

1. Planning for the Future

This chapter gives an overview of the General Plan document, describes the purpose of the General Plan, and outlines the process by which it was created during the 1998-'99 General Plan Update. The last two parts of the chapter address the planning system and citizen participation. These sections contain policies setting the framework for planning and community participation.

This General Plan document is given the effect of law through adoption of an ordinance by the County Council. The ordinance establishes definitions, how the document is to be applied, authority for making interpretations, the process for amending the plan, and other matters relating to the administration of the General Plan.

1.1 HOW TO READ THIS PLAN

The plan is organized according to themes, rather than according to topics like “land use” or “public facilities.” The themes emerged from public discussion and development of the 2020 vision statement. The first and last chapters set forth the framework for planning and implementation. Chapter 2 contains Kaua‘i Vision 2020. Chapters 3-8 set forth policy according to the Plan’s main themes. Following is a list of the chapters:

1. Planning for the Future
2. Vision for Kaua‘i 2020
3. Caring for Land, Water and Culture
4. Developing Jobs and Business
5. Preserving Kaua‘i’s Rural Character
6. Enhancing Towns & Communities and Providing for Growth
7. Building Public Facilities and Services
8. Improving Housing, Parks and Schools
9. Implementation

Appendices present technical material or information that is too detailed for the body of the plan.

Each chapter sets forth policy and implementing actions that apply to a range of topics and government responsibilities. Within each chapter, there are headings for specific topics, such as “Community Participation” or “Visitor Industry.” Policies and implementing actions are associated with specific topics. The background for the policies is found in descriptive or “Overview” sections. Some topics have a “Rationale” section that sets forth the reasons for the policy. These text sections clarify the policy statements, providing context and a means for future interpretation.

The Plan includes two sets of policy maps that intended to be used in conjunction with the text policies. Each set includes an islandwide map and five regional maps. The General Plan

Land Use Map depicts policy for long-range land uses with the following map designations: Urban Center, Resort, Residential Community, Transportation, Military, Agriculture, Resource, Major Parks, Town Center, and Public Facilities. All but the last two are designated by map color. Town Centers are designated by a boundary, and public facilities are designated by various symbols. Scenic Roadway Corridors are shown on the Heritage Resource Map.

The General Plan Heritage Resources Map depicts important natural, historic, and scenic resources that are cited in the text policies. It includes two elements important to scenic views: (1) mountains, streams and other important landforms; and (2) Scenic Roadway Corridors.

1.2 PURPOSE OF THE GENERAL PLAN

The General Plan fulfills legal mandates of State law and the Charter of the County of Kauaʻi. More importantly, it provides guidance for land use regulations, the location and character of new development and facilities, and planning for County and State facilities and services.

1.2.1 Legal Mandate

The County of Kauaʻi is legally mandated to prepare and adopt a General Plan by State law and the County Charter.

Chapter 46 of the Hawaii Revised Statutes (HRS) grants the counties certain powers and responsibilities. Among them is the power to regulate land development through zoning. However, the law makes clear that zoning must be based on a general plan. HRS Sec. 46-4 states in part:

Zoning in all counties shall be accomplished within the framework of a long range, comprehensive general plan prepared . . . to guide the overall future development of the county. Zoning shall be one of the tools available to the county to put the general plan into effect in an orderly manner.

Along with the authority to zone, each county also has the responsibility to prepare a long range, comprehensive plan. In fact, the general plan comes before and *guides* zoning.

Article 14 of the County Charter states that the Planning Director shall prepare a general plan; that the Planning Commission shall review the general plan and shall transmit it with the Commission's recommendations through the Mayor to the County Council; and, finally, that the County Council shall adopt the general plan by ordinance. It makes similar provisions for county development plans. According to the Charter, the general plan shall set forth:

. . . in graphic and textual form policies to govern the future physical development of the county. Such plan may cover the entire county and all of its functions and services or may consist of a combination of plans covering specific functions and services or specific geographic areas which together cover the entire county and all its functions and services. The general plan shall serve as a guide to all future council

action concerning land use and development regulations, urban renewal programs and expenditures for capital improvements.

The County adopted its first General Plan in 1971. Based on a 1982 update study, the County adopted a revised General Plan in 1984. Both the original and the 1984 General Plan addressed the entire county and all of the county's functions and services and included land use maps, depicting existing and future land uses. Thus, each GP fulfilled the Charter requirements. While the Charter provides the option of preparing "a combination of plans" that would together cover all aspects of the county, the County has chosen to prepare a single, unified General Plan document.

1.2.2 Setting a Direction

The General Plan states the County's 20-year vision for Kaua'i and sets policies for achieving that vision. The General Plan is a direction-setting, **policy** document. It is not intended to be regulatory in the sense of a zoning code or other land use regulation.

The General Plan represents an opportunity to look at the whole island, to think about the future, and make early decisions about issues and opportunities. The specificity of the General Plan depends on the level of agreement that can be reached concerning (a) vision and direction and (b) strategies for achieving the vision.

The policies are intended to guide County decision-making by mapping the direction of future development; by describing what kind of future development is desirable; and by setting priorities for public improvements. The policies will guide the County in making revisions to land development regulations; in deciding on zone changes and development permits; and in setting strategies for capital improvements. The General Plan also establishes a framework and priorities for future community-level planning and long-range planning for public facilities.

1.3 THE GENERAL PLAN UPDATE PROCESS

The 2000 General Plan was developed by the Planning Department in collaboration with a 34-member Citizens Advisory Committee (CAC). They were supported by a consultant team that prepared research and analysis, facilitated public discussion, and drafted plan elements.

The Mayor appointed most of the CAC, and the County Council added two members. CAC membership represented a broad cross-section of the leading community organizations, including the Chamber of Commerce, the Resource Conservation & Development Corporation, the Farm Bureau, the League of Women Voters, the Sierra Club, the Outdoor Circle, the Kaua'i Economic Development Board, the unions, the churches, and the Thousand Friends of Kaua'i. Members included attorneys, planners, real estate developers, nonprofit sector workers, a doctor, community activists, several small business owners, and a high school student representative. Representation was evenly distributed among Kaua'i's five districts.

The CAC held over 20 meetings during a two-year period – beginning in February 1998 and continuing through the preparation of the General Plan document for submittal to the Planning Commission early in the year 2000. The purpose of the CAC was to provide critical information for the plan, to participate in developing plan policies, and to provide feedback

and recommendations to the Planning Department concerning the form and content of the General Plan. In addition, CAC members participated in five Task Groups to formulate detailed strategies in the following areas: Rural Lands and Agriculture; the Visitor Industry and Growth; Energy and Environmental Issues; Native Hawaiian Issues; and Community Participation. The Task Groups also enlisted resource persons with expertise in the visitor industry, agriculture, real estate, parks management, economic development, watershed planning, and public facilities and services (water supply, transportation, solid waste, electrical power, wastewater systems, and drainage).

Prior to most meetings, the consultant team prepared and circulated working papers or reports concerning the agenda topic(s). Meetings were publicized, and each one drew a number of interested community members. Non-CAC attendees often availed themselves of the opportunity to comment at the end of each meeting. Meeting summaries were prepared and circulated for review and approval.

In addition, the Planning Department led a phased outreach program to inform the wider community of the planning process and to get input. In the early months of 1998, the Department held meetings with 25 community organizations seeking ideas about values, the special assets of various Kaua‘i communities, issues of concern, and opportunities for the future. This was followed by the first of three rounds of regional meetings in the five Planning Districts. Held in June 1998, these meetings provided feedback on the CAC’s draft Community Values statement. Using maps, community members indicated the location of important community resources, as well as places with issues or opportunities related to future development.

Over the weekend of October 10-12, 1998, the Department held a Future Fair at the Kukui Grove Shopping Center. Co-sponsors included the Mayor’s Office, the County Council, the Chamber of Commerce, the Garden Island RC&D, and the Kaua‘i Discovery Center. Opened by Mayor Maryanne Kusaka, the Future Fair hosted exhibits by 60 community groups, landowners, business and government agencies. During the weekend, the Fair attracted about 3,000 participants. Ideas from the Future Fair were incorporated into the 2020 Vision statement.

The second round of meetings, held January-early March 1999, featured a presentation on the Draft 2020 Vision statement. The islandwide portion of the Draft Vision was published by the Garden Island in installments, and copies were widely distributed. In addition, the Project Team presented vision statements focused on each Planning District. Each of these “close-up” visions concluded with a list of issues and opportunities affecting the respective communities. Meeting participants broke into small groups to discuss whether they agreed or disagreed with Vision elements, what they would change what they found missing. The Department and the CAC used the summaries from these Planning District meetings to set the agenda for the final phase of work.

The third round of regional meetings was held in January 2000. The agenda was to brief community members and elicit their comments on the Discussion Draft General Plan.

1.4 PLANNING SYSTEM

The planning system is composed of several elements, as shown in Figure 1-1. The General Plan, the Development Plans and the Public Facility Plans state long-term policy directing development of the land use ordinances and the Capital Improvement Program. Zone change ordinances change the type of use and development intensity of specific sites. Day-to-day land use and capital funding decisions are based on the plans and regulations.

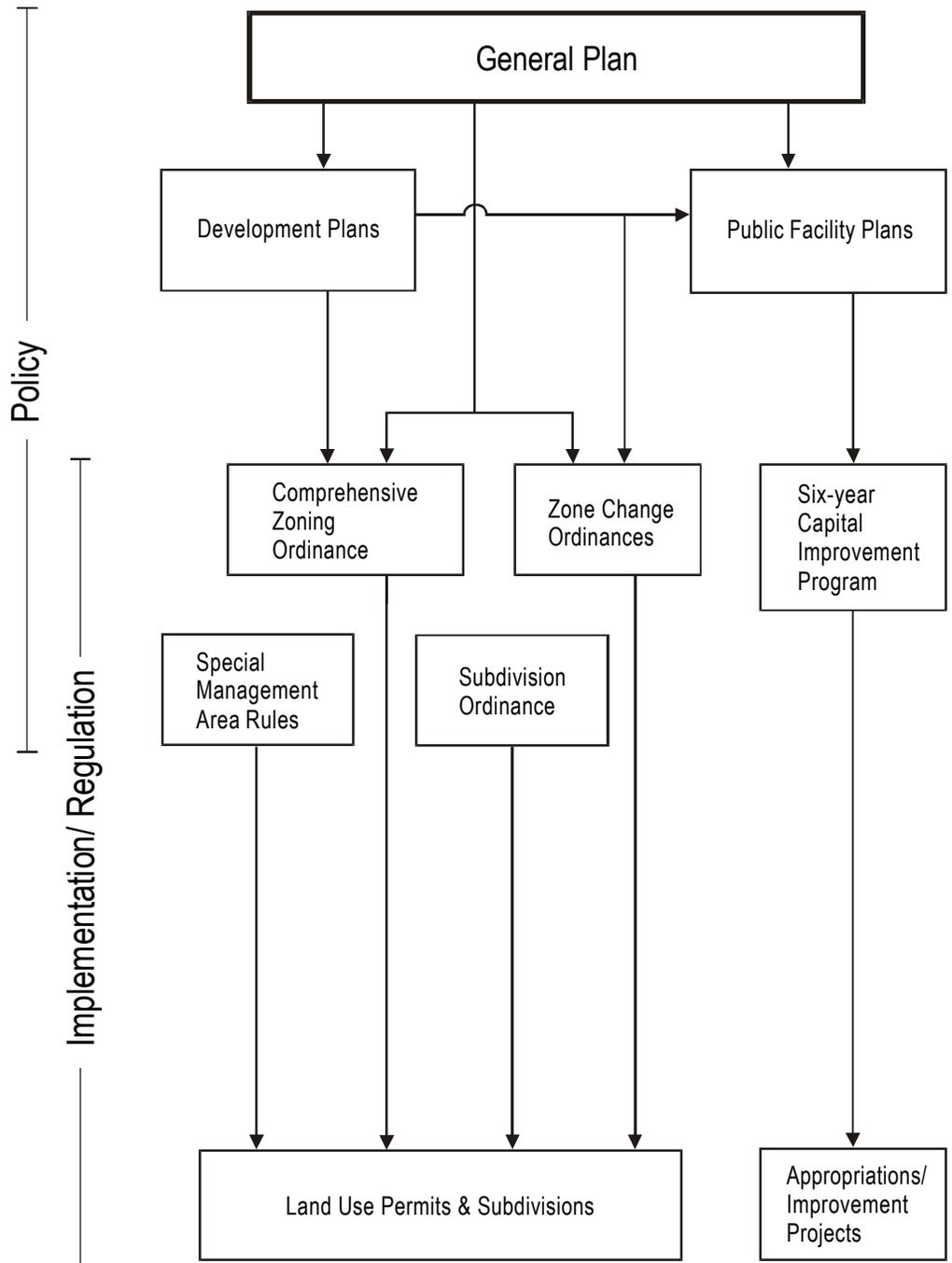
The elements of the planning system are described below. Policy concerning the preparation of Development Plans is set forth in Section 1.5.

1.4.1 Policy

The planning system of the County of Kauaʻi is composed of the following elements and functions:

- (a) The General Plan is the primary policy directing long-range development, conservation, and the use and allocation of land and water resources in the County of Kauaʻi.
 - (1) The General Plan establishes through maps and text geographic areas of the County which are intended to be used for various general purposes such as agriculture, resorts, urban communities, and preservation of natural, cultural and scenic resources.
 - (2) The General Plan establishes through maps and text policy to direct the revision of land development regulations, including the Comprehensive Zoning Ordinance, subdivision, grading and drainage regulations.
 - (3) The General Plan establishes a framework for planning of specific geographic areas and of County public facilities.
 - (4) The General Plan shall have a time horizon of 20 years, and shall be updated every five to ten years.
- (b) A Development Plan is intended to direct physical development and public improvements within a specific geographic area of the County within the framework of the General Plan. In accordance with the County Charter, a Development Plan shall be submitted to the Planning Commission for review and recommendation and to the County Council for adoption by ordinance.
 - (1) Depending on its purpose, a Development Plan may be long-range and comprehensive, or it may be limited in scope and timeframe.
 - (2) A Development Plan may contain detailed guidance for land use and zoning, circulation systems, street design, architectural design, specific public facilities, or other matters relating to the physical development of the planning area.
 - (3) A Development Plan may recommend the establishment of a special treatment district, a change to the zoning map, or other changes to the CZO. Actual land use regulations, however, shall be adopted as part of the CZO and the zoning maps.

Figure 1-1
County of Kaua'i Planning System



- (c) A Public Facility Plan is a long-range plan for a public service system, such as solid waste management, or a master plan for a specific facility, such as a landfill.
- (1) The County shall prepare and update as needed a long-range, comprehensive plan for the development, operation, and funding of each of the following County systems:
- Water Supply
 - Parks and Recreation
 - Solid Waste Management
 - Long-Range Land Transportation
- (2) The County shall prepare long-range facility plans as needed for the following services:
- Wastewater Treatment (by facility)
 - Flood Prevention and Drainage (by watershed)
 - County Roads (by area)
- (d) The purpose of the Comprehensive Zoning Ordinance is to provide regulations and standards for development of land uses and the construction of structures. The CZO establishes various zoning districts and overlay districts; delineates uses and development standards for each district; establishes permits and permit processes; and establishes criteria for granting permits. The CZO and the Zoning Maps shall be revised as necessary to conform to the General Plan.
- (e) A zone change is a legislative action setting land use policy for a specific parcel of land. A zone change shall meet the following criteria to be adopted: consistency with the General Plan Vision; conformance to the General Plan policies; availability of adequate public facilities; and compatibility of the zoned uses to the surrounding environment, both the built environment and the natural environment. Policies set forth in the General Plan, either general or specific to the site, shall be applied in the review and adoption of a zone change.
- (f) Land use permits and subdivisions are specific actions taken in response to an application. The procedure and criteria for decisions are set forth in the Comprehensive Zoning Ordinance, Subdivision Ordinance, and Special Management Area (SMA) Rules.
- (g) The Capital Improvement Program sets forth capital improvement projects by order of priority, the amount and means of financing, and the schedule of activities and expenditures.
- (h) The Planning Department shall carry out the following functions in support of the planning system:

- (1) Periodically update 20-year economic and population projections for the County, by geographic area.
- (2) Provide support to State and County agencies in preparing public facility plans that affect Kaua'i.
- (3) Actively participate in planning efforts affecting Kaua'i, in order to assure conformance with the General Plan, public facility plans, and Development Plans.
- (4) Prepare Development Plans in collaboration with community organizations.
- (5) Manage and coordinate agency review of proposed zone changes and land use permits.
- (6) Monitor County and State programs for conformance to the General Plan policies.
- (7) In collaboration with community organizations, develop indicators and measure progress related to specific elements of Kaua'i Vision 2020 and specific General Plan policies.

1.4.2 Rationale for Policy

1.4.2.1 Elements of the Planning System

Although Figure 1-1 shows the planning system arranged as a hierarchy, each element is equally important. The arrows express the transition from broad policy to more specific policy, to land use regulation (left side) and project implementation (right side). The General Plan sets forth the basic policy of the County. This policy is elaborated through the more detailed plans, zoning and land use regulations.

Development Plans and Public Facility Plans occupy the second tier. A Development Plan establishes more detailed policy that is specific to a certain community or geographic area and can also establish the basis for zoning controls that are unique to the area. Public Facility Plans analyze alternatives and establish policy regarding the future development of specific systems and facilities. Development Plans and Public Facility Plans are strategic in character. They define and set forth strategies and courses of action, often engendering commitment of resources and development of physical improvements.

The third tier reflects the interface between policy and implementation. The Six-Year Capital Improvement Program (CIP) expresses expenditure and action priorities. It also establishes a financial plan and a general schedule for implementing projects.

On the land use regulation side, the regulatory ordinances (and administrative rules), including the CZO, the SMA Rules, and the Subdivision Ordinance, set standards for land uses, as well as procedures and criteria for deciding discretionary permits. Similar to the CIP, the land use regulations translate policies into more concrete terms. Regulations are the "rules of the game." To the extent possible, regulations should be written so that they can be understood equally well by zoning administrators and the general public. Too much complexity or too many administrative interpretations indicate a need to revise the regulations.

The CZO and other land use regulations serve to elaborate on General Plan and Development Plan policy. The regulations translate policies (both maps and text) into specific terms (permissible uses, building heights, etc.).

Zone change ordinances also translate policies into specific terms that apply to a particular land parcel or group of parcels. The General Plan Land Use Map shows only general land uses for an area. At the time of zoning, decisions need to be made concerning a wide range of issues, including but not limited to the following: potential effects on the use and character of surrounding lands and appropriate mitigation measures; the specific location of commercial and residential areas; densities of development; the road system; and the adequacy and/or improvement needs of infrastructure and community facilities. The adoption of a zone change ordinance and the conditions placed on the zone change express County policy.

The last tier of Figure 1-1 represents implementation. The left side of the figure relates to regulatory action on land use permits. The right side represents appropriation of funds and development of projects. Permit decisions are guided by the applicable regulations. It is incumbent upon the County to amend the regulations as necessary to implement General Plan and Development Plan policies. In the absence of such action, the General Plan or the Development Plan policies cannot be used to augment or preempt the regulatory ordinances. (SMA permits are an exception. State law specifically mandates that an SMA permit must be consistent with not only County zoning but also the general plan.)

Needed but not shown in the diagram is an evaluation element, a means of assessing progress in relation to the General Plan vision and policies, using indicators and benchmarks that have developed collaboratively among the County and various community interests. Developing agreed-upon indicators is an important first step in objectively evaluating the County's progress and building accountability and feedback into the system.

Also not shown as part of the planning system are site development and construction regulations, such as the grading ordinance and the drainage standards. These regulations play a major role in guiding land development and maintaining environmental quality. Their role in conserving land and water resources is discussed in Chapter 3.

1.4.2.2 Purpose, Uses and Form of Future Development Plans

The County Charter charges the Planning Director to "Prepare a general plan and development plans for the improvement and development of the county." (Section 14.04.A.) According to the Charter, "'Development plan' means a relatively detailed scheme for the replacement or use of specific facilities within the framework of and implements [sic] the general plan." (Section 14.07.)

Six Development Plans were prepared in the 1970s as a follow-up to the original 1971 General Plan. They primarily addressed the urban-designated lands in six Planning Areas, or regions. For example, the Kōloa-Po'ipū-Kalāheo Planning Area addressed those communities as well as Lāwa'i and 'Ōma'o. The Kapa'a-Wailua Development Plan addressed the urban corridor between Wailua and Kapa'a but did not address the homestead areas. One of the key functions of the original Development Plans was to establish zoning districts within urban areas. While future Development Plans may address zoning issues, there is no need to adopt an entirely new set of zoning maps.

The planning system policy set forth in Section 1.4.2 above does not explicitly refer to the pre-existing Special Development Plans (Chapter 10, R.C.O) – commonly known as the “Development Plan Ordinances.” Each of the six DP Ordinances is based on, but includes only limited elements of, the actual Development Plan reports. The ordinances omit the information, illustrations, and detailed planning provided in the DP Reports. Though outdated, the original DP reports remain a useful resource for future planning.

The DP ordinances are a hybrid combination of (a) policy elements – e.g., broad goals and objectives; and (b) land use regulations specific to each of the DP area. The DP land use regulations actually amend and supersede certain CZO regulations. The explicit amendment of one ordinance by another continues to be a source of confusion, as does the codification of zoning regulations outside of Chapter 8, the Comprehensive Zoning Ordinance. To remedy this problem, Implementing Action 1.4.3 (b) below calls for centralizing the zoning regulations in the CZO. The remainder of the DP Ordinances will remain in effect unless and until replaced by more recent plans.

1.4.3 Implementing Actions

Following are actions needed to implement the Kaua‘i Planning System.

- (a) The Planning Department shall prepare amendments to the Comprehensive Zoning Ordinance and the zoning maps to carry out the policies of the General Plan. The Planning Department shall transfer the portions of Chapter 10, Special Development Plans, that are regulatory in nature into the CZO.
- (b) To centralize the zoning regulations in a single chapter, the Planning Department shall prepare an ordinance transferring to Chapter 8, the Comprehensive Zoning Ordinance, those provisions of Chapter 10, the Special Development Plans, that modify or affect the CZO, making such other revisions to Chapter 8 as may be necessary. The policy provisions of the Development Plan ordinances may remain until such time as they are amended or superseded by a new Development Plan.
- (c) The Planning Department shall collaborate with community organizations in developing indicators and benchmarks to measure progress relative to the General Plan and to other community goals.
- (d) County service agencies, including the Department of Water and the Department of Public Works, shall prepare public facility plans to guide Capital Improvement Programs and the appropriation of funds.

1.5 CITIZEN PARTICIPATION IN PLANNING AND LAND USE DECISIONS

This section sets forth policies concerning citizen participation in planning and land use decisions. Representative and broad-based participation is integral to the development of effective plans and an effective planning system.

1.5.1 Overview

The County needs effective means for gaining input from local communities on government plans and actions, as well as on applications for land development.

Looking beyond individual projects and actions, the County needs to develop a process for developing special area plans for specific communities. Special area planning demands collaboration between the Planning Department and local residents and businesses. Finally, County and State agencies and public utilities need a process that will involve the public in locating sites for potentially controversial facilities – e.g., an electric power generating plant, wastewater treatment plant, sanitary landfill, or airport expansion.

The Kaua‘i 2020 Vision, presented in Chapter 2 below, includes a section on Community Participation. Key values cited in the Vision include trust, mutual respect and a determination to maintain open dialogue. Local organizations have a responsibility to inform community members and hold forums. Government agencies have a responsibility to provide equal access to information and assistance and to conduct open meetings.

1.5.2 Policy for Citizen Participation

1.5.2.1 Early Consultation

Government agencies and private applicants proposing new projects should consult with and solicit input from community organizations and public meetings at the earliest possible time. Although project developers and community members may not always reach agreement, at least there should be a free and open exchange of information and opinion concerning community issues and concerns, project location and design decisions, and potential project impacts.

1.5.2.2 Information and Input Program

- (a) The County shall administer an ongoing program of community information and input, whose purpose is to enable nonprofit organizations representing Kaua‘i’s various towns and communities to understand and influence County decisions that affect their communities.
- (b) The objectives of the information and input program shall be as follows:
 - (1) To strengthen the role and capabilities of organizations representing the various towns and communities of Kaua‘i, particularly their ability to inform community members about proposed County actions and issues and to provide timely input to County agencies.
 - (2) To provide more direct contact and free flow of information between the government and citizens without creating a new layer of bureaucracy or the need for additional staff resources.
 - (3) To provide community organizations early notice and access to environmental assessments, application materials and other relevant documents about proposed land use actions and County-funded projects in their communities. For land use

applications, early notice shall generally mean at the time an application is accepted.

- (4) To disseminate through posting, fax, news release, or electronic means public notice of all major land use applications and State- and County-funded projects to organizations and the general public.
 - (5) To provide citizens with information and training about County land use plans and permit regulations.
 - (6) To provide other organizational and funding support to community and islandwide organizations, as the County deems appropriate. Such support may include training organizational and meeting facilitation skills, assistance in staging community forums and workshops, and support for copying and other expenses associated with a community newsletter or other efforts to disseminate information to grass-roots community members.
- (c) Community organizations participating in the program shall be registered nonprofit associations and corporations which represent a specific geographic community, have open membership, and hold open meetings. Participating community organizations shall publicize their meetings in advance and keep meeting minutes.
 - (d) The Planning Department shall have the lead responsibility for information and input on planning and land use issues. The Mayor will delegate responsibilities to other County agencies as appropriate.

1.5.2.3 Preparation of Development Plans

- (a) The County shall prepare and adopt a Development Plan for a specific town or community where the community has demonstrated a need, clear objectives, and the ability to organize a broadly representative steering committee.
- (b) A Development Plan may be initiated by the Planning Department or a community organization in collaboration with a representative coalition of community interests.
- (c) Development Plan Projects
 - (1) Prior to initiating a Development Plan project, community members should form a steering committee to co-lead the project with the Planning Department. The steering committee should be broadly representative, including the various neighborhoods, the business community, and relevant organizations.
 - (2) To request funding for a Development Plan project, the Planning Department and the community steering committee shall first: (1) demonstrate the need for a plan by documenting the issues and opportunities facing the community; and (2) agree on a set of objectives for the planning project.
 - (3) Development Plan projects shall be funded and prepared according to priorities established by the County Council, considering the recommendations of the Planning Department and community organizations.

1.5.2.4 Location of Public Facilities

The County shall sponsor and support community participation processes, with access to technical expertise, for the design and location of new public facilities or major improvements to existing facilities that are considered to be “locally undesirable land uses” (LULUs) and/or have islandwide or regional impacts. Examples include a wastewater treatment plant, sanitary landfill, electric power generating plant, and an airport expansion. The County shall encourage the State and Federal Government and public utility companies to sponsor and support community participation processes in siting LULUs on Kaua‘i.

1.5.3 Policy Rationale

Information and Input Program. The purpose of this policy is to meet the need expressed by CAC members and others for meaningful citizen participation. The emphasis is on building the capacity of organizations at the community or grass-roots level to inform their community and provide timely input on proposals affecting their community. “Early notice” means notice that the Planning Department has accepted an application for a land use permit. The information and input program would replace the prior County-administered Improvement Advisory Committee mandated under previous planning ordinances. This program was functional only for a brief period because the County lacked adequate resources to organize and staff five ongoing committees.

Preparation of Development Plans. Rather than covering entire regions, future Development Plans should focus on specific towns and communities. Many have longstanding community associations and other organizations rooted in the area led by individuals well-informed about planning issues. The people in each community share a common history, common daily experiences, and detailed knowledge of the area. A Development Plan could also be organized according to a natural watershed. Whatever boundaries are proposed, a self-defined community is the best unit around which to orient more detailed planning on Kaua‘i.

Boundaries need not be set in advance. Rather, the Planning Department and the community steering committee should propose boundaries for a particular Development Plan project, as dictated by the plan objectives.

Not every community needs or desires a plan. Many good planning policies are already incorporated in the General Plan and codified as regulations in the CZO and other ordinances and rules.

Location of Public Facilities. County and State agencies and public utilities need a process that will involve the public in locating sites for potentially controversial facilities. Sponsorship and participation by the County gives a process legitimacy that it might not have if conducted solely by the proposing agency. The objective is to engage interest groups in developing the decision criteria and factual basis for selecting a site. If the points of view and factual questions of potential proponents and opponents are discussed and debated in advance, then the proposing agency can modify the project so that it reflects the widest degree of agreement. A related objective is to avoid costly and time-consuming litigation.

