuiʻula Small Boat Harbor

Kukuiʻula Small Boat Harbor is located on the southern coast of Kauaʻi, approximately 12 miles southwest of Līhuʻe. This seven-acre facility has a 15-foot single lane ramp and ten moorings. Over the long term, facilities at Kukuiʻula Small Boat Harbor will be improved in conjunction with the development of A&B's Kukuiʻula project. Expansion is needed to accommodate growth in recreational and commercial boating.

4.9.3 Policy

- (a) Support improvements to Kīkīaola Harbor, in order to serve local fishing and recreation needs, to develop ocean-oriented businesses, and to serve as a cruise ship drop-off site.
- (b) Encourage the development of parking and other facilities to expand the capacity of Port Allen Harbor and provide improved service.
- (c) Support facilities expansion at Kukui‘ula Small Boat Harbor.