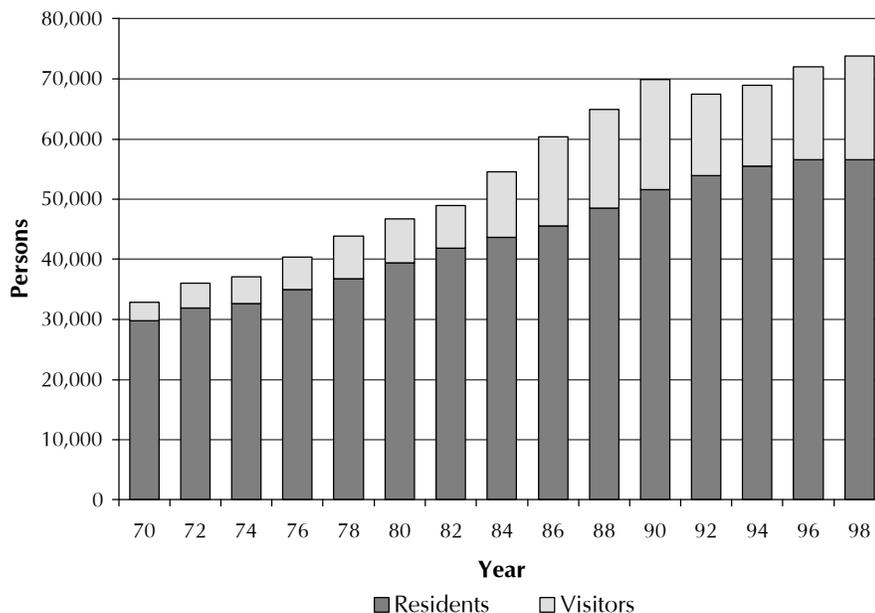
1.6 ECONOMIC AND POPULATION GROWTH

1.6.1 Historic Trends

According to the population estimate by the State of Hawai'i Department of Business, Economic Development, and Tourism (DBEDT), Kaua'i County had approximately 56,600 residents in 1998. Compared to the 1970 Census population of 29,800, this represents a 90 percent increase over almost 30 years. During this period, Kaua'i grew at a faster annual rate than the State as a whole – 2.3 percent compared to 1.6 percent. Between 1970 and 1998, Kaua'i County's share of statewide resident population increased from 3.9 percent to 4.7 percent.

Kaua'i's infrastructure and service needs are determined not only by the number of residents, but also by the number of visitors who spend time on the island. Between 1970 and 1998, the defacto population (residents and visitors combined), more than doubled, from about 32,800 to 73,800 (see Figure 1-2). Between 1970 and 1991 (pre Hurricane Iniki), visitors' share of defacto population increased substantially, from about nine percent to over 25 percent. In 1998, visitors comprised about 23 percent of Kaua'i's defacto population.

Figure 1-2
Resident and Visitor Population
Kaua'i County, 1970 - 1998



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

Historically, employment trends for Kaua'i County reflect the national recession of the early 1980s, the weak State economy during the 1990s, and the damaging effects of two hurricanes. Despite these economic setbacks, Kaua'i wage and salary jobs increased at an

annual rate of approximately 3.0 percent between 1970 and 1998. In 1998, Kaua‘i had about 24,900 wage and salary jobs.

1.6.2 Projections to 2020

1.6.2.1 Overview

For the purposes of long-range planning for roads, utility systems, and other public facilities and services, the County needs to have official projections of employment and population extending over a period of at least 20 years. One of the Planning Department’s functions in the Planning System is to adopt projections for the use of other County and State agencies (see Policy 1.4.1(h)(1) above).

Historically, the County Planning Department has relied upon the official State projections for islandwide growth. During the 1998-’99 General Plan Update, however, the State projections were found to be unsatisfactory; and an alternative set of projections was generated through the Update project.

Early in the 1998-’99 GP Update process, the Citizens Advisory Committee reviewed the State’s official 2020 population and economic projections, which at that time assumed that the number of daily visitors on Kaua‘i would increase from a historic high of 19,000 (1989) to 40,600 in 2020.¹ The CAC agreed unanimously that the State’s assumption of 40,600 daily visitors on Kaua‘i in 2020 was both unrealistic and undesirable. This led to the Planning Department developing a set of 2020 economic and population projections through the GP Update project.

Faced with the need to develop a new 2020 projection to replace the unacceptable State projection, the Planning Department worked with the CAC to study alternative scenarios. Sections 1.6.2.1 through 1.6.2.3 describe the CAC/Planning Department study of growth issues during the 1989-’99 Update process. Section 1.6.2.4 describes County projections current as of the Final Draft of this Plan.

A projection has been described as a “prediction of future conditions that will occur if the assumptions inherent in the projection technique prove true.” Projections are generally developed through mathematical models that relate various factors. Some models are complex, such as the State of Hawai‘i’s Input-Output Model. Others are simpler, such as the model used in the Kaua‘i General Plan Update. Both simple and complex models, however, are driven by assumptions about key variables. Since tourism is the State’s largest industry and the source of some 40 percent of Kaua‘i jobs, the average daily visitor census (ADVC) is a key variable in both the State and the GP Update models.

Actual growth occurs as the result of complex interactions of many factors, including national and international economic conditions, the airline industry, and the investment of private capital in resort facilities. The County government can influence some factors but cannot determine future growth. Faced with the need to develop a new 2020 projection to

¹ *Population and Economic Projections for the State of Hawaii to 2020: Report of Results and Methodology*, Department of Business, Economic Development and Tourism (DBEDT), State of Hawai‘i, May 1997. In February 2000, DBEDT adopted a new set of projections, extended to 2025. This updated series shows the 2020 Kaua‘i daily visitor count at 30,500 – effectively cutting in half the previously projected amount of growth between 2000 and 2020.

replace the unacceptable State projection, the Planning Department studied alternative scenarios and asked for the CAC’s advice.

In discussing the 2020 economic growth assumptions, the CAC used the term “growth targets.” The term “growth target” acknowledges that economic and population projections, though developed using mathematical models, are fundamentally influenced by assumptions such as the number of tourists that will visit Kaua’i. The assumptions are a matter of choice and should reflect the values and goals of the community.

1.6.2.2 Studies of Alternative Growth Scenarios

In considering alternative levels of growth, the CAC’s Visitor Industry Task Group identified two key areas: (1) impacts on highway traffic and the need for highway expansion; and (2) impacts on beaches, major parks and wilderness areas and the quality of the user’s experience. These were considered to be important for several reasons. First, highways and major parks are financed and developed by government, as opposed to other facilities that are often provided by developers – e.g., water, sewer and electrical utilities. Second, highways and parks are experienced daily by both residents and visitors. The amount of traffic and the condition of parks are easily observed and often discussed, unlike water and similar facilities that are noticed only when broken.

To develop information, the consultant team undertook two studies using three alternative scenarios of economic and population growth to 2020: (a) a projection of traffic and major roadway improvements; and (b) a survey of park and site managers and visitor activity businesses.

The alternative scenarios, summarized in Table 1-1, were based on different assumptions of economic growth – primarily visitor industry growth. Scenario A was based on the 2020 growth assumption originally suggested through the CAC – a range of 19,000 to 24,000 average daily visitors. The higher figure was used as the growth assumption for Scenario A. (Since the lower figure was so close to historic traffic levels, no projection was needed.) Scenario C – the highest – was based on the official State 2020 projections. Scenario B was built around the assumption that Kaua’i would host 32,000 daily visitors by 2020 – a number halfway between those of Scenarios A and C.

**Table 1-1
Alternative Projections of Resident and Visitor Populations on Kaua’i 2020**

	Historic		Projected 2020		
	1989	1998	Scenario A	Scenario B	Scenario C
Resident Population	49,850	56,600	65,260	79,490	82,800
Average Daily Visitor Population	19,140	17,220	24,000	32,000	40,600

Highway Transportation Analysis. Kaku Associates, a transportation planning company, was contracted to analyze traffic growth and needed transportation improvements for Scenarios A and B. These were compared with the current Kaua’i Long-Range Transportation Plan (LRTP), which was prepared by the State DOT in conjunction with the

County in 1994. The LRTP was based on a State-generated set of 2020 economic and population projections approximately the same as the Scenario C projections.

Projected population and economic activity were detailed according to 56 Traffic Analysis Zones and entered into the travel demand-forecasting model. The resulting 2020 travel forecasts were compared with existing capacity at critical points on major roads around the island.

The table “Summary of Major Roadway Improvements Needed by 2020” (see Appendix Table A-1) lists those improvements which, according the LRTP, are required in order to meet the 2020 traffic demand for Scenario C. For purposes of comparison, the table indicates which improvements would also be needed to meet the traffic demands of Scenarios A and B. The total cost of improvements under each scenario ranges from \$317 million for Scenario A to \$330 million for Scenario B and \$399 million for Scenario C.

Many improvements, including some of the most important and costly ones, are warranted under all three scenarios. They include a new Wailua-Kapa‘a Bypass; widening Kaumuali‘i Highway to six lanes in the Hanamā‘ulu-Wailua corridor; a new road connecting Po‘ipū and Port Allen; a new road connecting Po‘ipū and Kīpū (through the mountain); and widening of Kaumuali‘i Highway to four lanes from ‘Ele‘ele through Waimea. Improvements not needed under Scenarios A and B are confined to smaller projects in the vicinity of Līhu‘e and Kapa‘a. In summary, the transportation analysis shows that substantial highway improvements will be needed under all three growth scenarios.

The magnitude of improvements needed under all three scenarios reflects already-existing road capacity problems. In other words, there is an existing deficit in highway laneage, particularly in the more-populated central parts of the island. If growth occurs without the highway improvements, then traffic congestion will worsen.

Parks and Natural Areas. The GP Update working paper “Summary of Conclusions on Survey: Visitor Activities, Parks & Natural Resource Areas” sets forth the results of a consultant-led survey of parks and resource managers and visitor activity businesses. The survey specifically focused on the level of sustainable use of each site in relation to projected patronage under the three growth scenarios. Key conclusions are as follows:

- Kaua‘i’s wilderness areas and nature centers (Hā‘ena State Park, Kōke‘e State Park, Nā Pali Coast State Park, Polihale State Park, Waimea Canyon State Park, and Kīlauea Point National Wildlife Refuge) are heavily patronized by visitors to Kaua‘i. Off-island visitors account for upwards of 80 percent of total patrons. Presently, these parks collectively receive approximately 1.86 million visitors per year. The adjoining parks of Hā‘ena, Nā Pali, Kōke‘e, and Waimea Canyon receive about 1.42 million visitors annually.²
- Of the 20 parks and other sites for which managers returned surveys, five (5) or one-fourth are already considered to be serving the highest level of patronage that is sustainable, unless improvements are made and operational funding increased. They are Hā‘ena State Park, Kōke‘e State Park, Kīlauea Point National Wildlife Refuge, Polihale State Park, and Wailua River State

²Attendance figures based on survey of parks managers. See Appendix, Table A-2.

Park. With improvements, these sites could sustain higher levels of patronage. Five sites could sustain patronage under Scenario A but would need improved facilities and/or operational funding to handle more. Survey results for 11 of the most heavily used parks and sites are summarized in Appendix Table A-2.

- County parks and State parks, forestry, and boating functions are under-funded for operations, repairs, and capital improvements. Managers warn that further growth without improvements and increased operational funding would lead to deterioration of the patron's experience and/or deterioration of the site or function.

1.6.2.3 Conclusions

The growth targets discussion was joined by various community organizations and individuals represented on the CAC's Visitor Industry Task Group. Business-oriented organizations supported a range of growth up to 32,000 ADVC in 2020 (Scenario B).

The results of the Task Group discussions and the highway and parks studies were reported back to the CAC. Task Group and CAC members generally agreed on the following points: (1) there will be growth in the visitor industry, as well as in other industries; and (2) infrastructure and public facilities need to be improved, whatever the level of growth.

In reviewing the highways and parks studies, CAC members' predominant reaction was one of concern at the magnitude of needed road improvements and at the problems that parks would face with increasing patronage and declining budgets. It was noted that impacts would be even greater on "peak" days when the number of visitors exceeds the annual average.

When asked to identify the appropriate range for the average daily visitor census in 2020, CAC discussion groups arrived at three different recommendations: 19,000 to 28,000 ADVC; 19,000 to 24,000 ADVC; and 24,000 to 32,000 ADVC.³ CAC members recommended that the term "growth targets" be dropped and that 2020 "planning growth ranges" be used instead.

The Planning Department used available information, including CAC discussion, to establish the range of 24,000 to 28,000 daily visitors as the assumption under which overall projections were prepared.

1.6.2.4 Planning Department Projections

In December 1999, the Planning Department adopted islandwide economic and population projections based on a range of 24,000 to 28,000 visitors per day in 2020. The Planning Department directs that the higher end of the range should be used for the purposes of public facility planning. The projections are summarized in Table 1-2 below. More detailed tables may be found in Appendix B.

The projections are subject to revision by the Planning Department. The Planning Department will review the projections and make revisions as necessary when new information becomes available, such as new official State projections or new Census information. Otherwise, the projections should be reviewed at least every five years.

³ CAC Meeting No. 19, held on October 5, 1999.

Table 1-2
Kaua'i 2020 Projections

Resident Population	65,260 – 74,320
Average Daily Visitor Population	24,000 – 28,000
Total Population	89,260 – 102,320
Total Jobs	40,370 – 45,010

The projections were prepared using the model developed for the GP Update. It was assumed that agricultural employment will grow at an annual rate of 3.6 to 5.3 percent. High technology employment is assumed to grow at an annual rate of 3.3 to 4.0 percent. The average annual rate of growth in total employment of 1.0 to 1.5 percent is strongly related to the assumed range of 24,000 to 28,000 visitors per day. This range of visitor growth represents a 1.5 to 2.2 percent average annual rate of growth. It was chosen as a realistic projection which falls in the middle of the range of growth advocated by different members of the CAC.

What does the projected employment growth rate mean for the health of the Kaua'i economy? This can only be approximated since there is no economic model specific to the County of Kaua'i; and, moreover, the State publishes critical data such as annual gross excise tax receipts only for the state as a whole. It is possible to approximate growth in the economy by drawing on statewide statistics. Hawai'i's Gross State Product – the most widely used measure of the total economy – has recorded annual growth rates over the past 20 years that are on average 0.8 percent greater than the annual employment growth rates. Based on this relationship, an annual employment growth rate of 1.0 to 1.5 percent would yield average annual growth in Kaua'i's total economy of 1.8 to 2.3 percent.

Compared to the previous three decades, total jobs and population on Kaua'i are expected to grow at a slower pace between 1998 and 2020. Historically, total jobs between 1970 and 1998 increased at an annual rate of 3.3 percent. This compares to projected growth of 1.0 to 1.5 percent per year between 1998 and 2020. Kaua'i's resident population increased at an annual rate of 2.3 percent between 1970 and 1998. Over the next two decades, population growth on Kaua'i is expected to be in the range of 0.6 to 1.2 percent per year.

The Kaua'i 2020 Projections are not intended to be “targets” or “limits” for growth. They are intended to be guideposts, against which to measure actual growth and impacts. The projections will be used in forecasting land supply and infrastructure needs and, subsequently, in developing land use plans and long-range plans for public facilities and services.

2. Vision for Kaua'i 2020

This Chapter presents the text of the Vision for Kaua'i 2020, as well as the statement of Community Values. Section 2.1 presents the values statement, which provides the philosophical foundation for the Vision. Section 2.2 presents the Vision itself, describing the intended outcome of the General Plan.

2.1 COMMUNITY VALUES

The Community Values were formulated by the Citizens Advisory Committee, using input from 25 outreach meetings with a variety of community, business and public interest groups. The statement was revised based on public review and the initial round of Planning District meetings in June 1998.

- Protection, management, and enjoyment of our open spaces, unique natural beauty, rural lifestyle, outdoor recreation and parks.
- Conservation of fishing grounds and other natural resources, so that individuals and families can support themselves through traditional gathering and agricultural activities.
- Access to and along shorelines, waterways and mountains for all. However, access should be controlled where necessary to conserve natural resources and to maintain the quality of public sites for fishing, hunting, recreation and wilderness activities valued by the local community.
- Recognition that our environment IS our economy, our natural capital, the basis of our economic survival and success.
- Balanced management of our built environment, clustering new development around existing communities and maintaining the four-story height limit.
- Diverse job and business opportunities so that people of all skill levels and capabilities can support themselves and their families.
- Government that supports and encourages business.
- Balanced economic growth development promoting providing good jobs and a strong economy, without sacrificing our environment and or our quality of life.
- Respect and protection for the values and rights of our many cultures, in compliance with our laws and responsibilities as citizens.
- Preservation of our cultural, historical, sacred and archeological sites.
- Appreciation and support for the traditions of the Native Hawaiian host culture and the many other cultural traditions and values that make up the Kaua'i community.

- Appreciation and support for the visitor industry 's role in preserving and honoring all cultures and their values as Kaua‘i’s leading source of income and as a supporter of community festivals, recreation, arts and culture.
- Protection of Kaua‘i’s unique character.
- Recognition of the uniqueness of our communities, supporting people with roots and history in those communities to continue to live and raise their families there.
- Safety for all citizens and visitors.
- Support for our youth, educating them to succeed.
- Broad participation in the public process.

2.2 VISION FOR KAUA‘I 2020

The Vision describes conditions on Kaua‘i in the year 2020 and is written from the standpoint of that point in time. It reflects not only the Community Values but also the issues and opportunities foreseen by community members. The Vision expresses what Kaua‘i should strive for, in the context of realistic conditions as they are understood in 1999. The Vision is presented first in summary, then in a longer narrative.

We envision that in 2020 Kaua‘i will be . . .

- a “garden island” of unsurpassed natural beauty;
- a rural environment of towns separated by broad open spaces;
- a vital modern society formed by the people and traditions of many cultures;
- an island of distinctly individual towns and communities, each with its own unique history and character;
- a community which values its historic places and where people practice and draw strength from ancient languages and cultural traditions;
- a rural place whose population size and economy have been shaped to sustain Kaua‘i’s natural beauty, rural environment and lifestyle;
- a community which cares for its land and waters, leading the way with best management practices in the development of roads and other public facilities and in its land development and environmental regulations;
- an agricultural center, producing a wide range of crops, food, and forest products for local consumption and export;
- a resort destination where visitors are welcomed, supported with adequate facilities, and provided with a variety of cultural and recreational opportunities;

a resort destination whose government and industry leaders respect the island's residents and their need to have a community life where visitors are not always present and who find effective ways to protect residents' customary use of special places for religious and cultural observances, fishing, gathering, hunting and recreation; and

an island whose government supports the labor force and small business owners, firmly holding to essential policies and regulations while eliminating unnecessary red tape.

Zooming in for more detail, we envision that in 2020 Kaua'i will have these characteristics and qualities:

Caring for Land, Waters and Culture

The people of Kaua'i, along with the State and County governments, practice careful stewardship of the island's land and waters. The high mountains, forested watershed areas, the ocean and coral reefs, beaches – these areas are managed as part of the public lands trust. Over 50 percent of Kaua'i's land area lies in the undeveloped highlands of central Kaua'i and the steep cliffs and valleys of the Nā Pali Coast. Major landmarks include the peaks of Wai'ale'ale and Kawaikini; Waimea Canyon, and the Alaka'i Swamp. Nurtured by careful conservation practices, these lands support recovering populations of native forest birds and other native plant and animal species.

Over 40 percent of the land remains in agricultural use, interspersed with agricultural communities. Only four to five percent of Kaua'i's land area is developed with urban uses almost all of it on the coastal plains ringing the island.

Kaua'i's groundwaters, rivers and streams are managed to supply water for human consumption and agricultural irrigation, while maintaining surface flows needed to support native aquatic life, taro cultivation and other riparian uses, and recreation.

Kaua'i's coastal areas are safeguarded to preserve beaches, natural landmarks, Hawaiian fishponds and other Native Hawaiian sites. Coral reefs, surfing sites and fishing grounds are also protected. The beaches and shoreline area belong to the public trust, and the County assures that access from public roads to the shoreline is maintained and improved.

Kaua'i's land and waters are imbued with history and legends fundamental to Native Hawaiian culture. Ancient place-names convey meaning. Landmarks such as Hā'upu and Pu'u Konaenae frame the landscape and guide our travels around the island and on the ocean. The County is vigilant in protecting the visual integrity of important land features. The Kaua'i community and the County government respect and protect the special rights in land and waters that are rooted in the Native Hawaiian culture.

Prior to Western contact, Hawaiians managed the environment and organized their society through a land division system whose basic element was the "ahupua'a." The ahupua'a is an area of land usually extending from the mountains to the sea, including not only the highest inland areas but also the shoreline, fishponds, reefs, and deep sea fishing areas. Like the modern concept of "watershed," the ahupua'a system recognizes the integral connection among land-based, stream-based, and ocean-based resources and activities.

In 2020, management of development, agriculture and other activities on Kaua‘i is based on the related principles of ahupua‘a and watershed. Land is developed and used in ways that conserve natural streams and streamflows; conserve habitat for native species of plants and animals, both on land and in the ocean; and preserve sandy beaches and coral reefs. Best management practices used by government agencies, agricultural companies, other businesses, and individuals are effective in avoiding increases in floodwaters downstream; preventing beach loss; and minimizing pollution of ocean waters. All of Kaua‘i’s waters are “fishable” and “swimmable.”

The Kaua‘i community values its cultural and historic places and traditions. Many Kaua‘i residents observe the ceremonies and practices of their ancestral cultures. Special care is given to preserving and restoring the language, practices, artifacts and sites important to the Native Hawaiian culture. In building public facilities and in planning and regulating land use and development, the County of Kaua‘i assesses project sites’ archaeological and historic resources and acts to conserve those resources and to preserve significant sites and artifacts.

Museums and botanical gardens care for valuable sites, objects and plants and provide unique educational opportunities. They focus on providing programs for Kaua‘i residents and schoolchildren. They also attract tourists, educating them about Kaua‘i. Recognized as important assets for the community and the visitor industry, museums are well-funded and staffed to provide valuable programs.

Native Hawaiian organizations manage and care for cultural sites such as heiaus. They have developed cultural centers near important sites, where dance, language, and arts are practiced and taught. People trained in Hawaiian culture interpret the history and meaning of the sites as a paid service to visitors. The centers also market native crafts and other products.

Through planning and land use regulations, the County of Kaua‘i carefully safeguards its heritage of ecologically- and culturally-important lands, waters and sites. Through planning, the County identifies important resources and sets forth policies for responsible conservation and appropriate development. Zoning and other land use regulations are based on clearly-defined policy and design objectives. The County avoids rigid land use formulas in favor of flexibility in achieving desired ends.

For our most heavily used parks, rivers, and other natural sites, we have a practice of giving the land and waters one day’s rest each week. The rest-day reduces wear on these special places and allows caretakers time to carry out special tasks. Similarly, we observe one day of quiet each week. On the day of quiet, loud machines may not be used, and noise is kept to a minimum.

A Strong, Diverse Economy

Kaua‘i’s economy is strong, stable and diversified. While the visitor industry still provides the largest number of jobs (30-35 percent of total jobs), new businesses in diversified agriculture, aquaculture and high technology provide an increasing proportion of total jobs.

Job opportunities are many and varied, with wages that allow people to comfortably support their families. Unemployment is at an all-time low of 3-5 percent. Kaua‘i has a four-year college with agricultural, business, and high-technology programs to support our youth in finding well-paying, rewarding careers on Kaua‘i.

Key factors in Kaua‘i’s economic success include:

- Preservation of Kaua‘i’s special environment and culture.
- Expanding local markets for local products and reducing imports, resulting in more money remaining in the local economy.
- More jobs with higher wages, reflecting a variety of profitable businesses seeking qualified employees.
- A strong education system which prepares Kaua‘i’s children, teens, college students and adults to work in the diversified economy.

Carrying on community traditions, some Kaua‘i residents provide a substantial portion of their own food and subsistence through hunting, fishing, gathering and cultivating. These activities support the traditions of family and community working together, sharing the bounty of land and ocean.

Agriculture and Aquaculture

Agricultural enterprise helps to keep Kaua‘i green and economically healthy through a variety of crops sold locally and exported. Aquaculture is also a strong and growing industry contributing to local markets and exports. Agriculture and aquaculture businesses employ five to seven percent of our workforce, up from three percent two decades ago.

Kaua‘i is exporting coffee, seed crops, papaya and exotic fruits, and seafood, as well as refined sugar and other value-added food products. In addition, small farmers grow a variety of unique crops such as kava, hemp, herbs, nutraceuticals, exotic flowers, and perfume ingredients. The taro industry is the largest in the state and a major supplier to O‘ahu and to the mainland markets. Many taro products are produced on Kaua‘i, including chips and poi.

Kaua‘i residents support the farmers by buying locally-grown fruits, vegetables, taro and other basic foods. The market for organically-grown crops is increasing. In place of imported meat, Kaua‘i residents enjoy grass-fed beef from cattle raised in Kaua‘i’s pasturelands and prepared in local processing facilities. Kaua‘i now produces 50 percent of its own food, reducing food imports and keeping more money within the community.

Small farmers on Kaua‘i are thriving and profitable. They are known for their high-quality products, including exotic fruits not available elsewhere. They are supported by high local demand and exports to Asia and the Mainland. Many farmers work directly with restaurants and the visitor industry. Local agricultural products are an important attraction for visitors. The visitor industry showcases Kaua‘i agricultural and aquacultural products, and collaborates in the promotion of exports.

Small farmers work together in co-ops, collaborating to control costs and effectively market their products. By developing strong local demand, they minimize their vulnerability to transportation problems and fluctuation in overseas markets.

Kaua‘i’s aquaculture businesses produce shrimp, frog legs, trout, and fish for local consumption and export to Asia and the mainland. Located mostly on the West Side, aquaculture farms continue to be a growing industry. State and county government support

aquaculture with leases of government lands, a supportive and proactive permitting process, and education and training. Prime aquacultural land is identified and preserved.

The college, as well as other organizations, help farmers to acquire business skills essential for success. There are specialized programs for tropical agriculture and aquaculture. Many of Kaua'i's youth are finding careers in these fields.

Kaua'i's larger corporate agriculture and aquaculture businesses are volume exporters for niche markets. Locally-managed, they work in cooperation with small independent producers. Their financial strength provides for new crop research and extensive marketing, resulting in increased demand for unique Kaua'i products. Their ability to weather varying market conditions lends stability to the Kaua'i economy.

The forest products industry is growing hardwoods in a number of locations throughout the island. Kaua'i sawmills cut the rough timber to provide local building materials, as well as to provide fine woods for local craftspeople making and exporting wood bowls, musical instruments, furniture and other products.

State and county government support diversified agriculture by offering tax incentives; maintaining the agricultural irrigation and road infrastructure on State-owned lands; providing State lands for agricultural use at affordable lease rents; and reducing land use requirements for private entities giving long-term leases for agricultural use. They promote cooperatives and partnerships for central processing; provide facilities for disinfestation and shipping; and offer technical and marketing support. Airport facilities have been improved to facilitate the direct shipment of Kaua'i agricultural products to the mainland. State and county government maintain rights to irrigation water and oversee shared usage and maintenance of irrigation systems. They also walk their talk by buying local products.

While 5-10 percent of residences continue to be built in agricultural areas, there is still an ample amount of prime agricultural land for existing use and future cultivation. Through a government-private landowner partnership, an inventory of small agricultural lots, with irrigation water, is maintained for lease to individual farmers and small cooperatives. This public-private partnership is supported by innovative tax incentives and zoning regulations.

Land, facilities and systems of the former sugar plantations are used primarily for farming, forestry, and aquaculture. Viable irrigation systems are maintained and enhanced. They are managed by joint government/private boards and supply Kaua'i's diversified agriculture industry island-wide. Enough water is available to return some to stream systems for kuleana, ahupua'a and recreational use.

High Technology

Kaua'i's high quality of life attracts knowledge-based businesses working in high technology enterprises. These businesses are linked with the college and the high schools, providing internship and training opportunities for Kaua'i students. After attending college, students are able to find well-paying high-technology jobs on Kaua'i. All parts of the island are served with fiber optic cable, allowing high-speed communications.

Many residents have been trained in technological skills. A large number of them have their own businesses. Many work from their homes and service a world-wide market through global computer communications systems.

New high-technology businesses include a computer animation facility for the movie industry, and a solar energy research and development facility, and a bio-engineering company. Kaua'i has also become a center for electronic marketing, and several large national companies operate marketing centers here. Electronic marketing allows people to work from their homes, taking advantage of Kaua'i's excellent communications system. High-technology businesses employ about three percent of our workforce, a slight increase from two percent 20 years ago.

The Pacific Missile Range Facility is a major testing and evaluation facility, supporting civilian as well as military projects. As one of the most important T and E centers in the Pacific, it attracts high-technology businesses to locate on Kaua'i. PMRF remains a federal installation, with substantial federal funding. Scientific and commercial research constitute the largest portion of PMRF activities, yielding an ever-increasing amount of operating revenues. With a proactive program to hire current and returning residents, PMRF and its associated companies provide training programs and works in cooperation with the college and the high schools. Continuing agriculture and aquaculture operations on adjacent State lands provides a buffer and uses surface water that would otherwise inundate the base.

State government supports technology through funding research and development, providing solar tax credits and other tax incentives, making land and infrastructure available with appropriate zoning, and subsidizing the telecommunication infrastructure. They provide assistance in reaching global markets, in encouraging local employment and business ownership, in stimulating the development and use of alternative power generation; and in educating Kaua'i students so that they can fill high-technology jobs.

County government supports technology businesses by zoning appropriately located lands for high-technology uses and by providing County infrastructure.

Business Health and Diversity

Small business is the foundation of Kaua'i's economy, employing the largest percentage of the population. There is a wide variety of business opportunities, including outdoor recreation, with environmental tourism and sports facilities; support facilities for movies and television; healing, health care, wellness and retreat centers both in alternative health and traditional medicine; assisted living facilities for retirees; innovative power generation; light manufacturing and food processing; authentic Hawaiian cultural businesses and cultural education; and home-based cottage businesses networked with electronic marketing.

Some of the former sugar mills are now commercial centers with shops, museums, crafts and artisan areas, and restaurants. They are preserved for their historical significance and promote local products and culture. Other mills support food industry and industrial businesses.

Kaua'i businesses and government work together to combine the key ingredients of a successful island economy. The County supports business by providing needed infrastructure to towns and urban centers; by funding business assistance programs; by minimizing regulations and making them understandable; and by providing limited tax incentives. New

businesses are nurtured to ensure their success. Venture capital is available through local banks and private investors.

State and county governments continually streamline their operations. Business, health and land use regulations have been simplified, without sacrificing important health, safety and welfare objectives.

Opportunities and Prosperity

Kaua‘i’s diverse economy has provided its residents with more challenging work at a variety of skill levels, better paying jobs, and greater economic stability. The cost of living has gone down and the standard of living has gone up for the average resident. People have more time with their families and to provide service to their communities.

Everyone shares in Kaua‘i’s prosperity. An attitude of government and community responsibility translates into effective programs that improve employment, housing and educational opportunities for Kaua‘i’s less advantaged citizens.

Kaua‘i’s public schools benefit from a reinvented Department of Education, which places primary responsibility and authority for facilities, curriculum, and personnel at the level of the school. Teachers, working individually and in teams, have the ability to adopt innovative approaches to learning. Standardized tests are used to provide feedback on student, teacher and school performance. Parents and teachers are involved in school governance. Kamehameha Schools’ programs reach most students and families of Native Hawaiian ancestry and are coordinated with the public school system. This contributes to raising the level of performance throughout the DOE system.

Health and social service programs are integrated with the public school system to provide effective and coordinated assistance to families and ohanas. Education and youth programs are a top priority for Kaua‘i. The State is responsible for funding and operating the schools, and the County government plays a supporting role.

Kaua‘i’s non-profit health and social service agencies operate with stable sources of funding. They are valued and nurtured as community assets. Wilcox Hospital continues to be the leader in health services.

The County, through its Offices of Community Assistance and its Office of Economic Development, works with federal and State programs, business, and the non-profit sector to develop employment opportunities for Kaua‘i’s less advantaged citizens.

The County housing agency, State housing agency, and Department of Hawaiian Home Lands base their efforts on a philosophy of opportunity. While rental housing and rental subsidies remain important, the housing agencies are focused on providing homeownership opportunities for low-wage working families. This means building very low-cost housing. To leverage government funding and expand programs, they work closely with landowners, banks, major businesses, and for-profit and non-profit housing developers. As a result of this concerted effort, the percentage of Kaua‘i residents who are homeowners is 65 percent.

Crime and drug use are declining. In general, there is a greater sense of stability, peace of mind, and hope for the future. The diverse economy fosters the expansion and improvement of our education system, so that our youth can fill the available jobs.

A Vibrant, Stable Visitor Industry

Kaua‘i has a vibrant, stable visitor industry, with high occupancy rates and a strong mix of first-time and return visitors. Kaua‘i is known not only as the Garden Island – a place of outstanding mountain and coastal scenery, but also as a community friendly to visitors and as a place whose residents and businesses nurture the natural environment and cultural traditions.

Visitors can choose among a variety of activities: relaxed recreation and entertainment, in either basic or luxury accommodations; touring by motorized vehicle or by bicycle; adventures in ocean and wilderness exploration; and unique cultural experiences. Kaua‘i is known for its extraordinary variety of activities.

While it is a major visitor destination, Kaua‘i maintains its rural character. Limited in height and size, visitor accommodations and attractions are designed to complement the rural setting. Most hotels and resort facilities are located in the major resort areas of Princeville, Wailua-Kapa‘a, Lihu‘e/Nukoli‘i, and Po‘ipū. Development is managed to feature the natural environment, using tropical Hawaiian architecture and natural materials. Traffic flow is controlled to minimize noise and crowding.

The island is safe, and commercial and public facilities are clean and well-maintained. Kaua‘i’s residents, businesses, and government care for visitors and nurture the visitor industry. They share a common understanding that “The environment is the economy, our natural capital, the basis of our economic survival and success.” Together, they plan for visitor industry development which is compatible with the environment, supports the community’s quality of life, and sustains the qualities which attract visitors.

Visitors occupy various types of accommodations, buy from local businesses, and bring outside money into the Kaua‘i economy. Kaua‘i attracts higher-spending visitors, and their average length of stay is increasing because of the wide variety of cultural and recreational activities. Hotels and other resort accommodations have an average occupancy of 80 percent. Average wages and benefits for industry employees are the highest in the state.

In Kaua‘i’s original visitor destination areas, older buildings have been renovated or replaced, consistent with architectural guidelines and environmental requirements. With the exception of a few larger hotels, resort accommodations built since the year 2000 are smaller, more low-key and intimate. New visitor accommodations on the West Side, designed with community input, consist of inn- and residential-style buildings.

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.

People visit Kaua‘i to learn about Hawaiian culture. Ancient Hawaiian sites and cultural practices are presented with respect and authenticity. They are protected, restored and interpreted appropriately. Some areas are off-limits and visited only under approved

circumstances. Cultural sites and centers are managed by Native Hawaiians and preserved by laws and regulations of the State and the County.

The people of Kaua‘i appreciate the many benefits the visitor industry brings to the island. They, in turn, give the gift of aloha, encouraging guests to return and to stay longer. Residents support the industry's role in strengthening the economy, preserving the culture, and protecting the environment. In general, residents agree that a healthy, well-managed visitor industry is a major contributor to the quality of life on Kaua‘i.

A Rural Place

The Island of Kaua‘i is a rural place. “Rural” describes many aspects of Kaua‘i that people value: green, open lands; raising crops for food; small communities where people know each other; the absence of city noise and lights; not feeling crowded.

Kaua‘i’s rural character lies not just in those lands classified as “rural” or “agriculture”. Rather, it lies in how the whole island fits together – the relationship of urban settlements to open lands, how the built-up areas relate to the natural features of the landscape, how people get around. Some important elements of Kaua‘i’s physical environment:

- Small towns and communities that have a distinct character and are compact rather than spread out.
- Wide expanses of open lands – natural areas and lands in active cultivation – provide separation between the towns and communities. The rhythm of communities alternating with open lands is pleasing; and the separation highlights the special identity of each community.
- Buildings are relatively small in scale and low in height, complementing rather than dominating the landscape.
- The relatively small scale of Kaua‘i roads, the presence of natural vegetation along the roads, and the absence of medial concrete barriers.

Kaua‘i is a place of great natural beauty and green open spaces, valued by residents and visitors alike. Rural and urban development are carefully planned and regulated to ensure that Kaua‘i continues to be "The Garden Island."

Urban Areas

Businesses, residences, and other urban uses are concentrated in Kaua‘i’s towns and residential communities, occupying only five percent of the total land area. To minimize highway traffic and avoid urban sprawl, new residential communities are centered around the major towns and job centers of Līhu‘e-Hanamā‘ulu-Puhi and Kōloa-Po‘ipū. In the past two decades, the largest number of new residences have been built in two new developments on either side of Līhu‘e – the master-planned community of Puakea/Puhi to the west and, on to the east and north, an extension of Līhu‘e town, filling in around the airport and Hanamā‘ulu. Another new residential/resort community continues to develop at Kukui‘ula, near Po‘ipū.

Expansion of urban areas, particularly new shopping centers and other retail developments which attract a large amount of vehicular traffic, are controlled to avoid urban sprawl and

strip development along the highway. Town edges are clearly defined, and scenic corridors are maintained along the highways and major roads between towns.

Agricultural Lands

Agricultural areas are characterized by broad expanses of open space – a mixture of pastures and large-scale agricultural plantations, small farms, and clusters of residences. Land use regulations specifically provide for agricultural communities, with design standards for subdivisions to preserve open space and landscape features. Land use regulations and tax incentives are structured to promote legitimate agriculture enterprises and to increase opportunities for small farmers.

Agricultural communities consist of clustered houses surrounded by open land dedicated to conservation or agriculture. Development standards require new residential development to match the character of the rural landscape. Roads and structures are integrated into the topography, designed to be compatible with the landscape rather than to stand out. Large trees and important natural features, such as streams and hills, are preserved. Residences and other structures are sited and designed so that they do not visually dominate the landscape. Building height, size, color and materials are carefully controlled.

Rural Roads and Highways

Our rural roads retain their "country character." They are limited to two lanes, bordered with natural vegetation. Speed limits are kept low for safety reasons. The right-of-way may include grassed drainage swales, but there are no sidewalks, curbs or gutters. One-lane bridges have been preserved in the Hanalei-Hā'ena region, both for their historic value and because they slow traffic. Some historic bridges have also been retained in other communities, where traffic volumes are low. Traffic signage is minimal. Safe bicycle and pedestrian routes are provided.

Highways in agricultural/rural areas are designed to retain a natural appearance, affording uncluttered views of the ocean and the countryside. State and county agencies have adopted "flexible highway design," in order to enhance scenic and historic qualities and to strike a balance between flow of automobile traffic and safe facilities for buses, bicycles and pedestrians.

Highway signage is minimized and is designed to enhance the travel experience. Electrical utility poles and lines are designed to be unobtrusive, and, where feasible, utility lines are placed underground. Trees and other plantings have been added along highways in places where they enhance scenic qualities. Scenic pull-outs, built with natural materials, are placed in key locations.

Where four lanes are required to carry traffic in a particular corridor, the roadway is divided by a landscaped median or separated into two smaller roadways. Long stretches of highway between towns, such as the expanded section of Kaumuali'i Highway between Līhu'e and Maluhia Road and the Kapa'a Bypass, are designed as scenic parkways.

Keeping our roads and highways beautiful is a successful public/private effort. State and county agencies ensure proper roadside maintenance. Highways are bordered by low-care

landscaping that does not require herbicide control. The County and community groups maintain an effective litter control program.

Most of what is seen along Kaua'i's highways is open land in active agricultural or conservation use, such as farming, ranching, wild areas and forest. To avoid the appearance of sprawl, County scenic corridor regulations require new residential developments to observe deep setbacks from the highway. New commercial developments outside of existing towns are required to limit highway frontage, screen parking lots from the highway with landscaping, and provide access from a side road where feasible.

Coastal Development

In new resort developments and subdivisions along the coast, buildings are setback from the shoreline in order to serve the following purposes: to avoid potential tsunami or hurricane damage; to preserve dunes, coastal bluffs, and other important physical features; to allow space for coastal erosion, so that there is no need for a seawall and dry beach area is preserved; and to preserve views. Setbacks are based on historic coastal erosion trends, damages during past hurricane and tsunami events, the nature of the topography, and scenic values.

Visitor industry development along the shoreline provides well-marked, easy-to-use public access and clean shower/rest room facilities, with ample parking. Buildings are set well back from the shoreline, providing an open, landscaped area with a street or walkway facilitating public access up and down the beach. Residents and visitors share the beaches comfortably.

Development along the shoreline is designed and landscaped to moderate visual impact. There is a transition zone which allows increased building height with larger setbacks, up to the four-story height limit.

Residences and other buildings are excluded from undeveloped shoreline lands which are in the State Conservation District. In newly zoned areas, residential and resort development has been required to set back beyond the historic hurricane inundation zone and beyond areas at hazard of chronic beach erosion. We have also landbanked oceanfront whenever possible, to protect views and open space. Residences along the shoreline are required to meet special design standards for height, size, set-back, and color.

Increased setbacks have reduced the need for seawalls or artificial hardening of the shoreline. Along sandy shorelines, shore protection structures are allowed only in special instances as a last resort.

Parks and Access to Mountains and Ocean

We manage the access to public lands and shoreline by enforcing laws, working out solutions with all concerned, and establishing dedication and acquisition programs funded by developers. Landowners are offered incentives such as tax credits and limits on liability for public access. Conveyance taxes are used to acquire public lands, parks, and shoreline areas. We plan ahead for access by purchasing areas deemed necessary, using clear guidelines established through community-based planning.

Visitors share Kaua‘i’s parks, natural areas, and waters in harmony with residents and the environment. The County is implementing a long-range park master plan which is regularly updated and sets priorities for park operations and capital improvements. Each of the major State parks also has an up-to-date master plan, prepared in collaboration with the community. Increased funding to maintain and expand parks comes from State tax revenues as well as user fees paid by out-of-state visitors. Parks are safe. Restrooms are clean. Parking is ample. Facilities are available for local gatherings and public events.

The County Parks Program supports thriving youth and adult sports leagues, as well as providing a diverse range of recreational and social opportunities for people of various ages and interests. The Parks Program also recognizes the need to support the visitor industry and to balance visitor and community needs. An alliance between the County Parks Division and the visitor industry insures that park facilities used by visitors are well-maintained, supported by visitor fee revenues and industry resources.

The updated County Parks Plan is used to prioritize capital improvements and development of new parks and indoor recreation facilities. The Plan is fiscally-constrained, balancing projected capital expenditures and long-term operating costs against projected available financial resources. The Parks Plan’s priorities are adjustable, based on comparison of community benefits and consideration of the degree to which costs are offset by user fee revenues and/or community volunteer work.

Towns and Commercial Development

The County has completed major actions to revitalize and improve central Līhu‘e and Kaua‘i’s historic small towns and communities. Actions include upgraded sewer and water facilities, increased public parking, and pedestrian-friendly improvements to sidewalks and streets. These were coordinated with County zoning, private landowner initiatives, and highway and road development through collaborative planning among County agencies, community and business organizations, and the State Highways Division.

Under the General Plan, new commercial development has been focused on meeting community shopping needs while supporting local small businesses and older business areas. With strategic decisions about highway development and new commercial zoning, the County has avoided strip development and urban sprawl.

Public Facilities and Services

Solid Waste. The County of Kaua‘i leads the state in having the lowest per capita rate of waste generation and the highest rate of reuse and recycling. The County and/or private companies provide reliable collection service and environmentally-sound disposal, with the cost being paid by service users. By setting fee and tax rates in proportion to the amount of waste collected and disposed, the County assures equity in service payments and provides an incentive for reducing waste generation.

Drainage. Kaua‘i streams run freely in their natural courses, carrying nutrients and draining rainwater to the ocean. In coastal areas, wetlands and vegetated stream banks filter runoff before it reaches coastal waters. In some cases, old agricultural ditches and reservoirs are maintained as part of the existing drainage/flood prevention system. Commercial and residential developments have swales and shallow basins to detain stormwaters, in order to

reduce erosion from typical storms. The County limits construction along streams and on steeply-sloped lands. Where there is a serious hazard of flooding, the preferred methods are to enlarge the undeveloped floodplain area and/or relocate structures. The County is a leader in adopting and applying “best management practices” for land use, site development and construction. Because of careful management and regulation, Kaua‘i is free of concrete-lined drainage channels.

Electrical Power. The electrical power companies serving Kaua‘i take advantage of new technologies to offer alternative power sources that do not depend on fossil fuels. Renewable sources of energy such as solar, hydroelectric and biomass, supply a growing portion of energy needs. Fuel cells are commonly used to provide an individual power source for homes and businesses, especially in outlying areas. The power generating companies have been able to reduce power transmission facilities and costs, with savings passed onto the consumers.

Residents of Kaua‘i County are dedicated to the efficient use of energy and to minimizing the deleterious health, safety and aesthetic impacts of power installations. In particular, the county seeks opportunities and economic methods to render facilities (including transmission lines) inconspicuous in order to enhance a “parklike” appearance throughout the island.

Airports and Harbors

Līhu‘e Airport is continually upgraded in order to support the desired level of visitor industry development and the export of agricultural products to the mainland. The commercial harbors at Nāwiliwili and Port Allen are continually upgraded to accommodate the latest cargo shipping systems.

Several cruise lines visit Kaua‘i and serve the travel industry and local residents with cruises of varying lengths and cost. Cruise ships are welcomed in Nāwiliwili and Port Allen Harbors. Some moor offshore of Waimea and ferry visitors ashore via Kikīaola Small Boat Harbor. Passenger reception areas are attractive and well-designed, with easy circulation among visitor welcome stations and ground transportation staging areas.

Our small boat harbors provide for the recreation and commercial needs of Kaua‘i’s fishermen and boat owners. Commercial use of the small boat harbors is managed by the State, assuring that facilities are adequate to accommodate resident fishermen and recreational boating, as well as providing for boat tours and rentals for visitors. The Department of Land and Natural Resources manages and regulates boat tours and use of rental boats on Kaua‘i’s rivers, assuring that commercial boating does not degrade natural or recreational resources and does not crowd out resident use and enjoyment. Limits on boat tour landings in wilderness coastal areas are strictly enforced.

Helicopter tours are another popular way that visitors experience Kaua‘i. Tour companies work closely with the Federal Aviation Administration and residents to minimize negative impact and employ the latest technology to reduce noise. They control their routes to prevent intrusion on communities, sacred sites, and wilderness areas such as Kalalau Valley.

Helicopter tour operations are centralized at Līhu‘e Airport. Helicopters also operate from Princeville Airport and from other private sites, as regulated by the County Planning Commission. Proposed expansions of operations from these sites are negotiated with the

neighboring communities. To avoid spreading uncontrolled noise impacts, no other State-owned heliport facilities have been developed.

Community Participation

Kaua‘i citizens enjoy a rich civic life because of their individual and collective commitment to each other’s well-being and respect for the place. Key values are trust, mutual respect, and a determination to maintain open dialogue. Citizens of all ages, ethnic heritages, and income levels actively participate in community life at many levels and through a variety of activities. Community organizations inform citizens and mobilize them to participate in dialogue. Government agencies and public officials provide fair and equal access to information and assistance for all citizens; give adequate notice of proposed actions; conduct open meetings; and make public records accessible.

The County government reaches out to involve stakeholders and the interested public at the earliest stages of important public decisions, bringing people together to frame the issues, hear different viewpoints, and propose action. Government empowers and encourages citizen participation, especially in the betterment of their home communities.

Plans for individual towns and communities are prepared by broad-based community coalitions collaborating with the Planning Department. The community plan is action-oriented and provides specific guidance for enhancing the community and accommodating change within the islandwide framework of the General Plan.

3. Caring for Land, Water and Culture

3.1 OVERVIEW

This chapter sets policies relating to land, waters and culture – resources which are the heritage of the people of Kaua‘i. Heritage resources are connected to physical features or structures, but they also entail less tangible qualities like cultural meaning, historic significance, and the visual experience of the environment.

The chapter also sets policies for managing human activities to maintain the quality of the environment – particularly the quality of Kaua‘i’s waters and watersheds. As stated in the Vision, the concepts of ahupua‘a and watershed link the mountains, lowlands and ocean as one basic ecological unit. The rainwater running off the land affects the quality of the streams and coastal waters; this in turn affects their ability to support native biota and their usefulness for fishing, swimming, or other activities. Finally, the Chapter addresses the special rights of Native Hawaiians in water and land.

3.1.1 Heritage Resources Maps

The General Plan contains a set of Heritage Resources Maps – an island map and five district maps at a larger scale. These maps are intended to document important natural, scenic and historic features, particularly in relation to the urban and agricultural lands which are developed or may be developed in the future. The maps document the following heritage resources:

- Important landforms, including mountains, stream valleys and gulches, bluffs and other small coastal features (Based on elevation contours and other data, U.S. Geological Survey).
- Perennial streams and ponds (Source: U.S. Geological Survey).
- Coral reefs (Source: U.S. Geological Survey).
- Marshes (Source: U.S. Geological Survey).
- “Special streams,” defined as natural, undiverted streams and stream segments that have outstanding habitat for native aquatic species or recovery habitat for threatened and endangered waterbirds. (Source: Office of Planning, based on the *Hawai‘i Stream Assessment*)
- Registered archaeological sites and complexes; archaeological sites on the National Register of Historic Places and/or the Hawai‘i Register of Historic Places, including heiau. (Source: State Historic Preservation Division, DLNR)
- Recorded sites of heiau, not listed in the National or State Register (Source: State Historic Preservation Division, DLNR)

- Registered historic buildings and structures on the National and/or Hawai‘i Register of Historic Places. (Source: State Historic Preservation Division, DLNR)
- Potentially historic buildings and structures identified in the *Kaua‘i Historic Resources Inventory*. (Source: Planning Department, Kaua‘i Historic Preservation Review Commission)
- Existing major taro-growing areas. (Source: GP public meetings.) Note: These are only the most prominent of the currently cultivated areas. There are many other historic taro lo‘i, some of which have good potential for cultivation today.)
- Other natural, historic, cultural, scenic features. (Source: various documents, GP Update public meetings)
- Scenic roadway corridors. (Sources: 1971 General Plan maps, Development Plans, GP public meetings, literature)
- Major resource parks and sites, such as Wailua River State Park, Kōke‘e State Park, Grove Farm Homestead, and the National Tropical Botanical Garden.
- Federal and State natural preserves, including National Wildlife Refuges.

3.1.1.1 Policy

- (a) The Heritage Resources Map depicts natural, cultural and scenic resources that are important to the County of Kaua‘i and that are intended to be conserved. The mapping of important landforms, streams and other physical elements represents the general location of the resource. The mapping of historic and archaeological sites, other features and Scenic Roadway Corridors is intended to be representational, not precise.
- (b) Important landforms shall be designated as “Open” on the GP Land Use Map and shall be zoned accordingly, in order to protect steep slopes and streams from erosion and to protect landforms from development that might affect scenic views.
- (c) The Heritage Resources Map shall be used as a guide in preparing Development Plans and in preparing or revising land use ordinances and rules, including but not limited to the following: revisions to the Comprehensive Zoning Ordinance or the Zoning Maps; zone change ordinances; revisions to the Special Management Area (SMA) rules or boundaries; revisions to the Subdivision Ordinance; and the preparation of new ordinances or rules, such as a Scenic Roadway Corridor ordinance.
- (d) Projects undertaken with State or County lands or funds shall be designed to conserve heritage resources.
- (e) The Heritage Resources Map shall serve as a guide in the review of subdivision and land use permit applications, but may not be used to prohibit a land use that is allowed by the Comprehensive Zoning Ordinance or by permit.

3.1.2 State Responsibility

The State of Hawai‘i plays the preeminent role in managing natural resources. The Department of Land and Natural Resources (DLNR) controls and manages the forest reserves, natural area reserves, and state parks. In addition to their value as forested watershed, these lands also harbor rare and endangered plant and animal species and areas where the native ecosystem remains relatively intact.

The DLNR also exercises regulatory authority over land use in the State Conservation District, which covers 55 percent of the island’s land area. As shown on the islandwide Heritage Resources Map, the Conservation District encompasses the Nā Pali Coast and the mountainous interior of the island, as well as coastal mountains such as Mt. Hā‘upu and major river courses such as those of Waimea and Wailua. The State has also applied the Conservation District to strips of coastal lands, including almost all of the Polihale-Nohili-Barking Sands dunelands and the lands seaward of most of the coastal bluffs that fringe the North Shore. Anyone wishing to build a single-family residence or a radio tower or to undertake any other land use in the Conservation District must apply to the DLNR for permission.

Finally, DLNR plays other roles which are important in caring for natural resources and regulating uses.

- Through the Division of Boating and Ocean Recreation, the DLNR manages small boat harbors and regulates river and ocean commercial recreation activities.
- The DLNR’s Aquatic Resources Division regulates fisheries and advocates for aquatic and marine resources, especially native species and coral reef ecosystems.
- The Division of Forestry and Wildlife, in addition to managing Forest Reserves and Natural Area Reserves, also administers the State endangered species statute. DOFAW also manages the Na Ala Hele Trail System, Game Management Areas, and other uses of forest reserve lands.
- The State Historic Preservation Division administers the Hawai‘i Historic Preservation Act and staffs the island burial councils.
- The Commission on Water Resource Management, staffed by a division within DLNR, regulates the development of groundwater wells and diversion of streams.

In addition, the State controls the Public Land Trust, which includes ceded lands and submerged lands. These constitute most of the forest reserves and all marine lands. DLNR has the primary responsibility in administering these lands.

In summary, the DLNR holds many responsibilities in caring for Hawai‘i’s special lands, waters, and cultural resources. In regulating land use on urban and agricultural lands, the County seeks expert advice from DLNR on aquatic and marine resources, streams, rare and endangered species, and historic and archaeological resources.

3.2 SCENIC VIEWS

The Heritage Resources Maps show in light green important landforms that have ecological, recreational, cultural and scenic value. Landforms include mountains, hills, stream valleys and gulches, high cliffs and bluffs. As described above, most of these features lie within the State Conservation District, where land use is regulated by the State DLNR. Other lands lie within County jurisdiction and are generally designated as Open on the GP Land Use Map.

3.2.1 Policy

- (a) In developing public facilities and in administering land use regulations, the County shall seek to preserve scenic resources and public views. Public views are those from a public place, such as a park, highway, or along the shoreline.
- (b) The County shall observe the following general principles in maintaining scenic resources:
 - (1) Preserve public views that exhibit a high degree of intactness or vividness.
 - “Intactness” refers both to the integrity of visual patterns and the extent to which the landscape is free from structures or other visually encroaching features.
 - “Vividness” relates to the memorability of a view, caused by contrasting landforms which create striking and distinctive patterns. (Examples are the silhouette of Mt. Hā‘upu against the horizon, views of Nounou Mountain from the valley and the coast, and the view of Hanalei Valley from the overlook.)
 - (2) Preserve the scenic qualities of mountains, hills and other elevated landforms, qualities such as the silhouette against the horizon and the mass and shape of the landform.
 - (3) Preserve the scenic qualities of lowland/open space features, such as the shoreline, the edge of a coastal bluff, a marsh, a fishpond, or a historic or cultural property. Structures should not impede or intrude upon public views of the feature and should not alter the character of the immediate area around the land feature, historic or cultural property.

3.2.2 Rationale

Kaua‘i is known for the beauty and the great variety of its landscape. The native Hawaiian culture is intimately linked to physical places, many of which have a special significance in relation to a particular god, legend, song, or historical occurrence. In addition, these land features, some of which can be seen from many places around the island, attract visitors to Kaua‘i and therefore have substantial economic value. The Hawaii State Plan, the Coastal Zone Management Act, and many other statutes and regulations explicitly call for preserving natural landscapes and views.

Views of important mountains and other features should be safeguarded because of their cultural value, their value in residents’ quality of life, and their economic value to the visitor

industry. As discussed herein, the intent is to preserve public views – i.e., views seen from a park, the beach, a road, or some other public place. The term does not include private views – i.e., views from one’s residence or other private property.

As an example, consider a hill which is an important landmark for residents in the surrounding community and possibly for fishermen as well. If a person purchased the land and built a house high up on that hill, he would have a dominating view. But the owner’s private view would be achieved at the expense of many other residents’ and visitors’ enjoyment and appreciation of the landscape. Of course, the owner should be able to build a house on property he purchased for that purpose. But he should not be allowed to site his house so that it interferes with an important local landmark. Instead, the County should provide clearly-stated land use regulations that require a formal view analysis and placement of structures in locations that do not have a significant impact on public views.

3.2.3 Implementing Action

The Planning Department shall prepare amendments to the CZO, Special Management Area Rules, and the Subdivision Ordinance to provide specific criteria and guidelines for evaluating and protecting scenic views in the siting of new development.

3.3 HISTORIC AND ARCHAEOLOGICAL RESOURCES

3.3.1 Overview

As stated in the Vision, the people of Kaua‘i value their cultural and historic places and traditions. Many individuals and organizations care for these resources on a daily basis. Here are some examples: taking care of a heiau; organizing a Bon dance; cultivating taro in ancient taro lo‘i; interpreting historic sites to visitors; restoring historic buildings; attending an exhibit of Kaua‘i artists at the Kaua‘i Museum. Historic and cultural resources help to give Kaua‘i its unique identity – to establish a “sense of place.”

Historic preservation has become increasingly important to the visitor industry and therefore to the Kaua‘i economy. Today’s sophisticated, higher-spending visitors seek out historic and cultural sites and activities. Examples include Wailua-Nui-A-Ho‘āno, a complex of five major heiau in Wailua River State Park; restored historic buildings such as the County Building and the Wai‘oli Mission Complex; and other historic structures such as the Hanalei Bridge. Preservation of historic plantation town architecture in towns such as Kapa‘a and Kōloa creates a “sense of place” appreciated by both residents and visitors. The West Side “Sugar Corridor” puts together landscape elements, buildings, mill operations and other features to tell the continuing story of sugar cultivation and processing on Kaua‘i.

The Hawai‘i Historic Preservation Act (HRS Chapter 6E) mandates the Department of Land and Natural Resources (DLNR) to administer a comprehensive historic preservation program throughout the state. The lead agency for all aspects of historic preservation, archaeology, and burials is DLNR’s Historic Preservation Division (SHPD). The SHPD is staffed with archaeologists, architects specializing in preservation, and professionals knowledgeable about Native Hawaiian culture.

To provide local guidance on historic preservation issues, the County adopted Ordinance No. 496 creating the Kaua'i Historic Preservation Review Commission (KHPRC). Appointed by the Mayor with staff support by the Planning Department, the KHPRC advises the Planning Department and the Planning Commission on permits and government projects that involve historic sites, structures or districts. The Commission typically coordinates project reviews with the SHPD.

Fulfilling one of the goals of the 1984 General Plan, the KHPRC oversaw preparation of the *County of Kaua'i Historic Resources Inventory and Management Plan*, published in 1990. The Plan provides a large number of recommendations concerning County zoning review practices, Commission operations, and incentives for care and rehabilitation of historic properties.

The Heritage Resources Maps show important historic sites, including those listed on the National Register and the Hawai'i Register of Historic Places. In addition, the Heritage Maps show major existing taro-growing areas, non-Register heiau sites, and historic town districts. Currently, Kaua'i has 30 archaeological sites and complexes and 26 historic buildings listed on the National Register, the Hawai'i Register, or both. There are also listings for historic objects and historic structures, such as the Hanalei Pier. Many more sites in all categories are considered to be eligible or potentially eligible candidates for National or Hawai'i registration.

3.3.2 Policy

3.3.2.1 Historic and Archaeological Sites

Preserve important archaeological and historic sites and provide: (1) a buffer area between the site and adjacent uses; and (2) public pedestrian access, as appropriate to the site.

3.3.2.2 Historic Properties

- (a) Maintain and periodically update the County of Kaua'i Historic Resources Inventory.
- (b) Modify County zoning and building regulations to provide incentives for rehabilitating historic structures that are on the National Register or Hawai'i Register or that are classified as "contributing element" of a County Historic/Cultural Special Treatment District (ST-C), the Lihu'e Town Core Special Area, or Kapa'a Special Planning Area A.
- (c) Provide a real property tax exemption for historic properties, including commercial properties.
- (d) Where necessary to preserve historic town architecture, establish an historic district as an overlay to zoning. Reduce the burden on property owners by providing clear design guidelines and streamlined permit procedures.
- (e) Establish a low-interest revolving loan fund for rehabilitation of historic properties.

3.3.2.3 Archaeological Resources

- (a) In order to prevent destruction of archaeological sites, prepare a set of predictive maps identifying areas that have potential archaeological resources or burials. Inform

government agencies and permit applicants engaged in land development projects about potential resources, as well as about requirements for survey and discovery.

- (b) Educate planners, attorneys, and other individuals involved in land development and sales about laws concerning land titles, kuleana properties, water rights, access rights, and other rights in land and water that are unique to Hawai‘i.
- (c) Educate construction companies and workers about regulations concerning discovery and reporting of archaeological resources or burials.

3.3.3 Rationale for Policy

Only a very small portion of Kaua‘i’s land area has ever been surveyed for archaeological resources. Currently, the Planning Department works in conjunction with the Kaua‘i Historic Preservation Review Commission and the State Historic Preservation Division (SHPD) to require that applicants evaluate sites for archaeological resources and provide a plan for preserving or salvaging any important sites. Public agencies and applicants whose project is subject to State environmental assessment, typically hire a professional archaeologist to investigate and prepare a report.

Nevertheless, both SHPD staff and Kaua‘i Burials Council members report that archaeological resources or burials are often discovered unexpectedly during construction. Resources and burials are damaged or destroyed when the builder does not know or chooses to ignore the proper monitoring and notification procedures.

Predictive maps would show the general areas where archaeological resources might be present. They would provide useful information to government agencies and real estate professionals in screening sites and anticipating environmental assessment and permit requirements. The State’s professional archaeologists have the knowledge to develop such maps.

In addition, the maps could be used as a “check-off” item in reviewing building and grading permits, ministerial (over-the-counter) zoning permits, and road and utility repair orders involving excavation. If a check of the “Archaeological Resource Potential” map showed that a site had a high potential for burials or subsurface archaeological deposits, the County permit-granting agency could stamp a warning on the permit and attach relevant instructions about discoveries. Notice of such permits could be forwarded to the SHPD for information and follow-up. Neither of these steps would require significant additional County staff effort, nor would they add time to the permit process.

3.3.4 Implementing Actions

3.3.4.1 Historic Properties

- (a) The Planning Department shall prepare and submit an amendment to the CZO to broaden the type of uses that may be allowed under a use permit in an historic structure. For example, the owner of an historic structure in a Residential zoning district could apply for a permit to use the structure as an inn, as offices, or other uses that are not generally permitted.

- (b) The Department of Public Works shall prepare and submit an amendment to the Building Code to provide relief from code compliance in the renovation of historic structures, as recommended in the *County of Kaua‘i Historic Resources Inventory and Management Plan*.
- (c) The Finance Department shall prepare and submit an amendment to the real property tax ordinance that provides a tax exemption for commercial historic properties.
- (d) The Planning Department, in conjunction with the Office of Economic Development, shall study the market, costs, sources of funding, and operational feasibility of developing an islandwide low-cost rehabilitation loan program for historic structures.

3.3.4.2 Archaeological Resources

- (a) The State Historic Preservation Division should prepare “Archaeological Resource Potential Maps” for Kaua‘i, with assistance and input from the Kaua‘i Historic Preservation Review Commission (KHPRC), the Kaua‘i Planning Department, and the Kaua‘i Burials Council.
- (b) In addition to meeting State environmental assessment requirements, each responsible County agency shall develop procedures to screen capital improvement projects and repairs for potential archaeological resources and take appropriate action to survey the site prior to construction and/or to monitor excavation.
- (c) Once “Archaeological Resource Potential Maps” become available, the Planning Department or the Department of Public Works shall screen land use, grading, and building permit applications for potential resources; notify applicants when there is potential for discovering resources; and provide relevant instructions for assessment, construction monitoring and resource discovery.
 - (1) For zoning or land use permit applications, applicants shall meet environmental assessment and application requirements under State and County regulations. This involves review by the State Historic Preservation Division and, where warranted, a formal investigation and report by a professional archaeologist.
 - (2) For grading, building, and other ministerial permits, the responsible County department shall notify each applicant whose site has potential archaeological resources, provide relevant information, and provide notification of each permit granted to the State Historic Preservation Division. The intent is to provide the applicant early notice and information and notify the SHPD in a way that does not increase application requirements or processing time.
- (d) The State boards and commissions that license occupations relating to transfer of land ownership and land development should require applicants to demonstrate knowledge of (1) Hawaiian land and water laws and rights and (2) archaeological resource and burial regulations. They include the Real Estate Commission, the Board of Registration for Professional Engineers, Architects, Surveyors and Landscape Architects, and the Board of Registration for Contractors.

3.4 WATERSHEDS, STREAMS AND WATER QUALITY

As stated in the Vision, the modern concept of watershed management mirrors the Native Hawaiian land use principles and practices under the ahupua‘a land divisions. Like the modern concept of “watershed,” the ahupua‘a recognizes the integral connection among land-based, stream-based, and ocean-based resources and activities.

Watersheds are affected by natural events and human activities that cause changes in land and in the flow of water from the high mountains to the ocean. Current Federal and State clean water programs are targeting “nonpoint source pollution control,” with specific emphasis on protecting coastal waters from polluted runoff. County agencies fulfill particular functions in a network of regulations and agencies that control polluted runoff

3.4.1 Overview

Three federal laws relating to nonpoint pollution are currently driving new planning, management, and regulatory activities at the State level:

- Sec. 319 National Nonpoint Source Management Programs (Clean Water Act)
- Sec. 401 Water Quality Certification (Clean Water Act)
- Sec. 6217 Coastal Nonpoint Pollution Control Programs (Coastal Zone Management Act Reauthorization Amendments)

The State has the lead role in carrying out federal water quality mandates, with the current major emphasis being control of polluted runoff. The State CZM Office and the DOH are currently collaborating on planning for polluted runoff and protection of water quality. In the future, the State intends to join its CZM and Polluted Runoff plans into a single unified document. Rather than operate a statewide nonpoint pollution control program, the DOH is seeking to strengthen existing county and agriculture programs and regulations and to bring together current programs and agencies in a coordinated network.

3.4.1.1 Nonpoint Pollution on Kaua‘i

Nonpoint source discharges have a greater impact on streams and nearshore waters than point source discharges (i.e., a discharge from a pipe, ditch or other specific source). Nonpoint pollutants primarily consist of sediments from eroded soils; nutrients, and toxic chemicals. Sediments increase turbidity in coastal waters and can accumulate on coral reefs and other critical habitats. Nutrients, including fertilizers, can lead to eutrophication in coastal waters. Toxic chemicals, including metals, petroleum-based products, and pesticides can pose a risk to water quality and marine plants and animals.

As stated in the Hawai‘i Coastal Nonpoint Pollution Control Management Plan (1996), land-based activities are the source of most pollution problems. Activities generating pollution are categorized as agriculture; forested lands; urban areas; marinas and recreational boating; and “hydromodification” – i.e., channelization of streams, dams, and streambank and shoreline erosion. According to the Plan, “Storms and heavy rains generate runoff which picks up the nonpoint sources of pollution associated with these activities, and carries them downstream to the coastal waters.” Coastal pollution is increased when “land-based activities degrade

wetlands and riparian areas that would otherwise absorb and filter polluted runoff before it reaches coastal waters.”

The DOH report “Hawai‘i’s Water Quality-Limited Waters: The 1997 Assessment,” catalogues polluted water bodies that are targeted for additional water pollution controls and management programs. The report focused on perennial streams and coastal waters. Four bays and five perennial streams were found to be impaired; the study also lists five major streams or rivers that do not have impaired water quality, including Hanalei River and Wailua River. Impaired water bodies are listed in Table 3-1.

Stream or River	Coastal Waters
Kapa‘a Stream	<i>no impairment</i>
Hanamā‘ulu Stream	Hanamā‘ulu Bay
Nāwiliwili Stream	Nāwiliwili Bay
Hanapēpē River	Hanapēpē Bay
Waimea River	Waimea Bay

Responding to EPA directives, DOH’s has launched a program to demonstrate “unified watershed assessment and management.” The 1998 DOH report “The Hawai‘i Unified Watershed Assessment” assessed watersheds (including coastal waters), and ranked them in terms of their priority for restoration. Category I –Watersheds In Need of Restoration” includes (1) Nāwiliwili Bay and coastal waters, including the three tributary watersheds of Nāwiliwili, Pū‘ali and Hulē‘ia; (2) Waimea Bay and coastal waters, including the tributary watersheds of Waimea, Kapilimao, Waipao, A‘akukui and Mahinauli; and (3) Hanapēpē Bay and coastal waters, including the Hanapēpē River and watershed.

DOH selected the Nāwiliwili Bay unified watershed as one of five statewide “Category I/Priority Watersheds” for which federal funding would be made available. DOH has contracted with the East Kaua‘i Soil and Water Conservation District to undertake the detailed assessment of the Nāwiliwili Bay watershed. This will result in the development and future implementation of watershed restoration strategies. Hanamā‘ulu was included among DOH’s Category II watersheds.

A key concern is the long-term organizational structure for watershed management. Each restoration project will develop and draw upon a network of government and community-based organizations. But it is unclear which agency or organization will accept responsibility and be funded to coordinate restoration and management over the long term, or how such an agency would function within the existing management network.

3.4.1.2 County Role

As set forth in the Hawai‘i Coastal Nonpoint Pollution Control Management Plan, County agencies play the lead role in management of nonpoint pollution in urban areas. In other geographic areas and management categories, State and other agencies play the lead role.

The County has primary authority for lands within the State Urban District, which consists of the most intensely developed parts of Kaua‘i – about four percent of the total land area. This is where the County exercises full regulatory authority over zoning and construction.

With advice from the Planning Commission, the County Council adopts the General Plan, the CZO, and zoning maps. Staffed by the Planning Department, the Planning Commission administers zoning and land use permits. A primary purpose of both zoning and land use permits is to regulate the location and intensity of development to avoid environmentally sensitive areas and negative environmental impacts.

The Department of Public Works administers the Flood Control Ordinance, the Drainage Ordinance and the Grading, Grubbing and Stockpiling Ordinance – all of which are related to actual construction activities. The subdivision ordinance controls the design and layout of subdivisions, which is a key element in minimizing drainage and erosion impacts. Subdivision permitting is staffed by the Planning Department, with heavy participation from the DOW and the DPW; decisions are made by the Planning Commission.

In the Agriculture District, the County shares zoning jurisdiction with the State (primary zoning standards are set by State statute). Management of grading activities on agricultural lands is delegated by the County Grading Ordinance to the Soil and Water Conservation Districts (State-sponsored volunteer panels, staffed by the USDA).

The County has no authority within the State Conservation District, which includes the mountainous parts of the island, some coastal lands, and all submerged lands – over 55 percent of Kaua‘i’s land area. Management of these areas as well as of stream and ocean waters is delegated by statute to the State Board of Land and Natural Resources and the State Commission on Water Resource Management. State and federal agencies exercise lead responsibility in the nonpoint pollution control categories of forested lands, hydro-modification, and marinas and recreational boating.

3.4.2 Policy

In developing County roads and drainage facilities and in administering the grading, flood control, and drainage regulations, the County of Kaua‘i shall carry out the following policies.

(a) New Development

- (1) Reduce average annual post-development sediment in runoff (total suspended solids), so that it is no greater than pre-development levels.
- (2) Maintain post-development peak runoff rate and average volume at levels similar to pre-development.
- (3) Work with other government agencies and community organizations to seek ways of reducing all types of nonpoint source water pollutants.

(b) Site Development. Plan, design and develop sites to:

- (1) Protect areas that provide important water quality benefits – i.e., wetlands;

- (2) Protect areas that are particularly susceptible to erosion and sediment loss – i.e., stream banks;
 - (3) Promote the use of permeable surfaces for driveways and parking and limit increases of impervious areas;
 - (4) Limit land disturbance activities such as clearing and grading, and cut and fill to reduce erosion and sediment loss; and
 - (5) Avoid disturbance of natural drainage features and vegetation.
- (c) Construction Site Erosion and Sediment Control
- (1) Reduce erosion and, to the extent practicable, retain sediment onsite during and after construction.
 - (2) Prior to land disturbance, prepare and implement an approved erosion and sediment control plan or similar administrative document that contains erosion and sediment control provisions.
- (d) Watershed Management
- (1) Manage land use and earth-moving activities from the standpoint of the entire watershed, considering important characteristics such as scenic landscape features, historic sites, native species of plants and animals, and other special resources.
 - (2) Specify relevant best management practices as a condition of approving land use permits that affect stream corridors.
 - (3) Collaborate with State agencies (Office of Planning, DLNR, DOH), federal agencies (U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service), and community organizations (e.g., Soil and Water Conservation Districts) in order to plan and manage watersheds.

3.4.3 Implementing Actions

- (a) The Planning Department shall revise the Comprehensive Zoning Ordinance and the Subdivision Ordinance as needed to implement the policy and shall utilize the policy to guide the granting of land use permits. In particular, the Department shall review and revise the Drainageway Constraint District to provide overlay regulation protecting stream and wetland riparian areas and floodplains.
- (b) The Department of Public Works shall implement the policy in revising the County’s Drainage Standards and preparing a Drainage Ordinance. The DPW shall also review and revise the Grading, Grubbing and Stockpiling Ordinance as needed to implement the policy; and shall utilize the policy to guide the granting of site development and construction permits.
- (c) The Department of Public Works shall maintain effective coordination with the Soil and Water Conservation Districts, in order to ensure enforcement of the Grading Ordinance.

3.5 COASTAL LANDS

Coastal lands have unique qualities and environmental conditions that warrant special consideration in land use planning and regulation. The special nature of coastal lands has been recognized in the federal coastal zone legislation, the Hawai'i Coastal Zone Management Act, and the County Special Management Area Rules and Shoreline Setback Rules. Following are key factors that need to be considered when planning for coastal lands:

- Coastal lands are susceptible to physical change – especially those fronted by sandy beaches. Patterns of weather and oceanographic conditions cause lands to erode and/or accrete, sometimes seasonally, sometimes in cycles, and sometimes chronically over a period of years. Storm events or unusual swells can exaggerate or change conditions. Coastal erosion is normal and should be planned for.
- Coastal lands are susceptible to damage from typical winter storms, riverine flooding, tsunami, and hurricane storm surge. The Federal Insurance Rate Maps delineate flood hazard zones and elevations for severe events, defined as those having a one percent chance of occurrence in any given year. Coastal properties on Kaua'i suffered extensive damage from storm surge caused by the 1982 and 1992 hurricanes.
- Use of the beach and access to coastal waters are essential for fishing and other traditional food-gathering activities. Hawai'i law guarantees the public use of lands seaward of the shoreline.
- Shoreline lands are highly desirable for recreation activities, such as surfing, snorkeling and canoe-paddling. These activities are coastal-dependent, another reason why public access to and along the shoreline is critical.
- Coastal lands are needed for harbors – large commercial harbors for shipping and small boat harbors for other commercial and recreational uses. Harbors are critical to the economy.
- Coastal lands, especially those with sandy beaches, are preferred locations for hotels, other resort facilities, and residences because of their scenic and recreational qualities. Coastal lands command high real property values.
- Unique natural and cultural resources are often found on coastal lands. Natural resources include wetlands, river deltas, native coastal plants, and endangered waterbird habitat. Because the coastal plains were well used by the ancient Hawaiian culture, many heiau, burial sites, and other cultural sites may be found there.
- The coast is rich in scenic qualities and unique views. Important public viewpoints include public roads, parks and other public lands, and beaches and other public lands makai of the shoreline. Some of the most vivid views are along the coastline and across embayments, looking toward prominent landforms such as cliffs, headlands or coastal bluffs.

As mandated under the State CZM Act, the County has delineated the boundaries of the coastal Special Management Area on Kaua'i and has adopted regulations to manage development within the SMA. The SMA regulations have been effective in mitigating the effects of new development, particularly in preserving natural and cultural resources and providing permanent public access to the beach. The SMA regulations, however, do not supersede zoning; the SMA regulations state that development must be "consistent" with the General Plan and zoning. Since SMA permits must be consistent with zoning, it is important that coastal lands be zoned based on a policy of preserving natural, cultural and scenic resources and preventing hazards to structures and the coastal environment.

3.5.1 Policy

- (a) Actively acquire shoreline lands and access-ways to shoreline areas for public use.
 - (1) Develop a land-banking program for acquiring shoreline lands and access.
 - (2) Adopt tax policies favorable to public shoreline access.
- (b) When developing public facilities or granting zoning, land use permits, or subdivision for development along the coast, the first priority shall be to preserve and protect sandy beaches.
 - (1) Strips of land along the shoreline that have been placed in the State Conservation District or in the County Open zoning district are intended to serve as a buffer from coastal erosion. Structures should be sited inland of these coastal buffers on lands that are appropriately zoned.
 - (2) When development is proposed along a sandy beach, hazards of long-term coastal erosion should be assessed and used to determine appropriate setbacks.
- (c) For coastal areas suffering erosion, promote and provide for beach re-nourishment in conjunction with property owners and the State Department of Land and Natural Resources. Discourage the construction of shoreline protection structures (seawalls, revetments).
- (d) Following are general guidelines for coastal development, including resorts and residential subdivisions, but excepting harbors and other uses which are specifically dependent on locating near the water:
 - (1) For resorts and other multi building complexes, transition from low building heights along the shoreline to taller buildings on the interior of the property (e.g., the Hyatt Regency).
 - (2) Provide an open, vegetated visual buffer between the shoreline and buildings.
 - (3) Provide a permanent pathway laterally along the coast, located in the buffer zone mauka of the shoreline (e.g., Waipouli Resort pathway).
 - (4) Maintain existing stands of trees or plant trees within the buffer zone, to provide sun and wind protection and to moderate the appearance of large buildings (e.g., Hyatt Regency, Kaua'i Coast Resort at the Beachboy).

- (5) Site buildings to preserve view corridors from roads or public places to the ocean and from the ocean mauka.
- (6) Provide public parking and convenient access to the ocean.

3.5.2 Rationale for Policy

The policies are consistent with existing County policy as expressed in the Special Management Area regulations. The principles for coastal development also reflect the recommendations of the *Kaua'i Urban Design Plan*, prepared for the County in 1977.

The policies concerning preservation of sandy beaches and setbacks to allow for coastal erosion are consistent with the State DLNR's *Coastal Erosion Management Plan* (COEMAP, adopted by the Board of Land and Natural Resources in 1997). The intention is to provide adequate area for natural beach retreat during erosion episodes and especially in areas experiencing chronic erosion. If allowed to retreat naturally inland, the beach will be preserved. Structures built too close to the shoreline of a sandy beach may be threatened by erosion, causing the owner to build shore protection (a seawall). A seawall preserves private land at the expense of dry beach area. If the erosion persists, the dry beach – the area used by the public for walking, sunbathing, and other forms of recreation – may be entirely lost.

The County Comprehensive Zoning Ordinance (CZO) provides for “Shore Districts” as one of six categories of Constraint Districts. Article 13 of the CZO provides both general and specific development requirements relating to marinas and shore protection structures. It also calls for preparation of a “Shoreline Treatment Zone Plan” to provide the basis for Planning Commission adoption of Shore Districts. The County has deferred preparation of the shoreline treatment plan and administers the Shore Districts based on the State-mandated 40-foot shoreline setback.

While development patterns have long been established in some coastal areas, others remain undeveloped. Areas that are developed should continue to be managed using the Shoreline Setback law, though the County should consider enlarging those setbacks in areas where there is evidence of chronic erosion and where it would be practicable to do so. In coastal areas that are as yet undeveloped, the County should take a more conservative position in zoning and permitting new development. In such instances, the County should require a buffer or structure setback that is based on coastal erosion potential over a long period, with reference to the recommendations of COEMAP.

3.5.3 Implementing Action

- (a) Working with community organizations, the County shall develop a long-term program for acquisition of shoreline lands and access-ways to shoreline areas for public use. The County shall seek funding from the Federal and State governments and private sources.
- (b) The Planning Department shall review the Shore Districts article of the CZO in relation to the Special Management Area regulations and shall prepare amendments as necessary to implement the policies of the General Plan. In the review, the Planning Department shall take into consideration recommendations of the Federal Emergency Management Agency and the State Department of Land and Natural Resources concerning coastal lands.

3.6 NATIVE HAWAIIAN RIGHTS

There is a statewide movement to restore Native Hawaiian rights and lands; to obtain reparations for past and ongoing use of trust lands; and to attain a sovereign Native Hawaiian government. It is important to set forth Native Hawaiian rights and to define the role of the County government vis-à-vis the State and Federal governments.

3.6.1 Policy

Under the State Constitution and the County Charter, the County of Kaua‘i is empowered to promote the health, safety and welfare of all inhabitants without discrimination as to ethnic origin. As part of carrying out its responsibilities under the Constitution and the Charter, the County recognizes the rights of native Hawaiians and the laws concerning lands and waters that have been established through the State Constitution, State and Federal laws, and State and Federal court decisions. No County ordinance or rule shall modify or diminish these rights:

- Native Hawaiian water rights provided under the State Water Code, HRS Chapter 174C.
- Kuleana lands, water rights and access rights provided under the Kuleana Act of 1850, as recognized in current statutes, rules and court decisions.
- Konohiki and hoā‘aina fishing rights provided under the 1839 Law of Kamehameha, as modified by subsequent legislative acts and court decisions.
- Traditional and customary rights of Native Hawaiians, such as for access and gathering, provided under the State Constitution and Hawai‘i Revised Statutes, as interpreted by the courts (i.e., the PASH case).
- Burial rights provided under the Hawai‘i Historic Preservation Act and the federal Native American Graves Repatriation Act.
- Preservation of historic properties and archaeological resources provided under the federal Archaeological Resources Protection Act of 1979; the National Historic Preservation Act of 1966; and the Hawai‘i Historic Preservation Act.

3.6.2 Rationale for Policy

Native Hawaiians have special rights under federal law, the State Constitution, and State statutes. Federal and state court decisions interpret the laws and how they are to be applied. The laws and court decisions apply throughout every county of the State of Hawai‘i, and they are superior to county ordinances. The County of Kaua‘i must respect these laws, and it has no power to change them. In addition, there are special State and federal trusts which have been established to benefit Native Hawaiians.

Other federal and State laws safeguard important rights that apply to all citizens of the State of Hawai‘i. For example, federal and state constitutional provisions ensure freedom of speech and religion. State laws govern fee title to land; and State laws and court rulings define riparian rights, appurtenant rights, and other rights in water. Still other laws preserve the

shoreline area for public access and use. All of these laws are also superior to county ordinances and cannot be changed by the counties.

These rights affect county government. For example, the County must allow construction of a house on a kuleana house site, regardless of County zoning. In developing new water sources, the Kaua'i Water Board must respect and provide for both (a) riparian and appurtenant uses of stream water and (b) Native Hawaiian rights to water. In administering zoning and other land use regulations, the County must recognize traditional and customary access and gathering rights. In compliance with State statutes on historic preservation and coastal zone management, the County requires land use permit applicants to conduct archaeological surveys and to protect archaeological sites and burial sites.

While it appears that some change will occur to reestablish Hawaiian self-government, the form of Hawaiian sovereignty is undecided at this time. While it would be inappropriate to adopt specific policy on sovereignty, the County will maintain a basic philosophy of cooperation and negotiation between the County government and a future Native Hawaiian sovereign government.

3.6.3 Implementing Action

State boards and commissions that license professions relating to transfer of land ownership or land development should require applicants to demonstrate knowledge of Hawaiian land and water laws and rights as a prerequisite for licensing or professional registration. These include, at minimum, the Real Estate Commission and the Board of Registration for Professional Engineers, Architects, Surveyors and Landscape Architects.

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

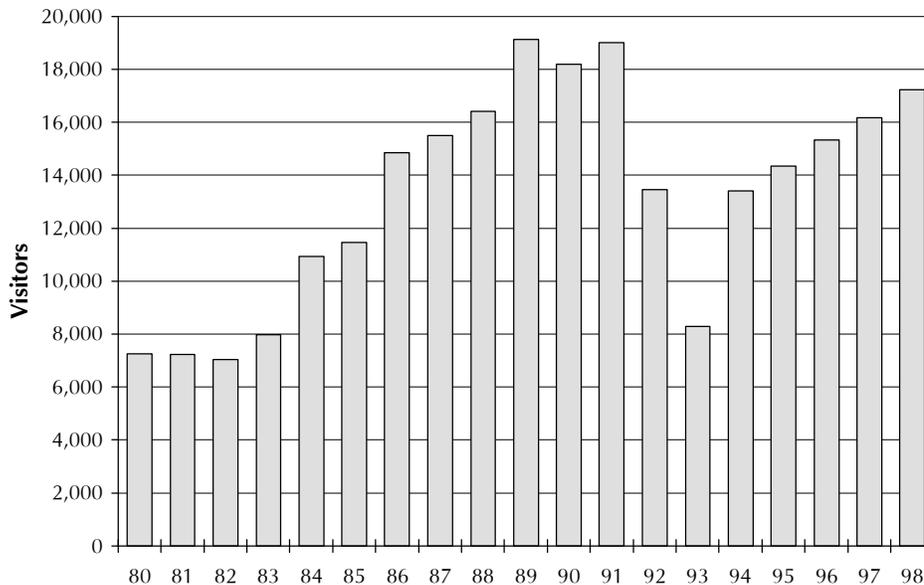
4.2.2.1 Daily Visitors

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 Kauaʻi.

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 Kōkeʻe 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:

- Kauaʻi’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 Kauaʻi.
- 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 Hawaiʻi, Hawaiʻi Tourism Authority, *Draft Tourism Strategic Plan*,” p. 15, June 29, 1999.

³ State of Hawaiʻi, Hawaiʻi 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.

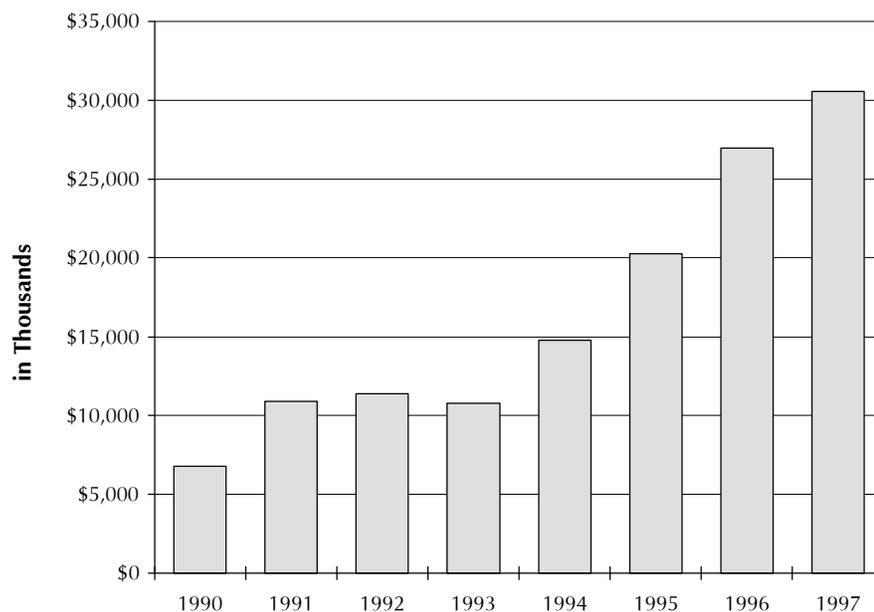
4.3.4 Growth in Jobs and the Economy

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



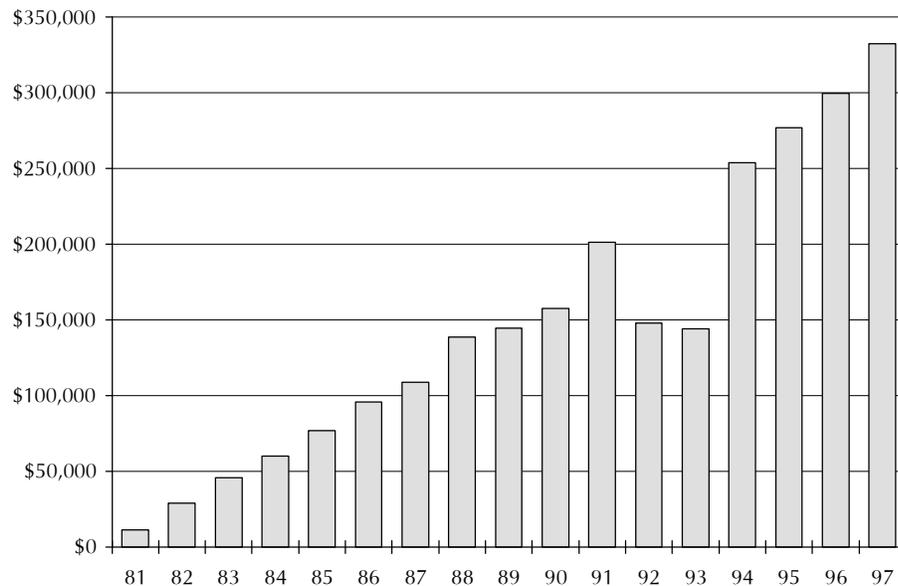
Source: State of Hawai'i, Department of Business, Economic Development, and Tourism, *Hawai'i State Data Book*, various years.

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 Kaua‘i. 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 Kaua‘i’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 Kaua‘i 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 Kukui‘ula Small Boat Harbor

Kukui‘ula Small Boat Harbor is located on the southern coast of Kaua‘i, approximately 12 miles southwest of Līhu‘e. This seven-acre facility has a 15-foot single lane ramp and ten moorings. Over the long term, facilities at Kukui‘ula Small Boat Harbor will be improved in conjunction with the development of A&B’s Kukui‘ula 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.

5. Preserving Kaua‘i’s Rural Character

As stated in the Vision, “rural” describes many aspects of Kaua‘i that people value: lush vegetation; broad expanses of agricultural lands giving wide open vistas; small communities where people know each other; the absence of city noise and lights; not feeling crowded. An essential part of the Vision and one of the driving ideas of the General Plan is to preserve Kaua‘i’s special rural character.

Kaua‘i’s rural character lies not just in those lands classified as “rural” or “agriculture.” Instead, it lies in how the parts of the island fit together – the relationship of urban settlements to open lands, how the built areas relate to the natural features of the landscape, how people get around. Some important elements of Kaua‘i’s physical environment:

- Small towns and communities that have a distinct character and are compact rather than sprawling.
- Wide expanses of open lands – natural areas and lands in active cultivation – that provide separation between the towns and communities. The rhythm of settled areas alternating with open lands is pleasing; and the separation highlights the special identity of each community.
- The relatively small scale and low heights of buildings.
- The relatively small scale of Kaua‘i roads, the presence of natural vegetation along the roads, and the absence of medial concrete barriers.

This chapter discusses the elements of the physical environment that make Kaua‘i a rural place. Section 5.1 sets forth the framework for land use and the general policies to govern development in the next 20 years. Sections 5.2 and 5.3 set forth the policy for the Agriculture and Open designations on the General Plan Land Use Map. Section 5.4 sets forth the policy for the seven urban land use designations on the General Plan Land Use Map. Section 5.5 describes and sets forth policy for Scenic Roadway Corridors, as shown on the Heritage Resources Map.

5.1 POLICY FRAMEWORK FOR LAND USE AND DEVELOPMENT

This section sets forth basic land use policies for maintaining Kaua‘i’s rural character and for growth and development within the context of a rural place.

5.1.1 Basic Policy

The General Plan Land Use Map shows the location of Urban Centers, Resorts, Residential Communities, and other urban land uses in relation to Agriculture and Open lands.

Following are the basic land use policies for preserving Kaua‘i’s rural character.

- (a) Enhance Urban Centers and Towns and maintain their identity by defining the Town Center and the edges of each Town. Concentrate shopping and other commercial uses in

Town Centers. Encourage residential development within Urban and Town Centers and in Residential Communities contiguous to them.

- (b) Promote compact urban settlements in order to limit public service costs and to preserve open space.
- (c) Define and conserve Scenic Roadway Corridors along the roadways that connect Towns, Resort areas, and Residential Communities. These corridors are intended to conserve the open space between towns and to prevent sprawl and commercial strip development.

5.1.2 Policy for Future Growth

Following are policies to provide for growth and development while preserving rural character.

- (a) Allow incremental growth of Towns, contiguous to existing development. Concentrate primary shopping facilities within the Town Center. Support infill development.
- (b) Provide for build-out of existing Residential Communities, to include areas zoned R-1 or higher. Allow small, neighborhood-oriented commercial sites in Residential Communities.
- (c) Support growth of residential and business uses in master-planned developments in the Puhi-Lihu'e-Hanamā'ulu Urban Center and at Po'ipū-Kukui'ula.
- (d) In the outlying West Side and North Shore districts, plan for additional residential use to meet regional demands for housing.
- (e) Expansion contiguous to an existing town or residential community is preferred over a new residential community.
- (f) Allow build-out of properties in existing low-density agricultural communities, including the homestead areas of Wailua, Kapa'a, 'Ōma'o and Kalāheo and existing agricultural subdivisions in other parts of the island, while taking measures to assure the adequacy of County road, drainage, and water supply systems.
- (g) Limit the development and dispersal of new agricultural communities through zoning regulations.

5.2 AGRICULTURAL LANDS

Agricultural lands are designated by color on the GP Land Use Map. The first sub-section below sets forth the policy for the Agriculture land use designation. The second sub-section provides the rationale for the policy. The third sub-section recommends implementing actions, and the fourth discusses implementation options relating to residential development on agricultural lands.

The policy states the purpose of the designation and provides direction for the zoning regulations. The GP Land Use Map will be revised in accordance with the purpose of the

Agriculture designation. It is anticipated that the CZO will also need to be changed – both in terms of mapping and district standards.

5.2.1 Policy

- (a) Lands included within the Agriculture designation shall be predominantly used for or held in reserve to be used in the future for agricultural activities. These activities include the breeding, planting, nourishing and caring for, gathering, and processing of any animal or plant organism, including aquatic animals and plants, for the purpose of producing food or material for non-food products; the commercial growing of flowers or other ornamental plants; the commercial growing of forest products; and the commercial breeding and caring for domestic animals and pets.
- (b) The primary intent of the Agriculture designation is to conserve land and water resources in order to:
 - (1) insure an excellent resource base for existing and potential agricultural uses;
 - (2) assure a sufficient supply of land available for sale or lease at a cost that is economically feasible for agricultural enterprise; and
 - (3) promote and preserve open agricultural lands as a key element of Kaua‘i’s rural character and lifestyle, essential to its image as “The Garden Island” and to the continued viability and development of Kaua‘i’s visitor industry.
- (c) In administering zoning and subdivision regulations, the County shall seek to preserve important agricultural lands. Important agricultural lands include those designated “A” or “B” by the Land Study Bureau evaluation or “Prime” or “Unique” by the Agricultural Lands of Importance State of Hawai‘i evaluation; provided that these ratings shall be superseded at such time as the State of Hawai‘i officially maps and designates Important Agricultural Lands, as mandated in the State Constitution.
- (d) Lands designated Agriculture shall include: important agricultural lands; lands in active agricultural use; lands with potential for agriculture, silviculture or aquaculture; and other lands not suited for urban development because of location, topography, economy of public services, or other purpose related to general health, safety and welfare.
- (e) The secondary intent of the Agriculture designation is to provide an opportunity for Kaua‘i citizens to reside in an agricultural community. An “agricultural community” is an area that has both agricultural uses and residences. Typically, an agricultural community is established through subdivision of land and provision of roads and potable water service. Agricultural communities are generally located in outlying areas, do not have convenient access to County facilities, and may not receive the full range or highest level of County services such as are available to residential communities, towns, and urban centers.
- (f) The primary intent of the Agriculture designation shall take precedence over the secondary intent.

- (g) To implement the Agriculture designation, specific controls on the subdivision and alteration of designated lands shall be formulated to prevent the dissipation of agricultural potential, the loss of rural character, and the dispersal of residential and other urban uses.
- (h) The following principles shall be applied in the development of an agricultural community:
 - (1) maintain irrigation works and easements where feasible and beneficial to existing or potential agricultural uses within the site or downstream; and
 - (2) preserve wetlands and streams and provide a riparian buffer area to prevent land disturbance and to filter runoff.

5.2.2 Rationale for Policy

The policy statement on the Agriculture designation continues Kaua‘i’s longstanding policy of preserving agricultural lands as a valuable resource base. It also recognizes irrigation water systems as a key resource. Related policies supporting agricultural enterprise may be found in Section 4.3.7 of the General Plan. Finally, the primary intent highlights the importance of open agricultural lands in maintaining Kaua‘i’s rural character and its economic viability as a visitor destination.

The policy also states a “secondary intent” for lands in the Agriculture land designation: To provide an opportunity for Kaua‘i citizens to reside in an agricultural community. This explicitly recognizes what is common knowledge – that so-called “agricultural subdivisions” are primarily residential. In fact, at least 90 percent of the dwellings in the Agriculture district on Kaua‘i are primarily used as single-family residences and do not support income-producing agriculture. High prices reflect strong market demand for agricultural house-lots. Typically, an agricultural house-lot, served with a public road and potable water supply, will be priced at \$125,000 to \$150,000. Such prices make lots infeasible for agricultural enterprise (defined as income-producing, profit-driven agriculture).

Kaua‘i, like the other neighbor island counties, has found it impossible to enforce the State requirement that only “farm dwellings” and farm worker housing are allowed within the State Agriculture Land Use District. (In most cases, the State Agriculture District is coterminous with the County’s Agriculture Zoning District.) What is the remedy if a person builds a house intending to farm his property; fails and gives up farming; and instead goes to work at a hotel? By definition, his house is no longer a “farm dwelling” but is now a “single-family residence.” What practical remedy is available to enforce the farm dwelling provision? It would be unreasonable (and infeasible) for the County to force the former farmer to sell his home and find a new house outside of the State Agricultural District.

Over the years, the development of “agricultural subdivisions” has changed parts of Kaua‘i. What was previously an agricultural, rural landscape has been developed into a quasi-suburban landscape dotted with residences on large lots. Areas designated on the General Plan as “Agricultural” but primarily developed with residences include (a) homestead communities in the Kalāheo-Lāwa‘i-‘Ōma‘o region and in Wailua-Kapa‘a; and (b) former plantation lands on the East Side and North Shore, particularly former Kilauea Sugar Company lands.

As sugar plantations have reduced crop acreage or terminated operations, a large amount of fallow land has become available. While some major landowners such as A&B and Grove Farm are retaining agricultural lands, others are selling or dividing their interests. In the late 1990s, Amfac/JMB set about liquidating its Līhu‘e Plantation lands. At the same time, the two Knudsen trusts were undergoing partition, with lands being divided among the trust beneficiaries. New owners seeking a return on their real estate investment may opt for large-lot residential development through subdivision and CPR of agricultural lands.

Following is a brief summary of the issues relating to residential development of agricultural lands:

Consumption of Agricultural Land. Large-lot “agricultural subdivisions” consume at least three times more land per housing unit than residential subdivisions (R-1 and higher). Land primarily used for single-family residences is lost to farm use. Supplied with potable water and County roads and valued at residential house-lot prices, such lots are not feasible for intensive, income-producing farming. In fact, subdivision deeds typically have covenants limiting types of crops, poultry and livestock.

Development of Open Lands. Because Agriculture-designated lands typically adjoin lands planned and/or zoned “Open,” most agricultural subdivisions – especially on the North Shore – are comprised of a mixture of the two zoning districts. Open lands typically include important landforms, wetlands, streams, steep slopes, and other environmentally-sensitive areas. Under the CZO, single-family residences are allowed within the Open District. In addition to allowing construction on sensitive lands, Open zoning increases the allowable number of subdivision lots and house-lots in an agricultural subdivision. The policy on Open lands (Section 5.3 below) calls for eliminating this “density bonus.”

Loss of Agricultural Open Space and Views. When houses spread out across agricultural lands, a wide area appears “developed” – it no longer appears to be open farm land. Open space is decreased rather than conserved. In some instances, houses encroach on natural landforms. For example, Crater Hill is an important coastal landform that frames the landscape around Kīlauea Town. Building high on the slopes of Crater Hill detracts from its appearance and its value as a landmark. The same number of dwellings could be built at lower elevations by allowing smaller lots and/or clustering residences.

Extension of County Services at Increased Cost and Lower Revenue. Agricultural subdivisions have a higher operational cost per unit for County services, such as fire protection, water supply, and refuse collection. Conversely, property tax rates and water rate revenues are lower per acre of area served.

Agricultural subdivisions will also result in higher long-term costs per unit for repair and replacement of roads, water supply, and other County facilities. For example, a small water storage tank serving 30-40 agricultural estates will need repair and replacement as often as a larger tank serving a residential area with 800-1,000 urban house-lots. In effect, agricultural subdivisions extend County liability over a broader area.

Extensions of service happen incrementally. The developer who owns land adjacent to town finds it feasible to extend water service down the highway from town to his site. The owner of the next property away from town can then afford to extend the water line from the first

development to his property. Subsequent extensions follow in a domino effect. The Kīlauea-Kalihiwai-Waipake Water Service Area resulted from such incremental extensions.

Need for Community Facilities. The transition of Kaua‘i’s homestead areas from predominantly agriculture to predominantly residential use and the proliferation of agricultural subdivisions on the North Shore has created a need for community facilities, such as parks, churches and schools. As these agricultural communities grow, they will also create a demand for more shopping facilities and other commercial services. In towns and planned communities, areas are zoned for these more intense uses. In agricultural areas, various uses may be allowed through special permits. Applications for special permits have in fact been growing, particularly around Kīlauea. The special permit process is designed to permit uses that meet certain standards and to mitigate impacts through conditions. The accumulation of such uses over time, however, overburdens roads and other infrastructure. Dispersal of institutions and facilities represents a missed opportunity to create a central gathering place that can serve as the heart of a community.

Addressing the above issues will entail effective community planning as well as revision of the zoning regulations. The term “agricultural community” is intended to explicitly recognize a type of land use that is different from commercial agricultural enterprise. An agricultural community is specifically designed for residences on large lots in a rural setting where agricultural and animal husbandry may also be pursued.

Competition with Planned Urban Development. Both the State and the County have longstanding land use policies promoting compact urban development and the preservation of agricultural lands and open space. Consequently, the conversion of lands from agricultural to urban land use receives detailed government review through a series of land use entitlement processes: General Plan map amendment, State Land Use Boundary Change, and County zone change. Unless generated by the County, a General Plan map amendment also requires a formal environmental assessment under State regulations. As a condition of approval, many of these projects are required to build public facilities, including urban-standard roads, offsite highway improvements, wastewater collection and treatment systems, drainage facilities, and water systems. Typically, they are also required to provide affordable housing and land for parks, schools, and other public facilities.

Whereas government sets high procedural and financial hurdles for urban development, the requirements for residential development on agricultural lands are minimal. On Kaua‘i, a residential project on agriculture-zoned land needs only subdivision approval by the Planning Commission. No public hearing is required. With regard to public facilities and affordable housing, the agricultural subdivision developer is typically required to build internal roads and water systems. A wastewater system is not required, nor is affordable housing. Public facility requirements are typically less than for residential projects on lands zoned for residential use. Contrary to policy, the regulatory playing field is skewed to favor large-lot residential development of agricultural land over residential development in urban areas.

5.2.3 Implementing Actions

- (a) The Planning Department shall prepare amendments to the Comprehensive Zoning Ordinance (CZO) to implement the policies for Agriculture Lands. The amendments shall include site planning standards and criteria for approving an Agricultural

Community. The CZO amendments shall be submitted through the Planning Commission to the County Council for adoption.

- (b) The Planning Department shall take measures to assure long-term effective administration of the limitations on resubdivision of Agriculture-zoned land.
- (c) The State should determine and map Important Agricultural Lands, as mandated by the State Constitution.

5.2.4 Options for Zoning Regulations

During the 1998 and 1999 General Plan Update, the Project Team and the CAC's Rural Lands Task Group not only worked on the policy issues relating to agricultural lands (see 5.2.2 above), but also grappled with practical issues of implementation through the zoning regulations. A number of options were discussed concerning the following subjects: (1) density and site planning for Agricultural Communities (residential development on agricultural land); (2) revisions to administration of the "one-time subdivision" rule; (3) the process for permitting an "agricultural community"; and (4) making land available to farmers. The purpose of this section is to outline the issues and set forth some options for amending the zoning regulations.

5.2.4.1 Density Regulations and Site Planning; Use of CPRs

First adopted in 1972, the CZO's Agriculture District regulations incorporate measures that are designed to carry out the purpose of limiting subdivision of agricultural lands and restricting the number of units that could be built. The regulations, however, are highly complex. They are difficult to understand and difficult to administer. In some respects, the manner in which the regulations have been applied departs from the original intent.

The key regulation is a sliding scale limiting the number of lots that can be created in subdividing a parcel of Agriculture land. The sliding scale is structured to allow some residential development on each existing parcel, but to discourage wholesale development of large acreages. Under the sliding scale, the ratio of residences to land area decreases as the land area increases. This preserves large areas of the larger lots for agricultural use. It favors the subdivision of smaller parcels (30 acres or less) by allowing smaller lot sizes of one to three acres.

The subdivision of a large lot results in the creation of residential lots and a "residual" lot that is reserved for agricultural use. The residual lot would amount to about 58 percent of a 300-acre parcel, scaling upward to 75 percent of a 1,000-acre parcel and 83 percent of a 2,000-acre parcel. The 300-acre parcel would be allowed 12 residential lots, while the larger parcels would be allowed up to 22 lots.

Many jurisdictions throughout the mainland use sliding-scale regulations to limit conversion of agricultural lands. In 1998, Maui County adopted a sliding scale regulation for agricultural lands that is in some ways more limiting than Kaua'i's.

Kaua'i's innovative 1972 agricultural zoning regulation includes two additional limitations. First, contiguous parcels under single ownership as of 1972 are treated as a single lot for subdivision purposes. For example, contiguous parcels of 200 and 300 acres owned by a

single corporation as of 1972 would be treated as one 500-acre parcel when calculating the number and minimum size of lots that could be created through subdivision. Second, an agricultural lot may be subdivided only once. Administration of these provisions demands careful record-keeping that may prove difficult with the passage of time.

The 1972 restrictions on subdivision appear to have served their intended purpose with regard to discouraging subdivision of larger parcels, with the exception of the former Kīlauea Plantation lands. Nevertheless, Planning Department records show that about 2,100 agricultural lots were created through subdivision actions between 1972 and 1996. Several other elements of the zoning regulations have encouraged greater density of housing development (a larger number of houses per lot and per acre) than originally intended. First, the regulations allow up to five (5) dwellings per subdivided lot, depending on the size of the lot. Second, an additional lot is allowed for each five acres of land in “Open” zoning. Because many parcels have lands in both districts, Open zoning has contributed significantly to the density of agricultural subdivisions. Finally, additional dwelling units (ADUs) are allowed in the Agriculture zoning district, which effectively means that every agricultural lot is allowed two dwellings.

Developers report that the complex mathematical calculations drive subdivision design and lead to less than optimal site layouts. If allowed greater flexibility in laying out the lots, the developer could better conserve the physical attributes of the property and better incorporate environmental best practices. In addition, CPR complicates real estate sales. Over the long-term, some CPR owners experience problems in complying with or enforcing compliance with CPR declarations.

The Planning Department also reports problems in administering zoning regulations when lots have multiple CPR owners. For example, the number of houses and other development standards are based on the lot of record. If four of five CPR owners in a single zoning lot have together built the maximum of five houses, then the fifth owner will not be allowed to build. Similarly, if a CPR owner obtains a use permit, the permit conditions could affect other owners within the lot of record.

Most people on Kaua‘i do not understand the rules that govern agricultural subdivisions. Many people, however, express concern about the proliferation of “gentleman estates.” This combination of concern and confusion was voiced by participants in GP Update meetings who blamed the “CPR law” for allowing houses to spread on agricultural land. In actuality, it is the County CZO that allows multiple residences on larger agricultural lots. The State CPR law is simply a means of dividing ownership, in effect allowing each homeowner to obtain a separate home mortgage loan.

The CAC Task Group’s major concern was to eliminate the Open District “bonus” in agricultural subdivisions. There was clear consensus on this subject. Some members stated that it is the only change needed in regulating residential development on agricultural lands. Section 5.3 of this plan recommends changing the Open District so that it includes only the more environmentally-sensitive lands and no longer confers a “density bonus” increasing the number of lots and houses that can be developed.

Following are recommended principles for developing new regulations for subdivision of Agriculture-zoned lands. These are in addition to and build upon the policies for Agriculture lands set forth in Section 5.1.

Apart from eliminating the Open District bonus, there are various options for amending the current regulations to address the problems of density, site planning, and administration in relation to the development of Agricultural Communities. Following is one set of options, which could be implemented in whole or in part.

- (a) Maintain residential densities at approximately the same level.

Residential density is the potential number of single-family residences that can be developed through subdivision of a given parcel of land. It is a combination of the number of lots that can be created and the number of residences that can be built on each lot. The intent of changing the regulations is not to reduce densities under agricultural zoning but to improve site planning and reduce the creation of CPRs.

- (b) Avert the creation of multi-unit CPR properties by modifying CZO density formulas. This entails allowing a greater number of lots but restricting the number residences per lot to no more than one or two.

Most people prefer to own a subdivided lot rather than a CPR unit. The density formula could be modified so that a lot could have no more than one or two residences. This would eliminate the administrative problems of having lots with three, four or five CPR units, while providing a larger number of more desirable lots. Possible formula: Allow one additional lot in exchange for every multiple-unit lot that could have been created under the existing sliding scale.

- (c) Create greater flexibility in site planning in order to afford more efficient subdivision design, preserve natural features of the site, and avoid construction on steep slopes and in potential flood areas.

The purpose here is both to give the developer greater flexibility and to promote “conservation design.” Using a conservation design process, the developer analyzes the natural features and development constraints of the site, then develops a subdivision layout that conserves natural features and avoids constrained areas. The County would specify the type of features and hazards to be analyzed and set forth conservation guidelines.

The Subdivision Ordinance contains “General Environmental Standards” as well as standards for site development and public facilities that are broad and require discretionary review by the agencies and the Planning Commission. The ordinance also gives the Planning Commission the authority to impose conditions on a subdivision approval. Typically, agricultural subdividers have been required to provide setbacks, berms and/or landscape buffers to minimize impacts on highway views; and to set buildings back from streams and other natural features.

The County may also require that house sites be limited to a certain portion of the parcel, so that the greatest area remains in agricultural use or conservation. Typical rural

zoning ordinances require that 80 to 90 percent of the land remain in contiguous open space.

To provide greater flexibility and to encourage the clustering of house sites, the County could allow variation in the size of lots, down to a minimum of one or two acres. A subdivision might then contain a variety of lots. Large lots would have a specified house site, along with 10-20 acres of land for cultivation or pasture use. Small lots might simply consist of a house site. This also allows for greater variation in lot prices.

- (d) Sunset the ordinance that allows additional dwelling units on Agriculture lots.

In the homestead areas, water supply, roads, and drainage infrastructure have not been designed for the increased loads from subdivision and increased residential use. ADUs further increase the burden on infrastructure systems.

The above options could be used as the basis for developing revisions to the CZO. New provisions relating to density and site planning could be adopted as criteria (more strict) or guidelines (less strict) for new Agricultural Communities. Alternatively, the various features could be packaged as an incentive program that may be voluntarily chosen by the developer.

The primary objective of revising the density and site planning regulations is to guide the development of new, freestanding agricultural subdivisions. New requirements, however, could be waived for subdivision of smaller parcels within homestead areas. It is suggested that new requirements be waived or modified for subdivisions of parcels 30 acres or less in size.

5.2.4.2 County Process for Permitting an “Agricultural Community”

Simple subdivision is the only land use approval currently required for an agricultural subdivision. The subdivision process entails only Planning Department and agency review, and decision by the Planning Commission. No public hearing is required, though notice of action on subdivision applications is provided through the Planning Commission agenda. Under the Subdivision Ordinance, the County is obligated to accept dedication of water, road and other facilities that are built to County standards.

In contrast, a landowner seeking to develop an urban residential community must gain (a) the approval of the State Land Use Commission (SLUC) for a State Land Use District boundary amendment; (b) the approval of the Planning Commission and County Council for a General Plan map amendment, if necessary; and the approval of the Planning Commission and County Council for a zone change to Residential. Typically, both the SLUC and the County will impose conditions of approval on urban zoning, ranging from dedication of park space and shoreline access to requirements to provide affordable housing. The current regulatory system imposes high costs on urban development, while requiring comparatively little for residential development of agricultural lands.

Under most local government codes, subdivision is a “ministerial action.” Like a building permit application, the presumption is that a subdivision application will be approved if it meets all lot configuration, road, and public facility standards. In many jurisdictions, the power to approve subdivisions is assigned to the director of planning or the director of public works. The Kaua‘i Subdivision Ordinance, however, is different in two important ways: (a) the Planning Commission decides on subdivision applications; and (b) the Commission

exercises substantial discretion over such matters as subdivision design and viewplanes, often placing specific conditions on subdivision approvals. In summary, Kaua'i's Subdivision Ordinance – as currently written – is more discretionary than ministerial in nature.

Residential development functions like a “floating zone” within Kaua'i's 140,000 acres of Agriculture- and Open-zoned lands. A new subdivision creates a “spot” of residential use within the Agriculture District, and it commits the County to provide services to that spot. It directly affects the Department of Water, the Fire Department, and the Public Works Department (Road Maintenance and Refuse).

In order to formalize and plan for the commitment of County services, some have suggested that a new zoning district be created for agricultural communities. Homestead areas and other lands with existing agricultural subdivisions and adjacent lands would be included in the new zoning district. A new agricultural subdivision outside of the district would require a zone change. The rezoning process entails a public hearing and recommendation by the Planning Commission and public hearing and decision by the County Council.

With the fiscal implications for County services and the potential impacts on rural character, a more formal decision-making process – i.e., zone change or use permit – for approving an “agricultural community” is warranted. In the review of a zoning application or a use permit application, County agencies could make known the cumulative impacts of such development on their ability to provide services and on the County's financial resources. Such a process would answer the needs of the Department of Water (DOW), which is concerned about the ever-increasing extent of its water service obligations and the progressive expansion of service areas in outlying agricultural lands. If the County Council were to adopt a zone change for residential use, then the DOW and other County agencies would have their marching orders. The subdivision process then could be made completely ministerial and could be streamlined to reduce processing time.

In the absence of a County process for deciding the location of future agricultural communities, the DOW is considering the establishment of formal water service area boundaries. Water service areas would encompass existing development and could be extended by formal action of the Water Board. Instituting water service areas would afford the DOW some control over its future service obligations. Some criticize such an approach, however, as usurping the role of the Planning Commission.

Finally, a zone change or a use permit process decided by the Planning Commission would afford the opportunity for a public hearing on future residential development on agricultural lands.

Following is a summary of the alternatives. Note that any process should be accompanied by clear standards for approval and for the imposition of conditions. Actual subdivision of lots would follow as a ministerial process with clear standards and no provision for conditions. Subdivisions would be administered directly by the Planning Department with specified deadlines for review and action.

- (a) Creation of a new Agriculture-2 District, specifically to accommodate “Agricultural Communities.” The initial mapping of the new Agriculture-2 District would include the homestead areas and other existing agricultural subdivisions. All important agricultural lands and other agricultural lands would be placed in an Agriculture-1 District.

Proposed new residential developments would need to apply for a zone change to Ag-2. The process would include public hearing and recommendation by the Planning Commission; public hearing and decision by County Council.

Criteria for rezoning could include adequacy of the regional roadway system, compatibility with existing and potential agricultural use in the area, and the availability and costs of County services. The County Council would be able to impose conditions of approval relating to public facilities, regional drainage and environmental concerns, and community benefits.

- (b) Project Development District OR Class IV Zoning Permit. These are two options for a discretionary permit process that would formalize the decision to allow residential development within the Agriculture zoning district and allow subdivision to become a ministerial action. The process would entail review by the Planning Department, public hearing, decision by Planning Commission.

Decision criteria could be similar to those suggested above for rezoning. With a permit process, however, the County would have less latitude to impose conditions of approval.

- (c) New Project Development District. This is conceived as an optional, incentive-driven program that would afford the developer density and other benefits if the project met certain objectives such as conservation design, provision of affordable farm lots with irrigation water, or affordable housing. The process would entail detailed design review by the Planning Department, public hearing, and decision by the Planning Commission. Recognizing that review and approval criteria would be stricter, the public hearing could be waived.

An optional, incentive program could be used in combination with the existing Agriculture District regulations for residential development, incorporating features outlined above, such as a greater number lots, and a smaller minimum lot size. The developer would have the choice of selecting the incentive program instead of the standard zoning standards.

Specific incentives could be created to make land available for active farming. One model is the Moloa‘a Hui project, in which the developers created farm parcels to be sold at agricultural land prices with irrigation water and dirt roads only; some of the farm parcels had house-lots. Development of the agricultural lots was subsidized by developing a small number of residential view lots, to be sold at much higher residential prices.

5.3 OPEN LANDS

Open lands are designated by color on the GP Land Use Map. The first section below sets forth the policy for the Open land use designation. The second section provides the rationale for the policy and discusses the mapping of the Open designation. The third section recommends implementing actions; and the fourth section discusses options for implementing the policy through the zoning regulations.

5.3.1 Policy

- (a) The intent of the Open designation is to preserve, maintain or improve the natural characteristics of non-urban land and water areas that:
 - (1) are of significant value to the public as scenic or recreation resources;
 - (2) perform essential physical and ecologic functions important to the welfare of surrounding lands, waters, and biological resources;
 - (3) have the potential to create or exacerbate soil erosion or flooding on adjacent lands;
 - (4) are potentially susceptible to natural hazards such as flood, hurricane, tsunami, coastal erosion, landslide or subsidence; or
 - (5) form a cultural, historic or archaeological resource of significant public value.
- (b) Lands designated Open shall include: important landforms such as mountains, coastal bluffs, cinder cones, and stream valleys; native plant and wildlife habitat; areas of predominantly steep slopes (20 percent or greater); beaches and coastal areas susceptible to coastal erosion or hurricane, tsunami, or storm-wave inundation; wetlands and flood plains; important scenic resources; and known natural, historic and archaeological resources. Open shall also include parks, golf courses, and other areas committed to outdoor recreation.
- (c) Lands designated Open shall remain predominantly free of development involving buildings, paving and other construction. With the exception of kuleanas and other small lots of record, any construction that is permitted shall be clearly incidental to the use and open character of the surrounding lands.

5.3.2 Rationale for Policy

The policy differs only slightly from the previous General Plan policy on the Open designation. Key elements have been retained verbatim, including: the main statement of intent, to “preserve, maintain or improve the natural characteristics of non-urban land and water areas” Also from the previous General Plan: Open lands “shall remain predominantly free of development”; and any construction allowed “shall be clearly incidental to the prevalent nature of the surrounding area.” The same statements are also found in the purpose section of the Open zoning regulations.

While the policy remains essentially the same, some material has been added regarding the types of resources to be preserved and the types of lands to be included in the designation. The mapping of the Open designation on the General Plan Land Use Map has been revised, in order to more closely reflect the policy. The mapping is discussed in more detail below.

This discussion of the policy rationale also addresses the implementation of the policy through the Open zoning regulations – particularly the use of Open-zoned lands to increase the number of lots in agricultural subdivisions.

5.3.2.1 Land Use Map

The delineation of Open lands on the General Plan Land Use Map has been revised from the previous General Plan in order to more closely conform to the policy. The policy is very specific and directive: To “preserve” Open lands and to keep them “predominantly free of development.” Since the policy is the most restrictive of all the GP land use designations, Open lands should be mapped to include specifically identifiable features that meet the criteria of the particular types of lands enumerated in the text. Undeveloped lands that do not have the characteristics described have been placed in the Agriculture designation. The few areas previously designated Open that are already predominantly developed have been re-designated to one of the urban classifications. Following is a summary of the basic principles that guided the mapping of the Open land use designation.

Stream Valleys and Drainageways in Urban Areas. In urban areas, the Open designation has been mapped to include stream valleys, drainageways and golf courses that are important for detaining stormwater, receiving wastewater effluent, and providing open space relief. Some, like Nāwiliwili Valley and Hanamā‘ulu Valley, are also important landforms. In intensively developed areas such as Līhu‘e and Princeville, Open lands have been mapped in specific detail that reflects the underlying or planned Open zoning.

Urban and Rural Areas with Existing Residential Development. A few areas mapped Open lie within the State Urban or Rural Land Use Districts and have a long history of residential use. They include portions of Wainiha Valley, the properties along Hanalei Bay, ‘Anini Beach and Niumalu. These areas’ history of residential use is reflected in the pattern and size of the zoning lots. The minimum size for Open-zoned lots in these districts is one acre. These areas remain designated Open on the GP Land Use Map. In reviewing the Open zoning district, however, it is recommended that a new zoning district be established to distinguish these State Urban and Rural residential areas from other Open-zoned lands. Possibly named “Open/Residential,” such a zoning district could accomplish the following: (1) explicitly allow residential use but not the other uses which may be allowed by permit in a Residential district; and (2) maintain a 10 percent lot coverage standard for these areas, recognizing their constraints. The purpose of the Open/Residential zone would be restricted to these historic areas; it should not be used as prospective zoning for a newly-developing area.

Conservation District Areas. The Open designation encompasses lands within the State Conservation District, over which the State Board of Land and Natural Resources has jurisdiction. The BLNR adopts and administers land use regulations for the Conservation District that are stricter than any County zoning regulations. On Kaua‘i, approximately 195,000 acres lie within the Conservation District, amounting to about 55 percent of the island’s total land area.

Agricultural Areas. The Open designation often abuts or interrupts larger areas GP-designated and zoned Agriculture, which also generally lie within the State Agriculture Land Use District. In these areas, the Land Use Map has been revised as follows:

- The Open designation was reserved for those lands having the land characteristics described in the policy. Areas not having those characteristics were re-designated Agriculture.

The previous GP Land Use Map designated as Open some areas that do not conform to the criteria stated in the policy. As an example, the previous Open designation included the plateau east of the Waimea River, which is relatively level and has been under cultivation for many years. This area was re-designated to Agriculture, as were other lands currently or formerly in cultivation.

- Open and Agriculture designations were generalized, in order to graphically show regional land use policy and to avoid small-scale mapping/policy issues more appropriately addressed through text.

The original mapping included nearly all stream courses, which appear on the GP Land Use Map as fingers of land dividing larger Agriculture-designated areas. Through the 1984 GP Update, the maps for agricultural portions of Wailua-Kapa‘a and Kalāheo were changed to eliminate the Open “fingers” and to designate these areas more generally as “Agriculture.”

In practice, the County has generally exercised its zoning and subdivision authority to protect streams and drainage courses where development has been proposed. The question is how to express the policy that all streams and riparian areas should be protected from development – not just the major stream valleys. Instead of mapping every stream course, this General Plan states explicit policy in text. Text policy is preferable because it recognizes that each stream is different, as is its surrounding topography. Streams are shown on both the Land Use Map and the Heritage Resources Map, while the problems of assigning a uniform land designation (or zoning district) around every stream course are avoided. In the 2000 GP Update, major stream valleys are designated Open on the map, and text policy calls for protection and buffering of all streams. Smaller stream gulches have been mapped within the surrounding Agriculture designation.

Coastal Areas. Strips of shoreline land around the island are designated Open. Some also lie within the State Conservation District. The intent is to preserve coastal bluffs, sandy beaches and other natural features. Typically, these strips range from 150 feet to 300 feet wide, but some are substantially wider where warranted by the topography or natural features of the site. The 2000 GP Update Land Use Map maintains the existing shoreline strips and adds others – e.g., between Pt. Allen and Wahiawa Bay and along the Princeville cliffs.

5.3.2.2 Residential “Density Bonus” Provided via the Open Zoning Regulations

The most important conflict between the policy and the administration of the zoning regulations relates to the incorporation of Open-zoned lands in subdivisions of Agriculture land. Subdivision in the Open district is not limited by a sliding scale, as in the Agriculture district. The prevailing practice, which resulted from a court decision against the County, is to add the number of lots that could be created under Open zoning to the number that could be created under Agriculture zoning.

The approved plan for the Waipake subdivision, for example, allowed 20 lots based on 226 acres of Agriculture-zoned land and an additional 15 lots based on 78 acres of Open-zoned land. (The Open-zoned lands at Waipake lie in a stream gulch.) With multiple houses per lot

allowed under Agriculture zoning (ownership subdivided through CPR), the subdivision plan allowed the development of a total of 125 houses. In some cases, Open-zoned lands have increased the total number of new agricultural lots by 100 percent or more.

There is general agreement that this “density bonus” for Open lands contradicts the intent of the Open district and of the Agriculture district development standards. To correct this situation, it is recommended that the CZO be amended so that Open-zoned lands within Agriculture-zoned properties are treated as “Agriculture” for purposes of determining the allowable number of residential lots. Counting all acreage as Agriculture gives the benefit of the additional land to the owner while observing the intent of the Agriculture district’s density limitations.

5.3.2.3 General Review of the Open Zoning Regulations

A general review of the Open zoning district Constraint Districts is needed for the reasons cited below. This effort should also include a general review of the Constraint Districts.

- The zoning maps need to be revised so that they are consistent with the General Plan Land Use Map and follow consistent criteria. The Open District should include lands designated Open on the GP Land Use Map. Because zoning is intended to be more detailed and parcel-specific, the delineation of the Open zoning district on the zoning maps may also include lands in addition to those on the GP Land Use Map. Note that Section 8-8.8 of the CZO calls for review of the Open zoning designations within five years of the effective date of the ordinance. No comprehensive review has been undertaken as of 2000, though the ordinance was adopted in 1972.
- The CZO includes six Constraint Districts, which were part of the original CZO. The regulations for Flood Districts and Tsunami Districts were amended to comply with the federal flood insurance program. The others remain essentially unchanged since the 1970s. Drainage Districts have not been implemented for lack of a study to identify and map drainageways. Administration of the Soils and Slope Districts is complicated, and their purposes and mapping appear to overlap those of the Open zone. The Constraint Districts should be reviewed to eliminate regulations that are no longer relevant, to improve the effectiveness of relevant regulations, and to simplify zoning administration.
- The inclusion of single-family residences as a “generally permitted use” and the provisions for subdividing lands for development of single-family residences should be reexamined in light of (1) the preservation purpose of the Open district; (2) the more refined mapping of the Open designation; (3) the substantial supply of lands specifically zoned for residential development; and (4) worst case environmental consequences of building houses on sites in the Open zone.
- Changes to the maps and regulations are linked in the over-arching question of how broadly – or narrowly – the Open zone should be mapped and regulated. If mapped under more strict criteria, then perhaps more strict use regulations are also warranted. If mapped more broadly (including a wider range of lands),

then the use regulations and development standards will also need to be defined more broadly – i.e., to include a broader range of uses.

5.3.3 Implementing Actions

- (a) The Planning Department shall prepare amendments to the Comprehensive Zoning Ordinance (CZO) to eliminate the use of Open lands to increase residential density in the development of subdivisions. Amendments shall be submitted to the Planning Commission and the County Council for adoption.
- (b) The Planning Department shall conduct a general review of the zoning maps and the CZO provisions relating to the Open District and the Constraint Districts. The Planning Department shall prepare amendments to the CZO and the zoning maps as deemed necessary to implement General Plan policies, clarify the intent of each district, eliminate unnecessary regulations, and ensure consistent administration. Amendments shall be submitted to the Planning Commission and the County Council for adoption.

5.3.4 Options for Zoning Regulations

As stated above, the Citizens Advisory Committee expressed consensus on the need to eliminate the Open district “density bonus” for agricultural subdivisions. There was also agreement on re-mapping the General Plan Open designation and the desirability of a similar review of the mapping of the Open zone. It was acknowledged that changes to the CZO would require a follow-up effort.

There are several options for carrying out Implementing Action 5.3.3 (a), involving amendment of the CZO. Briefly, they include:

- Redrawing the zoning maps to re-designate most or all Open lands to Agriculture.
- Applying the subdivision standards for Agriculture to the combined acreage of Agriculture- and Open-zoned land within the parcel(s) to be subdivided.
- Restricting or eliminating the subdivision of Open lands for residential use.
- Excluding single-family residences as a generally permitted use in the Open district; or reducing the allowable density to one single-family residence for each existing parcel, regardless of parcel size or future subdivision of the parcel.¹

Any action to exclude or reduce the density of single-family residences in the Open district would need to take into consideration property owners’ expectations of future development and the need to provide for reasonable economic use within the zoning district. One option is to allow single-family residences only under a special permit. The CZO could specify criteria for approving or denying a permit – e.g., slope conditions in which residences would be allowed. As stated above, a second option is to allow one residence per lot. A third option is

¹ This would not affect kuleana rights. The right to develop a house on a kuleana house lot is guaranteed under State law, regardless of County zoning.

to replace single-family residences with a similar but less intensive use, such as vacation cabins (limited size; no kitchen) within the zoning district.

5.4 URBAN LAND USES

One of the key policies in the Framework for preserving Kaua'i's rural character is to promote growth and development in compact urban areas. Urban lands comprise only four to five percent of Kaua'i's land area, leaving 55 percent in conservation and 40 percent in agriculture. This section sets policy for the following urban land use designations: Urban Center, Resort, Residential Community, Transportation, Military and Parks. These are designated by color on the General Plan Land Use Map.

5.4.1 Urban Center

5.4.1.1 Policy

- (a) Lands included within the Urban Center designation shall be centers of government, commerce and transportation that serve the entire county or a large region. Uses may include shopping centers, government offices, churches and other institutions, office complexes, and industrial facilities. Residential or resort uses may also be located within the Urban Center designation, where compatible.
- (b) Urban Center areas are typically served by wastewater collection and treatment facilities and major roads. Urban Center lands may be zoned for any type of use, including General Commercial, General Industrial, Resort, and Residential.

5.4.1.2 Rationale

The Urban Center designation replaces the previous "Urban Mixed Use" designation. It applies to Greater Līhu'e (includes portions of Hanamā'ulu and Puakea); the Wailua-Kapa'a commercial corridor; and Port Allen. The mapping of the Puhi-Līhu'e-Hanamā'ulu area has been revised from the previous General Plan Land Use Map. Instead of the whole area being blanketed by the Urban Center designation, the map now distinguishes areas used or planned for Residential Community or Open. The Urban Center designation is intended to accommodate the more intensive urban uses and zoning, such as general commercial and general industrial.

5.4.2 Resort

5.4.2.1 Policy

- (a) Lands included within the Resort designation shall be used predominantly for housing and serving visitors to Kaua'i. In addition to hotels and multi- and single-family dwellings used for transient lodging, the Resort designation shall provide for commercial, recreational and public facilities that serve visitors or support the visitor industry. Lands designated Resort may also be used for residential purposes, including resort employee housing.
- (b) Resort-designated areas shall be served with wastewater treatment plants and shall have the full range of urban services.

- (c) The Resort designation shall be reserved for a limited number of locations.
 - (1) Primary resort destinations intended to accommodate 1,500 visitor units or more include Princeville, Wailua-Kapa‘a, and Po‘ipū-Kukui‘ula.
 - (2) Secondary resort destinations include Nukoli‘i and Līhu‘e.
 - (3) A rural resort destination shall be located in the Kapalawai-Waimea area. It shall be oriented to inn- and residential-style visitor accommodations and shall be limited to ten percent of the island’s total number of visitor units.

5.4.3 Residential Community

5.4.3.1 Policy

- (a) Lands included within the Residential Community designation shall be used predominantly for low- to high-density housing in towns and other residential areas. Density shall be one to 20 units per acre. Residential Community areas may also be used for commercial and industrial businesses, government facilities, and institutions.
- (b) High-density residential use of 10 units per acre or more shall be confined to areas served by wastewater collection and treatment facilities and major roads.
- (c) The location of non-residential uses shall be established through zoning. The intent is to provide convenient shopping and services to improve the livability of the various residential communities.

5.4.3.2 Rationale

This designation is applied to residential areas throughout the island and includes lands previously designated “Urban Residential” and “Rural Residential.” A review of the land use patterns and character of areas previously designated “Rural Residential” and zone R-1 or R-2 found that they had more in common with R-4 residential neighborhoods than they did with agriculturally-zoned residential areas. In fact, R-2 zoning built-out with ADUs becomes equivalent to R-4 zoning. It is more important to distinguish the “Residential Community” from the much lower density of the “agricultural community” described above.

In addition to serving as the primary land use designation for most towns, Residential Community is also used to designate outlying areas such as Wailua Homesteads, ‘Ōma‘o, and Anahola. The intent is to distinguish between Residential and Agricultural Communities.

5.4.4 Transportation

5.4.4.1 Policy

- (a) Lands included within the Transportation designation shall be used predominantly for major shipping and transportation facilities. Uses include commercial harbors and airports managed by the State of Hawai‘i Department of Transportation.
- (b) Transportation uses have industrial characteristics such as high noise levels, and shall be buffered from surrounding urban uses.

5.4.4.2 Rationale

This designation is applied to the commercial harbors at Nāwiliwili and Pt. Allen, as well as to the Līhu‘e Airport.

5.4.5 Military

The Military designation describes lands under the control of the U.S. Armed Forces. Uses within the Military designation include residential, office, and various facilities related to the mission of the installation. The public is typically restricted from access.

This designation includes the Pacific Missile Range Facility at Barking Sands.

5.4.6 Park

5.4.6.1 Policy

The Park designation describes major active public parks and outdoor recreation facilities, located primarily within urban areas. The designation includes regional and district parks, stadiums, beach parks, and golf courses.

5.4.6.2 Rationale

Lands mapped as Park are primarily County facilities, such as Vidinha Stadium, Kōloa District (Ann Knudsen) Park, and Kapa‘a Town Park. Also included is Kukuilono Park, which is owned by a private foundation but dedicated to public use. Uses are limited to recreation and accessory activities. Neighborhood parks and smaller parks are not shown.

5.4.6.3 Implementing Action

The Planning Department shall apply to amend the State Land Use District boundaries to remove Wailua Golf Course and Kukuilono Park from the Conservation District and place them in either the Urban or the Agriculture District. The Conservation District is inappropriate zoning for actively-used recreation facilities that serve urban communities. In addition, the Conservation District Rules prohibit golf courses, which makes it extremely costly and difficult to carry out planned improvements. It is recommended that a strip of land along the Wailua beach be retained in the Conservation District, consistent with other coastal areas through the island.

5.5 SCENIC ROADWAY CORRIDORS

Scenic Roadway Corridors consist of major roadways and the lands visible from those roadways. Affording views of Kaua‘i’s scenic features and open space, they are designated by color on the Heritage Resources Map. The sub-sections below set forth policy for roadway design and for Scenic Roadway Corridors.

5.5.1 Policy

- (a) The purpose of designating Scenic Roadway Corridors is to conserve open space, scenic features, and views within and along Kaua‘i’s most heavily-traveled routes. The policy of conservation recognizes the vital function of these roadways in meeting the public need for transportation. It also recognizes the legitimate desire of private landowners to

make economic use of their lands. The intent of this policy is to establish basic principles for roadway design and land use within these scenic corridors and to provide a basis for County action to establish programs and regulations to implement them.

- (b) Scenic Roadway Corridors are primarily designated in areas between towns where the surrounding lands are primarily designated Agriculture and Open. Where a Scenic Roadway Corridor is designated within a town or adjoins an area planned for urban use, the primary intent is to promote setbacks, landscaping, and views of scenic features. Scenic Roadway Corridors are intended to provide design guidance but not to restrict the principal land uses of urban areas.

5.5.1.1 Policy for Roadway Design

- (a) In planning, designing and constructing highway and road improvements, transportation agencies shall balance conservation of the area's natural, historic and scenic qualities with transportation objectives. In some cases, it will be preferable to accept a lesser design speed or capacity in order to maintain the rural character and appearance of the Garden Island.
- (b) Maintain the small scale of Kaua'i's roadways by limiting roadway width.
 - (1) Build no highways wider than four lanes.
 - (2) Four-lane highways should be limited to the central portion of the island – generally no farther west than Kalāheo and no farther north than Kawaihau Ridge (northern edge of Kapa'a).
 - (3) Use contra-flow and alternate routes to provide roadway capacity for peak periods. To meet long-range traffic demand on the west side, for example, transportation agencies should consider building a new roadway between Po'ipū and Pt. Allen as an alternative to widening the existing highway through Kalāheo and Lāwa'i.
- (c) Maintain the one-lane bridges and historic road dimensions in the Hanalei-to-Hā'ena Scenic Roadway Corridor. Restore the Hanalei Bridge as an important historic feature and the gateway to the district.
- (d) Maintain the unique features of historic bridges, striking a balance between safety needs and preserving historic and scenic character.
- (e) Design new bridges and bridge improvements to afford scenic views.
- (f) Develop and maintain green highways and roads, providing trees and vegetation in rights-of-way as appropriate to the character of the area. For divided highways, provide a landscaped median.

5.5.1.2 Policy for Scenic Roadway Corridors

- (a) Define Scenic Roadway Corridors and manage the development of lands within the corridors to conserve open space and scenic qualities. Scenic Roadway Corridors shall generally include but shall not be limited to those shown on the General Plan Heritage Resources Map.

- (b) Based on an assessment of views from the road and the scenic qualities of lands along Scenic Roadway Corridors, develop appropriate programs and/or land use regulations to conserve those qualities.

5.5.2 Rationale for Policy

As stated in the Planning Framework, the open spaces separating Kaua‘i’s towns and communities are crucial to preserving rural character, maintaining the individuality of each town, and preventing the sense of urban sprawl so prevalent in many communities. Equally important are major roadways through urban centers and towns that can be designed and landscaped to maintain a sense of open space. Kaua‘i’s most heavily-traveled and important roadway segments are designated on the Heritage Resources Map as “Scenic Roadway Corridors.”

How a roadway is designed and what a traveler sees along the road are vitally important to his sense of place. The view from the road is a source of daily appreciation for Kaua‘i residents, as well as a primary source of overseas visitors’ impressions of the island.

In planning roadway improvements, it is important to consider not only transportation objectives, but also the values of rural character. Widening highways through small towns causes not only direct physical effects such as the loss of commercial property and on-street parking, but can also change the scale and character of the town, reducing its attractiveness to pedestrians and affecting the viability of businesses. Understanding this, businesses and residents have argued against plans to widen Kūhiō Highway through Kapa‘a Town, favoring instead a bypass route that, with the addition of connector roads, could improve overall circulation. Similar consideration should be given to alternatives before widening roads through other settled areas such as Kalāheo.

In order to use federal funds to build road improvements, the State and County transportation agencies need to design to established road standards. Previously, federal-aid projects were bound to follow federal and state road standards that were based almost exclusively on speed, capacity and safety considerations. As an alternative to this “one size fits all,” the Federal Department of Transportation has provided an option for “flexible highway design” that recognizes the importance of other factors in highway design. Under this program, a state can develop its own highway design standards providing for conservation of historic and scenic qualities as well as adequate safety and capacity. A number of states have taken advantage of the flexible highway design provisions, and Hawai‘i could do the same.

Many local governments have also adopted various types of programs and land use regulations to conserve the visual quality of key road corridors. Often, these efforts are aimed directly at improving rural communities’ ability to attract tourists. Programs involving acquisition of land, development rights or visual easements are valuable tools, especially for conserving specific high-priority sites. Transfer of development rights is another option, but experience with this tool suggests that it is complicated to administer and works better in larger jurisdictions with a correspondingly larger pool of buyers and sellers of development rights.

Corridor regulations administered as a zoning overlay district are relatively common. Kaua‘i already has some overlay regulations, such as the Kōloa Special Treatment District and the

Kapa‘a Special Planning Area. The intent of these regulations is to guide rather than deny development. Corridor regulations could include design guidelines requiring the clustering of residences or screening development with trees and berms. The appropriateness of various design requirements depends on the topography and visual qualities to be conserved.

5.5.3 Implementing Actions

- (a) The State Department of Transportation should develop flexible highway standards that support State and County scenic and historic preservation objectives. Flexible standards should address scenic conditions in general along state- and federally-aided roadways, as well as provide specific guidelines for identified historic road segments, such as the Hanalei-Hā‘ena highway.
- (b) The Department of Public Works should adopt flexible standards for design of County road improvements with the objective of preserving historic features and enhancing scenic values, consistent with the policy.
- (c) The Planning Department shall prepare a study assessing visual quality along various segments of the Scenic Roadway Corridors. The study should describe the existing visual character and prominent features within the limits of the motorist’s general visual perception. Based on the study, the Department shall develop a management plan and shall propose programs and/or land use regulations to the County Council to implement the plan.

Programs to be considered include private or public purchase of land or development rights and transfer of development rights. Regulations to be considered include design guidelines for development, implemented through an overlay district or through amendment of existing regulations for subdivision and zoning permits.

6. Enhancing Towns & Communities and Providing for Growth

Chapter 5, “Preserving Kaua‘i’s Rural Character” establishes the policy framework for land use and future growth. Within that framework, enhancing Kaua‘i’s towns and urban centers and directing new development to towns and urban centers are equally as important as maintaining open space between towns.

Rather than allowing development to sprawl along Kaua‘i’s main roads, the intent is to focus development in a way that supports Urban Centers and Town Centers, while allowing already-existing, outlying Residential Communities and Agricultural Communities to build out.

This chapter of the General Plan addresses (1) the special community assets of each planning district; (2) a preliminary vision for each planning district; (3) the particular issues and opportunities facing towns and communities; and (4) the location and character of recommended future residential and commercial growth. Towns and communities are discussed according to the five planning districts.

6.1 NORTH SHORE

The North Shore Planning District extends from Moloa‘a Bay on the east to Puanaiea Point on the west, which is eight miles west along the Nā Pali Coast from Hā‘ena. The North Shore includes the communities of Hā‘ena, Wainiha, Hanalei, ‘Anini, Kalihiwai, Kīlauea, and Princeville.

The North Shore is rich in natural resources, scenic resources, and outdoor recreation opportunities. It has become a major destination for visitors to Kaua‘i who are seeking outdoor recreation, particularly hiking and boating along the Nā Pali Coast. Economic growth is mostly concentrated in tourism-oriented businesses. Agriculture, which is important to the rural character of the North Shore, thrives in certain areas but is challenged in general due to high land prices and the alternative of developing large-lot residential subdivisions. The North Shore’s large wetland areas represent an important agricultural resource for the cultivation of taro and other wetland crops.

Over the past 30 years, the North Shore has experienced a relatively high rate of population growth. In 1970, the North Shore (Hanalei Judicial District) had only about four percent of the Kaua‘i population, by far the least of the five districts. By 1990, the North Shore was home to nine percent of the population. In the next census, the North Shore will have well over 10 percent of Kaua‘i residents and may surpass the West Side (Waimea Judicial District) in population size.

6.1.1 Community Assets

During the 1998-’99 General Plan Update process, North Shore residents and businesspeople attending community meetings listed the assets of their communities. The entire list was long

and diverse and is available in the GP Update Working Papers. Following is a selection of assets related to the North Shore, particularly the physical environment:

- Natural beauty of the North Shore.
- Rural scenes.
- Small town, rural, intimate environment.
- Hawaiian culture.
- Clean watersheds, rivers, waterfalls.
- Recreational opportunities – beaches, ocean, mountains.
- Historic one-lane bridges from Hanalei to Hā'ena.

The special places named and drawn on maps by community participants include: Nā Pali Coast, Kē'e Beach, the heiau at Hā'ena, Hanalei Valley and River (especially the taro farms), Hanalei Bay, Black Pot Beach Park, Limahuli Gardens, Pu'u Poa Beach and Marsh, Kaweonui, 'Anini Beach and reef, Wainiha Kū'au, Lumaha'i Beach, Nāmoloama Falls, Queen's Bath, Kīlauea Bay, the wildlife refuges, Kauapea Beach, Crater Hill, Kamookoa Ridge, Kalihiwai Falls, Kapinao Heiau, and Moloa'a Bay. In addition, Kīlauea and Hanalei have a number of historic buildings; and there are significant archaeological sites throughout the district. Many of these can be found on the Heritage Resources Map.

Stores and businesses are located in the historic towns of Kīlauea and Hanalei and in the Princeville Shopping Center. Princeville was master-planned as a resort/residential/golf course community that would absorb most of the growth on the North Shore and serve as the primary employment center. The development of Princeville, however, has not proceeded as fast as originally planned. On the other hand, many people have come to reside on the North Shore, giving it the highest growth rate among Kaua'i regions. As a result, residential growth has occurred in the town of Kīlauea and in agricultural subdivisions from Moloa'a to Kalihiwai. Many of these residents commute to work in the central parts of the island.

6.1.2 Preliminary Planning District Vision

The following is a preliminary vision for the planning district in 2020, based on community and CAC input. While it is intended to provide some guidance for specific areas, it did not have the benefit of a detailed community planning effort. The Preliminary Planning District Vision is not policy, and individual projects may vary from it.

Diversified agricultural businesses are spread across the district. In addition to being the state's major taro-producing region, the North Shore also produces a wide range of other agricultural crops, as well as meat and dairy foods. Many farmers grow crops for export, while an increasing number are providing food for local consumption.

Commercial development is kept within defined town boundaries, and development along Kūhiō Highway outside of towns is minimized. Strip development along the highway is avoided, especially commercial and institutional buildings. New commercial buildings are designed to be compatible with the historic architecture of Kīlauea and Hanalei. The County

and State have discouraged growth north of the Hanalei Bridge, in recognition of limited infrastructure and the special character of the area.

Easy-to-understand zoning regulations call for siting residences away from beach and out of floodplains. Buildings are limited to 25 feet in height. Multi-unit resort and residential structures are allowed only in Princeville. Public views of open areas and natural features from the highway and along the shoreline are preserved. New development is located where it will not significantly affect public views.

There is an extensive network of well-maintained mountain trails marked for hiking. Some are also open for off-road bicycling. Beach parks and recreation areas are clean, safe and well-maintained.

The area from **Hā'ena** to **Hanalei** is recognized for its unique natural and cultural resources. The residential communities at Hā'ena and Wainiha are little changed from 20 years ago. Long a favorite destination of off-island visitors, the region is carefully managed to preserve the quality of life for residents as well as the quality of the visitor experience.

Narrow rural roads, bike paths, and one-lane bridges are an essential component of the Hā'ena-Hanalei area, distinguishing it from other parts of Kaua'i. These features slow traffic on the road and encourage the relaxed pace of life and neighborliness that is essential to the area's character. They also reflect the proportion and scale of the small coastal settlements, which contrasts with the deep river valleys and the tall cliffs between Lumaha'i and Hā'ena.

At the end of the road in Hā'ena, the State actively manages Hā'ena State Park, using revenues from entrance fees to provide parking, maintain facilities, and undertake ongoing restoration of archaeological and cultural sites. State park officers work with the community in caring for the natural areas and native Hawaiian sites and in managing the Park and the Nā Pali Trail for sustainable use and enjoyment. They collaborate with the Hanalei Visitor Center, in order to manage the number of cars and visitors flowing into Hā'ena each day. Located in Princeville mauka of Kūhiō Highway, overlooking the Hanalei Valley, the Visitor Center provides information, parking and a van shuttle service to Hanalei Town, Limahuli Gardens, and Hā'ena State Park.

Hanalei has friendly people and caring merchants. With its surrounding taro fields and its inventory of historic sites and buildings, Hanalei is a place of great beauty and cultural interest. The taro mill and taro cultivation continue to expand, restoring areas cultivated in ancient times. Small businesses are thriving. Walkways link all parts of town. A shuttle bus helps local residents to get around, as well as giving visitors the option of leaving their car at Princeville. Public parking is provided in the rear of buildings and/or screened from the road by landscaping.

Princeville continues to develop gradually, through implementation of its updated master plan. As the North Shore's primary visitor destination, Princeville provides a wide variety of visitor accommodations, including two full-service hotels. Princeville is known for its golf courses, gracious Hawaiian architecture, and extensive, well-maintained landscaping. The shopping center and library anchor the town center. A centrally-located meeting facility provides for community gatherings. Bicycle/pedestrian paths connect all neighborhoods to the town center. New development mauka of the highway includes a high-tech center near

the airport and a visitor center, which serves as a gateway to the Hanalei-Hā'ena region. Both residents and visitors use a network of equestrian and hiking trails to explore Princeville's mauka lands.

Kīlauea's character is expressed in its stone plantation buildings, the farms surrounding the town, and its active community association. A by-pass road runs makai from Kūhiō Highway on the Hanalei side of town, providing the preferred route to the enlarged commercial area in the town center and the Kīlauea Point National Wildlife Refuge. The by-pass road has a safe walkway and bike path and is the preferred route for getting to the Kīlauea Point Wildlife Refuge. The pedestrian-friendly town remains rural in character, with smooth traffic flow and residential areas protected from commercial/industrial development.

At **Moloa'a**, the Moloa'a Hui's agriculture park is fully developed and serves as a model for similar private ventures around the state. Other landowners in the area are offering lands for use by small farmers.

6.1.3 Issues & Opportunities

Based on community feedback during the 1998-'99 General Plan Update process, this section outlines regional issues and opportunities that will be subjects for future community planning. Because most issues could be viewed as opportunities and vice-versa, they have been compiled as a single set.

Sharing of Recreation Resources with Visitors. Many visitors travel to the North Shore to enjoy its beaches and unique natural areas. The impact is especially great in the Hanalei-Hā'ena region, which has a large share of visitor attractions. Heavy visitor use can displace residents or significantly change the quality of the experience, especially at beaches and parks. Residents need to work with businesspeople and parks agencies to identify: (1) parks and natural areas where visitors will be welcomed and accommodated, with levels of use based on parking or other easily managed limits; and (2) parks and natural areas where it is important to more strictly limit access in order to preserve the resources and/or the quality of the recreation experience. For example, Hā'ena State Park could be managed to accommodate large numbers of visitors (with better facilities); while, on the other hand, the DLNR already limits camping and boat landings in the Nā Pali Coast State Park.

Availability of Land Planned for New Residential Development. Urban residential-zoned lands are essentially built-out in Hanalei and Kīlauea Town, but there continues to be a demand for non-luxury housing on the North Shore. In response to the General Plan Update, landowners have proposed: (1) an extension of Princeville mauka of the highway, which would include lower-priced residential villages; (2) expansion of Kīlauea Town to the north, with residential and commercial development served by a new road connecting Lighthouse Road to Kūhiō Highway; and (3) rural residential development along the coastal areas and hillsides of Wainiha.

Development of Agricultural Subdivisions. In the past 25 years, many agricultural subdivisions have been developed with County roads and water service. The house-lots created through subdivision and CPR are gradually building out. When fully developed, they will contribute to population growth and demand on services.

Towns and Location of New Commercial Development. North Shore residents desire more stores and other businesses, in order to avoid traveling long distances to the East Side for necessary purchases and services. Several shopping centers have been proposed on sites near Kīlauea. Some sites lie on the makai side of the highway within or close to the existing town center. Other sites lie on the mauka side of the highway, divorced from the town.

6.1.4 Land Use Map and Policies

The policy relating to the North Shore is found in the Land Use Map and in the text statements below. General Plan policies focus on islandwide and regional issues relating to urban land use, development, and roads. Detailed policies for specific areas may be established through community-based development plans.

6.1.4.1 Land Use Map

On the North Shore, only Princeville has a substantial amount of vacant land previously designated for urban development. This is consistent with the longstanding strategy to concentrate urban development within Princeville, in order to reserve other areas for agriculture, rural settlement, and open space. Kīlauea is the only other Residential Community where significant growth would be possible. Urban development in the Hanalei and Wainiha-Hā'ena areas is undesirable because of the special character of the area, limited roads and other services, and environmental factors.

Designated on Previous General Plan Land Use Map. Major planned housing, resort hotel, and condominium projects on the North Shore have an estimated capacity for about 950 single-family residential units, 400 multi-family residential units, and 1,380 visitor units (see Appendix Tables C and D).¹ Nearly all of the vacant land capacity is located in Princeville, on the plateaus makai of Kūhiō Highway. Princeville has built out slowly, with a mix of single-family residential units, condominium apartment units, and a single hotel. Note that land designated Resort may be zoned and developed for hotel use, transient vacation rentals, or residential units. Of the existing multi-family units in Princeville, approximately 65 percent are used as visitor accommodations (including timeshare), and the remaining 35 percent are occupied by residents.

Designated Through General Plan Update. The Land Use Map incorporated in this General Plan includes the re-designation of the Princeville Mauka Village to Residential Community and the redesignation of lands northwest of Kīlauea Town to Residential Community. The North Shore Land Use Map re-designations are summarized in Table 6-1.

The Land Use Map also includes re-designation of approximately 40 acres northwest of Kīlauea Town from Agriculture to Residential Community. This redesignation is intended to provide for the orderly expansion of Kīlauea Town with additional residential and commercial uses, subject to community input and more detailed planning to be considered in conjunction with a future zone change proposal.

In addition to the approximately 40 acres of Residential Community, 10 acres shall be reserved for park use northwest of Kīlauea Town, for a total of 50 acres for future expansion,

¹ For multi-family projects within a Visitor Destination Area, it was assumed that 65 percent of the units will be used for visitor accommodations.

subject to community input and more detailed planning to be considered in conjunction with a future zone change proposal.

**Table 6-1
Lands Re-Designated on the General Plan Land Use Map, North Shore**

Location	Planned Use	Previous GP Land Use Map Designation	New GP Land Use Map Designation
Princeville Mauka	Residential (≈ 210 SF units and 490 MF units), commercial, industrial, schools	Agriculture	Residential Community
Kīlauea Town Expansion	Residential, commercial	Agriculture	Residential Community

New Road Corridors. The Land Use Map designates a corridor for a future road that would bypass Kīlauea Town to connect Kūhiō Highway with the lighthouse road. The depiction of this corridor is general and schematic; the actual alignment of the future road may vary from the Map.

6.1.4.2 Policies

- (a) The North Shore shall remain primarily a rural, agricultural area, with resort use and other urban development concentrated in Princeville. The towns of Hanalei and Kīlauea shall also provide for housing and other urban uses.
- (b) Kīlauea
 - (1) Kīlauea Town is a desirable residential community and, subject to community consensus and detailed planning in conjunction with future zone change proposals, could be an appropriate location for future residential development, with supporting institutional and commercial uses. Any future development shall be planned to enhance pedestrian and vehicular circulation and to be compatible with the character of the existing town.
 - (2) A new road shall be developed to provide an alternate access from Kūhiō Highway and an alternate route to Kīlauea National Wildlife Refuge that bypasses Kīlauea Town.
- (c) Princeville Mauka. The intent is to provide an urban village to consist primarily of affordable housing, with a commercial area for resident shopping and services and sites for a new elementary and/or a middle school. A site near the airport will provide for light industrial use.
- (d) Provide for development of a visitor center overlooking Hanalei Valley for visitor orientation and activities.
- (e) Maintain the historic roadway and one-lane bridges from Hanalei to Hā'ena in accordance with Policy 5.5.1.1(c).

6.1.4.3 Rationale for Map and Text Policies

The North Shore population is expected to continue growing, but at a slower rate than in the 1970-2000 period. The general intent of the re-designations is to increase employment opportunities on the North Shore, to provide lands for urban residential growth, and to encourage competition in the residential market.

Princeville. The Princeville re-designation continues the longstanding strategy of concentrating North Shore development at Princeville. It is the only North Shore community that provides the full range of urban-level services, including wastewater treatment. The resort/residential community is expected to build out gradually, consistent with historical growth. The approval of urban zoning for planned areas is dependent upon the provision of adequate facilities, including roads.

Mauka of the highway, the light industrial site will provide space for North Shore businesses and fulfill a prior condition of zoning. Princeville Corporation intends the “Mauka Village” to provide affordable housing to satisfy County and State housing requirements. The potential 700 units would be built out over a 20-year period, providing competition in the North Shore housing market. Unlike the makai resort/residential community, the Mauka Village will be oriented to local residents. It will also provide a site for a North Shore middle school and a third elementary school, if needed. Princeville will serve the village with its privately-operated water and wastewater treatment systems.

Kīlauea. As stated in the policy, Kīlauea is a desirable residential community made up of local residents. There is substantial capacity for additional housing in the agricultural subdivisions that stretch from Kalihiwai to Waipake and beyond. However, there is little vacant urban residential land. Subject to community consensus and detailed planning in conjunction with future zone change proposals, a potential area for expansion is the area to the northwest, between the planned by-pass road and Kīlauea Town. This area could also provide for additional commercial and institutional uses (churches, day-care centers, etc.) in a location convenient to Kīlauea residents.

6.2 KAWAIHAU

The Kawaihau district extends from the Wailua River north to Moloa‘a, including the Kapa‘a-Wailua basin, Keālia and Anahola. The Kapa‘a-Wailua basin is home to a large portion of Kaua‘i's population. An urban corridor extends along Kūhiō Highway from Haleilio Road in Wailua to Kawaihau Road, at the northern edge of Kapa‘a Town.

6.2.1 Community Assets

During the 1998-'99 General Plan Update process, Kawaihau residents and businesspeople attending community meetings listed the assets of their communities. The entire list was long and diverse and is available in the GP Update Working Papers. Following is a selection of assets related to the Kawaihau District, particularly the physical environment:

- Rural scenery, open space, and agricultural lands.
- Scenic mountain views.

- Recreational opportunities – beaches, ocean, mountains.
- Walking paths and bridges.
- Plantation town heritage.
- “Working Town” environment.

The special places named and drawn on maps by community participants include: Sleeping Giant, Wailua River, Lydgate Park, Kapa‘a Park, Makaleha Springs, the Arboretum and reservoir, ‘Ōpaeka‘a Falls, Anahola Beach Park and river, ‘Aliomanu reef, Fuji Beach, Waipouli Flats residential area near the beach, ancient canoe landing area in Waipouli, Blue Hole in Wai‘ale‘ale, and coconut groves. Residents also valued the region’s cane haul roads and canal systems. In addition, there are significant archaeological and historic sites throughout the district. Many of these can be found on the Heritage Resources Map.

6.2.2 Preliminary Planning District Vision

The following is a preliminary vision for the planning district in 2020, based on community and CAC input. While it is intended to provide some guidance for specific areas, it did not have the benefit of a detailed community planning effort.

Coming from Līhu‘e, highway travelers enjoy a greenbelt from the Kapule Highway junction to Wailua River. Accented by Kālepa Ridge, the greenbelt provides visual relief and a clear separation between the Līhu‘e-Hanamā‘ulu urban area and the Kapa‘a-Wailua urban area. Passing beyond Kapa‘a Town, the highway opens to rural scenery and a dramatic view of Keālia Beach. From here to Moloa‘a – and beyond to the North Shore – the landscape is rural and open, punctuated by small settlements and the town of Anahola.

The **Kapa‘a-Wailua urban corridor** is vibrant and active, a “working town” with banks, grocery stores, hardware stores, and shopping centers. Resident needs are met by small, locally-owned businesses, which are thriving because of high patronage by visitors as well. Some small businesses cater principally to visitors. Sidewalks along Kūhiō Highway make it convenient and safe to walk. A bicycle path extends along the coast from ‘Anini to Anahola.

The Kapa‘a By-Pass Highway furnishes an alternate route for those traveling between the North Shore and Līhu‘e. The two-lane By-Pass is designed as a parkway, with generous roadside landscape buffers. The buffers incorporate large trees and other low-maintenance plantings, as well as bikeways. Because of the Kapa‘a By-Pass, traffic moves smoothly through the Kapa‘a-Wailua corridor. Connector roads link the By-Pass to Kūhiō Highway, providing alternatives to reach commercial areas along the coast and improving circulation within the valley.

Wailua has one of the state’s largest, oldest and most important complexes of heiau and other ancient Hawaiian sites. Most of the sites lie within the Wailua River State Park. The rebirth of Hawaiian culture in the late 1900’s, combined with growing visitor interest in cultural sites and experiences, led to a new appreciation of the Wailua complex. Native Hawaiian organizations have taken on the leading role in caring for the archaeological sites and interpreting them to visitors. While the Fern Grotto and other scenic and recreational attractions maintain their appeal, visitors are increasingly interested in the historic sites and

the Hawaiian culture. The Wailua Visitor Center provides orientation to the culture and history of Kaua‘i and the Wailua region, as well as information about attractions and activities around the island. Guides versed in Hawaiian culture lead interpretive tours of Wailua’s ancient cultural sites. Visitor fees and gift shop revenues support improved maintenance of the Park, as well as cultural research. Recreational use of Wailua River is managed under a master plan developed with strong community participation. The plan provides for a sustainable level of use, balanced between community use and visitor-oriented commercial operations.

Defined by the Waikaea and Moikeha Canals, historic **Kapa‘a Town** is noted for its “western plantation” style architecture and its walkable, small town character. Served by sidewalks and parking on both sides of the highway, the town’s small shops and restaurants appeal to both residents and visitors. Cleaned up and landscaped with trees along their banks, the canals give strong definition to the edges of the historic town. Kayakers paddle the canals, while others take advantage of the pathways along the canal banks for recreational walking and bicycling. Kapa‘a Beach Park is now an open-space “town park,” opening up physical and visual access between the town and the beach. Large trees shade picnic and barbeque areas, and the enlarged beach pavilion hosts community events. A municipal lot located mauka of the highway provides parking for shoppers and visitors.

While retaining and enhancing its unique historical and architectural heritage, Kapa‘a is a real working town with a vibrant community of businesses and neighbors. The signs of a healthy town are high occupancy of commercial buildings, diverse occupational opportunities, low crime, and residents patronizing local businesses. Visitors enjoy the “sense of place” and are attracted to return.

Guided by the Department of Hawaiian Home Lands long-range master plan, **Anahola** has grown and developed. In addition to more homes and farm homesteads, DHHL has also built a village center for stores and community services. Mauka lands are being used for forestry and diversified agriculture. Local businesses mill the timber and use the native hardwoods for making furniture, musical instruments, and other hand-crafted products.

Residents treasure the **open, uncrowded beaches** from Wailua Bay north to Kapa‘a Beach, Keālia Beach, Donkey Beach, and Anahola Beach. They value the ocean and coral reefs as sources of food and recreation. Beach access is readily available, with parking. Residents share the beach and ocean resources with visitors, developing rules to prevent crowding and conflicts. The Coastal Trail from Līhu‘e to Anahola is popular with residents and visitors alike as a walking and bicycling route. Also popular are the back-road bicycle routes which lead through the valleys along old agricultural roads.

6.2.3 Issues & Opportunities

Based on community feedback during the 1998-’99 General Plan Update process, this section outlines regional issues and opportunities that will be subjects for future community planning. The first section below addresses the long-term build-out of residences in the Kapa‘a-Wailua basin. Other issues and opportunities follow.

6.2.3.1 Development in the Kapa‘a-Wailua Basin

The vast basin between the Wailua River and the Kapa‘a Homesteads continues its transition from agricultural to residential use. Home-building continues to increase, as small holdings are divided up. Conversion of land from Agricultural zoning to Residential zoning, the subdivision of agricultural lots, and the building of Additional Dwelling Units (ADUs) have all contributed to increasing the population of this area. Local roads and water systems were not designed to support residential uses and, in many cases, are overburdened. Fire protection is a problem because of poor road access and lack of fire-flow capacity in the water systems. Traffic, water, fire protection and drainage problems will compound as the number of residences continues to grow.

The GP Update Project prepared a detailed “**Build-Out Analysis**” of the Wailua Houselots-Wailua Homesteads-Kapa‘a Homesteads area. (The analysis excluded the Urban Mixed Use and Resort-designated lands.) As of 1998, the area had an estimated 4,700 dwelling units, making it the largest residential community on Kaua‘i. Based on 1999 General Plan Land Use Map designations (Urban Residential, Rural Residential, and Agriculture), the analysis found that an *additional* 4,000 units could be developed if GP-designated lands were fully zoned, subdivided, and built out. About 2,400 more units could be built in Urban Residential areas; about 500 more in Rural Residential areas; and about 1,100 more in Agricultural areas. This would increase the housing units and population of the area by 85 percent. (If every eligible lot added an Additional Dwelling Unit, that would add another 2,500 units, increasing the total build-out to an *additional* 6,600 units – a 140 percent increase.)

The Build-Out Analysis examined a second future scenario that assumed that all of the Agricultural land would gradually convert to Rural under the State Land Use code and would be granted R-2 zoning, allowing two dwelling units per acre. The result was an *additional* 8,000 dwelling units – double the basic scenario and a 240 percent increase.

The Planning Department requested that County service agencies review the Build-Out Analysis. Key agency comments on the basic scenario are summarized below:

- **Roads (DPW).** The GP Update provided estimates of automobile traffic based on the Build-Out Analysis totals. Traffic was distributed among the three main roads connecting the valley to Kūhiō Highway: Kuamo‘o Road, Olohena Road, and Kawaihau Road (Wailua Houselots was not included because it has direct access to the highway). The DPW found that all three roads would need to be increased to four lanes, in order to accommodate average daily traffic at Level of Service “C”. Kawaihau would need to be converted to a 50-mile-per-hour highway in order to have sufficient capacity. The terrain around Olohena Road and lower Kuamo‘o Road, as well as the historic resources in Wailua State Park, make building four lanes extremely difficult. Widening along Kawaihau Road would involve acquisition of residences and relocation, as a project cost “above the financial capabilities of the County.” As a final note, traffic at the levels projected would severely affect traffic operations at intersections with Kūhiō Highway and the future By-Pass Highway
- **Drainage (DPW).** DPW estimates that stormwater runoff in the Kapa‘a-Wailua basin might increase 20-40 percent as the result of the build-out and

the increased amount of impermeable surfaces. According to the DPW, this would present downstream drainage problems and would require more and larger detention basins.

- **Water Supply (DOW).** The DOW projected a need for approximately ten new wells and four new storage tanks to provide adequate water supply for the build-out scenario. Transmission and distribution lines would also need to be upgraded. Costs were not estimated, but it was noted that additional funding might be needed. DOW commented as follows:

“The distribution of units in the agricultural designation will require water system infrastructure improvements that are spread out over a large area. Longer pipelines that service fewer customers would result. Per residence located in the agricultural subdivision, there would be a higher capital and long-term operational, maintenance and replacement cost for the water system.”²

- **Fire Protection (Fire Department).** The Fire Department expressed concern about fire flow rates (water system), road access to affected areas, and its ability to respond given the limitations of existing stations, equipment and personnel. While it did not provide any specific data about Kapa‘a-Wailua, the Fire Department advocated that the DOW upgrade fire flow standards in Agriculture and Open areas and that the County upgrade its standards for road access onto properties with residential occupancy. Although the Fire Code calls for a width of 20 feet on all fire apparatus access roads, the Fire Department noted that this standard was applied only to commercial properties. (In fact, many County roads have paved width of less than 20 feet.)

In conclusion, the County should take measures to assure that adequate roads and other facilities are available to serve the homestead areas as they build out to their zoned densities. In addition, the County should refrain from zoning changes that would increase density, considering the potential cumulative impacts.

6.2.3.2 Other Issues and Opportunities

Neighborhoods and Activity Centers in the Homesteads. The Kapa‘a-Wailua Basin is large, and there is little to connect the various neighborhoods and communities. Shopping, services, active parks, and schools are located in Kapa‘a, generally near the highway. Individual residential areas have a sense of neighborhood, but parks and other gathering places are few. There is no park in the Kawaihau Road area, though Kapa‘a Elementary School provides a focus for the neighborhood. On the other side of the basin, Wailua Homesteads Park is a center of community activity. The convenience store on Kuamo‘o Road provides shopping for neighborhoods located far away from commercial centers.

Laid out for agricultural homesteads during Territorial Government days, the road system provides only wide-spaced connections between communities and limited north-south connections. Aside from the Kuamo‘o and Kawaihau Residential Communities and the

² Letter dated September 21, 1999, from Ernest Y.W. Lau, Manager & Chief Engineer, DOW to Dee M. Crowell, Director, Planning Department.

neighborhood along Kamalu Road at the base of Mt. Nounou, the community is dispersed with common orientation only to the distant coastal area. As important as it is to consider the magnitude of future growth in this large area, it is also important to plan at the community level for centers, gathering places, and improved circulation.

The Proposed Kapa‘a By-Pass will be a new highway carrying traffic north-south and running parallel to Kūhiō Highway between Wailua and Kapa‘a. Providing significant interim traffic relief, the DOT’s “Temporary By-Pass” follows an old canehaul route connecting Kūhiō Highway at Waipouli with Olohena Road mauka of Kapa‘a Town. The intent of the future By-Pass is to provide additional highway capacity and an extended route for through-traffic in the corridor. The DOT originally proposed to expand Kūhiō Highway to four lanes through Kapa‘a Town. Kapa‘a business people opposed the expansion because it would have eliminated on-street parking and made Kapa‘a a less desirable place to walk and shop. As of early 2000, the DOT had discontinued its original Environmental Impact Statement and was reassessing the alternatives. Following are some of the key issues relating to the By-Pass:

- One set of alternatives calls for a new bridge across the Wailua River. Any proposal to bridge the river needs to be carefully evaluated for impacts on sacred sites and on Wailua River State Park.
- Connector roads are needed to link the By-Pass with Kūhiō Highway. Building connectors in conjunction with the By-Pass will reduce the impact on Kapa‘a Town businesses and improve circulation within the valley.
- There will be a demand to develop commercial facilities and residences along the By-Pass and the connector roads. Land use policy for these areas should be planned in advance of highway construction.

Vacant Lots in the Kapa‘a-Wailua Highway Corridor. Currently, vacant lots along this developed highway corridor provide open space relief. Some are zoned for resort and high-density residential use; other properties mauka of the highway are still zoned for agriculture. With highway access, these lots remain attractive for urban development. How might future development affect the character of this important corridor? Is a new, detailed plan needed?

Reuse of Amfac/JMB Lands. Amfac is selling about 1,400 acres of former sugar lands mauka of Kūhiō Highway between Wailua Homesteads and Kapa‘a. Old canals and ditches in this low-lying area did double-duty providing irrigation water and capturing stormwaters. Portions of the area are wetlands, some of which are considered by the U.S. Fish & Wildlife Service as important for the recovery of endangered waterbird species. The proposed Kapa‘a By-Pass Highway would cross these lands. There are several opportunities and issues related to this land:

- These lands and canals already serve an important drainage function. They could be further developed to retain larger quantities of stormwaters, as a means of reducing flood hazards to urbanized coastal areas.
- Some of the wetlands could be developed as refuges for endangered Hawaiian waterbirds.

- A portion of this area could be developed as a regional park or a soccer complex.
- Given its location near the coast and likely to be served by the planned Kapa‘a By-Pass, this is a likely area for future development. Land to the north, just south of Kapa‘a has previously been designated Urban Center. Urban use would have to be carefully balanced against flood hazards in this low-lying area.

Wailua Cultural Center. As one of the most important Hawaiian sites, Wailua is an excellent location for a center for the study and teaching of Hawaiian culture. The cultural center, located next to the state park, researches and teaches language, history, dance, and many other aspects of native Hawaiian culture. It could develop interpretive materials for visitors and train interpreters who would work in a corresponding visitor center.

6.2.4 Land Use Map and Policies

The policy relating to the Kawaihau District is found in the Land Use Map and in the text statements below. General Plan policies focus on islandwide and regional issues relating to urban land use, development, and roads. Detailed policies for specific areas may be established through community-based development plans.

6.2.4.1 Land Use Map

Designated on Previous General Plan Land Use Map. The Kawaihau Planning District has substantial capacity for additional residential development, as described in Section 6.2.3.1 (Build-Out Analysis). Lands previously designated for urban use but as yet mostly undeveloped include an area located near Kapa‘a, south of Olohena Road. This area was previously designated for Urban Mixed Use and is shown as Urban Center on the new GP Land Use Map. Owned partly by the State and partly by Amfac/JMB (or its successor), this “expansion area” for Kapa‘a has already accommodated the Kapa‘a Middle School.

Major planned housing, resort hotel, and condominium projects in the Kawaihau District have an estimated capacity for about 1,730 single-family residential units, 70 multi-family residential units, and 1,460 visitor units (see Appendix Tables C and D).³ There are only two planned housing projects in the Kawaihau District: (1) the Department of Hawaiian Home Lands’ (DHHL) Master Plan for Anahola; and (2) a 130-unit project in Waipouli by Niu Pia Farms (has potential for resort use).

The Department of Hawaiian Home Lands owns about 4,160 acres in Anahola, extending mauka into Kamalomalo. Currently, DHHL has about 350 residential leases and about 50 agricultural leases in the area. Plans call for developing an additional 1,400 residential lots and about 330 agricultural lots. Because of the magnitude of the proposed residential development, the State Department of Health has recommended development of a wastewater treatment plant. As an alternative to costly wastewater treatment, DHHL is will also consider developing at a lower density, with fewer, larger lots.

³ For multi-family projects within a Visitor Destination Area, it was assumed that 65 percent of the units will be used for visitor accommodations.

DHHL's 1987 Anahola-Kamalomalo and Moloa'a Development Plan also calls for a "Town Center" with commercial facilities and reserve areas for schools and other services to be located along the highway, south of the main residential area.

Designated Through General Plan Update. The area planned for future residential and commercial development at Anahola has been designated Residential Community on the Land Use Map. Development is expected to occur in a number of increments over a long period. Aside from the Department of Hawaiian Home Lands Master Plan for Anahola, landowners proposed no major re-designations during the 1998-'99 GP Update effort.

New Road Corridors. Also shown on the Land Use Map is a corridor for the Kapa'a Bypass between Waipouli and the Moikeha Canal, along with as connector roads. This is a schematic representation that purposely does not address the Wailua River crossing. This schematic representation is not intended to represent the actual alignment or to preempt the evaluation of alignment alternatives that the State DOT will prepare as part of the project Environmental Impact Statement.

6.2.4.2 Policy

(a) Regional Growth and Public Facilities

- (1) Locate new growth in and around the Waipouli-Kapa'a urban center and on DHHL lands in Anahola.
- (2) Although not designated on the Land Use Map at this time, the former sugar lands bounded by Olohena Road and Wailua Houselots should be reserved for future urban development, including public facilities and parks; provided that wetlands and floodplains designated Open should not be used for habitable structures.
- (3) Give priority in capital improvements and the extension of County services to existing communities, such as the Wailua and Kapa'a Homesteads and areas planned for growth.

(b) Wailua and Kapa'a Homestead Areas

- (1) Reexamine zoning and development regulations with regard to the cumulative demands of future development on public facilities and services. Avoid rezoning that would increase residential densities, unless adequate facilities are provided.
- (2) Take measures to assure that roads, water supply, and fire protection are adequate to serve the cumulative amount of development allowed under existing zoning.

- ##### **(c) Support agricultural, residential, and limited commercial development of the Hawaiian Home Lands at Anahola, with the recommendation that projects be sited to avoid the appearance of strip development along the highway and that the highway frontage be enhanced with landscaping.**

6.2.4.3 Rationale for Map and Text Policies

The policies on regional growth are intended to support growth within the Kapa'a-Wailua area and the DHHL lands at Anahola and to discourage the expansion of residential development in rural outlying areas designated Agriculture.

As the build-out analysis indicated, Kapa‘a-Wailua has significant infrastructure needs that are growing as the residential and agricultural communities continue to build out. The County should give these needs a high priority. To finance roads and other improvements, it may be necessary to gain the participation of property owners who will benefit from the improvements – not only those who apply for a new subdivision or permit, but also those who own lands previously subdivided and developed. This can be accomplished through an improvement district, by which benefiting landowners pay a share of the cost of improvements.

Kapa‘a By-Pass. The Kapa‘a By-Pass is an essential project to relieve one of Kaua‘i’s most congested travel corridors. The project will benefit North Shore residents as well as Kawaihau residents. The By-Pass should also include roads connecting it to Kūhiō Highway. The road will also provide access to the former plantation lands to be reserved for future urban development.

Urban Reserve. A large portion of the area suggested in the policies as “urban reserve” (lying between Wailua Houselots and Olohena Road) is designated Open, due to the presence of wetlands, canals, streams, and floodplains. Portions of the area have been identified by the U.S. Fish & Wildlife Service as essential waterbird recovery habitat. Other, non-wetland floodplain areas would be well suited for athletic fields. These lands could double as stormwater detention basins.

6.3 LĪHU‘E

The Līhu‘e Planning District is the “heart” of Kaua‘i. Extending north to the Wailua River and south to Hā‘upu Ridge, the district serves as the main business, government and transportation center of the island.

The Līhu‘e region includes the communities of Līhu‘e, Hanamā‘ulu, Kapaia, Niumalu, Nāwiliwili, Puakea, and Puhi. It is the hub of the island's transportation system, its government center, and its commercial center. In 1998, the region had approximately 3.4 million square feet of retail, office, and industrial development – over 60 percent of the island's total inventory.

On the GP Land Use Map, large portions of Līhu‘e are designated Urban Center (formerly Urban Mixed Use). With the previous UMU designations and zoning for two large, master-planned projects – the Līhu‘e-Hanamā‘ulu Infill project and Puakea – the County essentially adopted a strategy of focusing Kaua‘i’s growth around its main urban center. The result will be a new “Greater Līhu‘e,” with new development extending north to Hanamā‘ulu Valley and south to Puhi.

6.3.1 Community Assets

During the 1998-’99 General Plan Update process, Līhu‘e residents and businesspeople attending community meetings listed the assets of their communities. The entire list was long and diverse and is available in the GP Update Working Papers. Following is a selection of assets related to the Līhu‘e District, particularly the physical environment:

- Scenic mountain views.
- Coastline, for both recreational opportunities and for the pristine beauty of undeveloped areas.
- White sand beaches and natural bays.
- Niumalu’s quaint character and narrow roads.

The special places named and drawn on maps by community participants include: Wailua Golf Course, Kālepa Ridge, Hanamā‘ulu Bay, Kalapakī Bay and its surrounding reef, Nāwiliwili Harbor, Niumalu Park, Menehune Gardens, Grove Farm Homestead, Hā‘upu mountains, Alakoko (Menehune Fishpond), Hulē‘ia, Kaua‘i Community College, Kilohana, Kīpū Kai, Kīpū Falls, and the coastline from Ahukini Landing to Niumalu. In addition, there are significant archaeological sites throughout the district. Many of these places and sites are shown on the Heritage Resources Map.

6.3.2 Preliminary Planning District Vision

The following is a preliminary vision for the planning district in 2020, based on community and CAC input. While it is intended to provide some guidance for specific areas, it did not have the benefit of a detailed community planning effort.

Kaua‘i’s urban development is focused in and around Līhu‘e Town. Growing residential communities in Līhu‘e/Hanamā‘ulu and Puakea/Puhi provide homes close to employment and shopping centers. With 50 percent of the island’s jobs, the Līhu‘e Planning District is the center of vital services for the island: State and County government; Wilcox Hospital; Nāwiliwili Harbor; Līhu‘e Airport; Kaua‘i College at Puhi; the Kukui Grove Center; War Memorial Convention Center; Vidinha Stadium and Sports Complex; and the Kaua‘i Veterans Center. The district is also home to 80 percent of the island’s industrial businesses.

Hā‘upu Ridge frames the Līhu‘e District and divides it from the Kōloa District, its silhouette creating a vivid and memorable image. Other key landmarks are Kālepa Ridge and the gently-sloping Kilohana Crater. The important scenic qualities of these landmarks have been preserved.

The stream valleys which cross the Līhu‘e Plain, such as Hanamā‘ulu Valley and Hulē‘ia Valley, are maintained as important watercourses and floodplains. The valley wetlands filter stormwater flows, capturing erosion sediments before they reach the ocean.

The two highways which together circle Kaua‘i meet at Līhu‘e Town. Extending west, Kaumuali‘i Highway is a four-lane parkway, divided by a landscaped median. Extending east, Kūhiō Highway begins as a four-lane commercial street through Līhu‘e Town, transitions to two lanes through Kapaia and Hanamā‘ulu, and changes to a four-lane parkway north of the junction with Kapule Highway. Directing development to the Hanamā‘ulu-Līhu‘e-Puhi core, the County has maintained open space and important highway views between Puhi and the Knudsen Gap and in the Kālepa Ridge corridor. This corridor is maintained as a greenbelt, providing a transition between the island’s two largest urban centers.

The heart of **Līhu‘e Town** is the government and cultural center, surrounded by business and professional offices, shops and restaurants. Landscaping and well-marked pathways link the historic County Building, the Kaua‘i Museum, the County Civic Center, and the State Office Building in a campus setting. Parking is primarily provided in a new County-State parking structure located behind the County Office Building, allowing other parts of the campus to be opened up for pedestrian enjoyment. The County, the Kaua‘i Visitors Bureau, and the Kaua‘i Museum collaborate in staffing a visitor center, which provides orientation to Līhu‘e and to visitor attractions around the island.

Mauka of Līhu‘e Town, Kaua‘i Electric’s Līhu‘e Energy Center generates a portion of the island’s electrical energy. Generating capacity is added in small increments as needed to meet new demand or to replace older generators at Pt. Allen. Increased use of new fuel cell technology is reducing the need for centralized power generation and distribution.

Located next to Vidinha Stadium, the State Judiciary Center and the Police Station are linked with the town center by interior roads and bicycle/pedestrian paths. Frequent shuttle bus service provides easy circulation around “Greater Līhu‘e,” reducing the need to use automobiles for short trips. Similar architecture, landscaping and signage link the government centers, presenting a unified image. Knitting the two areas together, about half of the master-planned Līhu‘e-Hanamā‘ulu Infill project is developed.

Līhu‘e Airport is the central facility for both passenger and air cargo traffic. It accommodates new aircraft designs and supports the needs of both the visitor industry and exporters of agricultural products. The Kaua‘i Bus connects the Airport to Līhu‘e and other communities, allowing residents to leave their cars at home when they travel to Honolulu or the Neighbor Islands. Surrounding lands accommodate industrial businesses, including the County’s Reuse and Recycling Center. Large trees and tropical plantings accent the Airport Gateway, extending along both sides of Kapule Highway and Ahukini Street. Buffered by the Kaua‘i Lagoons Golf Course, the Running Waters and Kaua‘i Marriott Hotels provide ample visitor accommodations for the Līhu‘e area.

Nāwiliwili Harbor accommodates cruise ship stopovers and cargo operations. The cruise ship terminal provides one-stop shopping for visitor activities and tours. A landscaped walkway from the cruise ship terminal leads down to **Kalapakī Beach** and adjacent shopping and restaurants. Nāwiliwili Park is a haven for visitors as well as residents. Well-landscaped with canopy trees, the park provides restroom and recreational facilities. Well-maintained walkways link the park to the Kalapakī commercial area and the cruise ship terminal. **Niumalu** remains a quiet residential village, with low traffic volumes.

Wailua Golf Course continues to be an important part of Kaua‘i’s public recreation system, as well as providing for reuse of effluent for the Wailua Wastewater Treatment Plant. The expanded Lydgate Park integrates a wide variety of recreational facilities, including beach and picnicking areas, Kamalani Playground, a sports complex, and tent-camping areas.

Puhi is home to shopping and educational centers, surrounded by mature and newer residential neighborhoods. Kukui Grove Center offers a wide variety of businesses, meeting resident needs and attracting visitors as well. It also serves as a center for community events and performances. The surrounding residential community continues to build out slowly with a variety of single-family and townhouse projects. UH-Kaua‘i College offers undergraduate

programs, with a special focus on technology, communications, agriculture and culinary arts. The four-year campus also offers theater and exhibit space for performances and events. Undergraduate and graduate courses are offered through interactive video connection with other UH campuses.

6.3.3 Issues & Opportunities

Based on community feedback during the 1998-'99 General Plan Update process, this section outlines regional issues and opportunities that will be subjects for future community planning. Because most issues could be viewed as opportunities and vice-versa, they have been compiled as a single set.

Water Resources. To achieve full development around Līhu'e, additional water supply is needed for businesses and residential neighborhoods. The County Water Department and major landowners need to collaborate on developing new water sources and transmission facilities.

Sewer Service. While the new wastewater plant serving Puhi will grow to accommodate future development, the Līhu'e-Hanamā'ulu area is limited by the capacity of the County's Līhu'e wastewater system. Attracting new development to this area will require investment in the County wastewater system.

Renewal of Central Līhu'e. This has been a long-term goal, as reflected in the 25-year-old Līhu'e Development Plan report. The acquisition and renovation of old Līhu'e Shopping Center for modern County offices was a major step towards this goal. However, revitalization of the Central Līhu'e will require additional government investment and a careful plan to attract visitors and other sources of business – especially in light of the dispersal of new government offices to the Airport area.

Circulation. As the island's transportation hub, Līhu'e will need to cope with future automobile traffic and potentially higher levels of traffic congestion. Providing alternatives to the individual automobile will become increasingly important, particularly the development of convenient and efficient public transit services and safe routes and facilities supporting bicycle transportation.

DHHL Wailua Lands. The Department of Hawaiian Home Lands has acquired 345 acres mauka of Kūhiō Highway, at the northern end of Kālepa Ridge. The land abuts Wailua River State Park, and surrounds the Māla'e Heiau. Most of this property is suitable for urban development – potentially resort and commercial as well as residential. A portion of the property may be needed for the Kapa'a By-Pass Highway. This property offers many opportunities for DHHL, and its eventual use will be important to the County and this region of the island.

DHHL also owns property on the makai side of Kūhiō Highway, overlooking Lydgate Park south of the Holiday Inn hotel. The property has good potential as a future resort and may be developed by DHHL as an income-producing asset. As of 1999, DHHL had no specific plans for the site.

6.3.4 Land Use Map and Policies

The policy relating to the Līhu‘e District is found in the Land Use Map and in the text statements below. General Plan policies focus on islandwide and regional issues relating to urban land use, development, and roads. Detailed policies for specific areas may be established through community-based development plans.

6.3.4.1 Land Use Map

Designated on Previous General Plan Land Use Map. The previous General Plan Land Use Map included several areas designated for future urban development. These lands are contiguous to existing development with similar GP designations; some have received zoning. They are retained on the map. Major planned housing, resort hotel, and condominium projects in the Līhu‘e District have an estimated capacity for about 1,430 single-family residential units, 1,050 multi-family residential units, and 400 visitor units (see Appendix Tables C and D).

Designated Through General Plan Update. The revised General Plan Land Use Map incorporates two re-designations – one in Puakea and one at the Kaua‘i Lagoons (see Table 6-2). The Puakea re-designation encompasses most of the Hulemanu plateau, between Pū‘ali Gulch and Hulemalu Road. It does not include the area south of Hulemalu Road, which slopes down into Hulē‘ia Valley. The intent is to reinforce the policy of concentrating residential growth in “Greater Līhu‘e”.

The re-designation of lands at Kaua‘i Lagoons represents a reconfiguration of land uses within the existing property. Golf course lands are re-designated Open; the area designated Resort has been reduced, reflecting the actual land needed for a planned second hotel; and areas adjoining Kapule Highway and the Airport are to be re-designated to Urban Center, in order to provide for future industrial use.

**Table 6-2
Lands Re-Designated on the General Plan Land Use Map, Līhu‘e**

Location	Planned Use	Previous GP Land Use Map Designation	New GP Land Use Map Designation
Puakea / Hulemanu	Residential , industrial commercial, golf course	Agriculture, Open	Open, Residential Community, Resource
Kaua‘i Lagoons	Resort, industrial, golf course	Agriculture, Resort	Resort, Urban Center, Open

New Road Corridors. The Land Use Map also shows the planned extension of Ahukini Street mauka giving access to a planned roads bypassing Līhu‘e and Puhi. These roads will provide an alternative route between Līhu‘e and points west.

6.3.4.2 Policies

(a) Regional Growth and Public Facilities

- (1) New growth shall be concentrated in the Puhi-Līhu‘e-Hanamā‘ulu urban center.

- (2) Give high priority to the development of adequate water sources and facilities to support planned development in the Pūhi-Līhu‘e-Hanamā‘ulu urban center.
- (b) Puakea
- (1) The project shall be oriented to residential development at urban densities.
 - (2) Preserve views from the interpretive site overlooking Menehune Fishpond. Future buildings on the heights above the overlook shall be set back out of view.
 - (3) Development shall be set back from Pū‘ali Stream. Drainage and water quality issues shall be addressed through zoning.
- (c) Kaua‘i Lagoons. In addition to providing an area for industrial development, the intent is to provide for future expansion of the Līhu‘e Wastewater Treatment Plant, located within the site and to secure a long-term commitment for disposal of wastewater effluent through golf course irrigation.

6.3.4.3 Rationale for Map and Text Policies

Hulemanu Plateau. Re-designation of the Hulemanu plateau for future urban use is a logical extension of the Puakea master-planned community. Puakea is close to Līhu‘e, jobs and shopping. The project is served by a wastewater treatment plant, and a new middle school is being built to support the growing student population. The policy to preserve the bluffs overlooking Hulē‘ia Valley is intended to preclude development of steep lands and to preserve the visual quality of this important landform and the historic Alakoko Fishpond. Zoning should be granted based on the completion of prior project phases and the availability of public facilities.

Kaua‘i Lagoons. At Kaua‘i Lagoons, the reduction in Resort-designated lands more realistically reflects future plans. Providing for future industrial development on the margins of the property near the Airport is an efficient use of land and will provide competition in the industrial market. The County’s Līhu‘e WWTP is located within the property, near the Airport, and disposes of effluent within the golf course. The County needs to extend its agreement for effluent disposal. If more land will be needed for the WWTP, this provides a good opportunity to plan for future expansion.

6.4 KŌLOA-PO‘IPŪ-KALĀHEO

The Kōloa-Po‘ipū-Kalāheo district lies between Līhu‘e and the West Side. From Hā‘upu Ridge on the east, it extends to Wahiawa Gulch on the west. Encompassing most of Kaua‘i’s south shore, the district extends along the coastline from remote Kīpū Kai westward to Māhā‘ulepū, Po‘ipū, Kukui‘ula Bay, Spouting Horn, Lāwa‘i Bay, Makaokaha‘i Point and Nōmilu Fishpond, and Wahiawa Bay.

Located on the sunny south shore, the Kōloa-Po‘ipū-Kalāheo Planning District is home to Kaua‘i’s largest resort destination as well as some of the most active agricultural businesses. Hotels and resort condominiums are centered around the beaches and golf courses of Po‘ipū. Visitors are drawn to bicycling and ocean recreation activities, as well as attractions such as the Allerton Gardens at Lāwa‘i Kai, the historic towns. Large- and small-scale agricultural

activities are located principally in the sunny, well-irrigated coastal lands makai of Kūhiō Highway. Corporate agriculture operations, such as the A&B coffee plantation and the seed corn facility, are located in the area west of Kukui‘ula and the area south and east of Kōloa. Smaller farms and private agricultural parks occupy leased lands throughout the region. Range-fed cattle and other livestock are raised on the pasturelands around Lāwa‘i and Kalāheo, as well as on lands further mauka.

6.4.1 Community Assets

During the 1998-’99 General Plan Update process, Kōloa-Po‘ipū-Kalāheo residents and businesspeople attending community meetings listed the assets of their communities. The entire list was long and diverse and is available in the GP Update Working Papers. Following is a selection of assets related to the Kalāheo-Kōloa-Po‘ipū District, particularly the physical environment:

- Beaches and beach access
- Scenic mountain and ocean views.
- Native forests and ecosystems.
- Portions of undeveloped “wilderness” coastline.
- Abundance of trees.
- Historic character and plantation architecture of Kōloa Town.
- Lots of small businesses.

The special places named and drawn on maps by community participants include: Lāwa‘i Kai, Hyatt Hotel, Hā‘upu mountain range, Māhā‘ulepū, National Tropical Botanical Gardens, Pālama’s Pond, Nomila Beach, Glass Beach, Kukuiolono Golf Course and Japanese Gardens, Tunnel of Trees, Lauoho Road (Old Lāwa‘i Cannery), Mountain Park, and Waitā Reservoir. In addition, there are significant archaeological and historic sites throughout the district. Many of these can be found on the Heritage Resources Map.

6.4.2 Preliminary Planning District Vision

The following is a preliminary vision for the planning district in 2020, based on community and CAC input. While it is intended to provide some guidance for specific areas, it did not have the benefit of a detailed community planning effort.

Commercial development is concentrated in historic commercial areas, with the exception of the new shopping center across from Brydeswood, just west of Kalāheo. There is no strip commercial development.

Kaumuali‘i Highway is a four-lane parkway up to the turn-off to Kōloa-Po‘ipū at the Maluhia Road “Tree Tunnel.” Maluhia Road actually consists of two tree tunnels with four traffic lanes between them. The old tree tunnel and the parallel new tree tunnel roadway each carry two lanes of one-way traffic. Along the new road, trees are beginning to fill out and grow tall. There is also a paved bicycle route, which is separated from automobile traffic.

Scenic roadway corridors are maintained along Kaumuali‘i Highway from Knudsen Gap to Lāwa‘i and from Kalāheo to ‘Ele‘ele. In these corridors, agricultural fields and pastures lie in the foreground and distant views are preserved. Heavy landscaping screens older developments built too near the highway. Kōloa Road and other major roads in the district have landscaped shoulders with large canopy trees.

Kōloa's history is preserved through the plantation/western architecture in the town core, its historic churches, and other historic buildings. In the town core, renovations and new buildings follow the style of “Old Kōloa Town.” Shaded by building canopies and large trees, pedestrian walkways connect “pockets” of public parking at each end of town. The town provides Kōloa and Po‘ipū residents with vital services such as grocery stores, the Post Office, and the Neighborhood Center. Both visitors and residents are also attracted to Kōloa because of its unique shops, restaurants and taverns. Outside of town, the former Kōloa Sugar Mill is in active use as a light industrial center and a food processing and packing facility. Coffee, papaya and other export crops are being grown on former sugar lands.

Po‘ipū is a beach resort that accommodates both a residential community and the island’s largest Visitor Destination Area. Supported by the growing community of Kukui‘ula to the west and by historic Kōloa Town to the north, Po‘ipū is home to about 40 percent of Kaua‘i’s resort accommodations and is a major center of employment. Po‘ipū is known for its many outdoor recreation opportunities, afforded by its beaches, surf breaks, diving spots, golf courses, and tennis facilities. The number of visitor units has grown moderately since the year 2000, with condominium projects being added mauka of Po‘ipū Road. Bicycle tours use old agricultural roads belonging to Grove Farm and McBryde. Walkers, joggers and bicyclists enjoy the continuous pedestrian/bicycle pathway that runs along the shoreline from the Spouting Horn to Māhā‘ulepū.

Developing under a community master plan, **Kukui‘ula** has a mix of resort units and residential neighborhoods built around a golf course and wetland/lagoon. New urban development in the region is focused here, retaining other productive agricultural lands in cultivation. The roadway system within Kukui‘ula provides an alternative route for traveling west to Kalāheo and Port Allen, as well as a mauka-makai road paralleling Po‘ipū Road and joining Kōloa Road and Maluhia Road bypassing Kōloa Town.

‘Ōma‘o and **Lāwa‘i** are valued as small rural residential communities. Pasturelands, hills and stream valleys give variety to the landscape and create separation between settlements, preventing the appearance of sprawl. The small commercial area around the old Lāwa‘i Cannery is developed with shops and services that serve the nearby residential neighborhoods, as well as people traveling along Kaumuali‘i Highway or Kōloa Road. Edges around the existing communities are maintained, and sprawl is avoided. A scenic roadway corridor along Kōloa Road maintains separation between Kōloa and Lāwa‘i.

In **Kalāheo**, numerous homes dot the hillsides mauka of town and around Kukuiolono Park. The population of the Kalāheo is growing, as homestead and agricultural subdivisions created in the 1970’s and ‘80s are built out with homes. In the town center, business properties are gradually being renovated with building designs supporting the paniolo theme. Public parking lots help to relieve traffic congestion, and sidewalks encourage people to walk around town. Businesses have expanded mauka and makai of Kaumuali‘i Highway along the larger intersections. An active business association promotes the paniolo town

theme and sponsors an annual town celebration. On the western edge of town, near Brydeswood, a shopping center with a large grocery store helps to provide for the needs of a growing population.

A reminder of the region's sugar plantation history, the old McBryde Mill at **Numila** is used as a coffee processing plant. A visitor center and gift shop feature the history and agricultural products of the area. As one travels beyond Kalāheo towards Hanapēpē/Pt. Allen and the West Side, the broad agricultural fields of coffee, seed corn and diversified crops spread out across the coastal plain. Agricultural operations on these highly-productive lands preserve rural open space and expansive views of the landscape and the ocean.

6.4.3 Issues & Opportunities

Based on community feedback during the 1998-'99 General Plan Update process, this section outlines regional issues and opportunities that will be subjects for future community planning. Because most issues could be viewed as opportunities and vice-versa, they have been compiled as a single set.

Māhā'ulepū. Grove Farm has proposed low-scale resort development extending east from the Hyatt Regency to Māhā'ulepū, mauka of the shoreline area (which lies in the State Conservation District). Significant archaeological, historic and natural features are located in the shoreline area. The lands proposed for development are designated Open and Agricultural on the General Plan Land Use Map. Grove Farm has outlined the land areas proposed for re-designation but has not proposed any specific development or number of visitor units. Access to the Māhā'ulepū and Kawaihoa Bay beaches is currently allowed over unpaved canehaul roads, and use by both residents and visitors is increasing. Grove Farm's proposal calls for preserving significant cultural and natural resources, setting aside the shoreline area as a natural resource park, and improving public access to the shoreline. Community and environmental groups have expressed concern that development would lead to overuse and degradation and loss of special natural resources. They value the scenic qualities of the area and question the need to extend resort facilities further along the southern shoreline.

East-West Highway Transportation. The *Kaua'i Long-Range Land Transportation Plan* (LRTP) calls for widening Kaumuali'i Highway to four lanes through Kalāheo Town. The right-of-way for such a widening would require acquisition of properties in Lāwa'i and Kalāheo and would leave no room for a divider or landscaping. This project should be carefully evaluated in light of its effect on the towns and the loss of rural character. The LRTP also calls developing a new road connecting Po'ipū with Port Allen through the Kukui'ula Project. This would entail bridging the Lāwa'i Valley and possibly other stream gulches, depending on the route selected. If the by-pass route were extended to Nāwiliwili through the Hā'upu Mountains (existing canehaul road and tunnel) – also proposed in the LRTP, the road could relieve the need for widening through Lāwa'i and Kalāheo.

Wastewater Disposal. There is no County wastewater system serving the Kalāheo-Kōloa-Po'ipū Planning District. Currently, 13 privately-owned treatment plants serve the resort developments in Po'ipū. All but one dispose of effluent using injection wells. As these systems age, they are subject to failure. In addition, County septage pumping logs reveal that Kōloa Town, Lāwa'i Town and Lāwa'i Estates have chronic problems with failed individual

wastewater systems (septic tank or cesspool). Alexander & Baldwin has developed a 1.1 mgd aerated lagoon plant to serve the Kukui‘ula project and Kōloa Town. It could be converted into a County regional plant, serving the entire Po‘ipū area, but this would be expensive. What should be the long-range plan for wastewater treatment and disposal in this growing resort area?

Commercial Development in the Kōloa-Po‘ipū Corridor. As part of the Kukui‘ula project, A&B is planning to develop a shopping center along Po‘ipū Road. Commercial development is also being proposed on former Knudsen Trust land west of Kōloa Town, between Maluhia Road and the West Kōloa By-Pass. Finally, commercial development will also be attracted to the intersection of the East Kōloa By-Pass Road and Maluhia Road north of Kōloa Town. The location of new commercial development could affect existing businesses in Kōloa Town.

Proposed Residential Developments. Former Knudsen Trust lands along both sides of Kōloa Road are being proposed for “Rural Residential” on the General Plan land use map. If developed fully, a strip of residential development would join Kōloa, Lāwa‘i, and ‘Ōma‘o, replacing the open space corridor which currently separates those communities.

Traffic Circulation in Kalāheo. As the subdivisions of homestead lands build out, population and traffic will increase. This will place a heavier burden on local roads throughout Kalāheo. Road improvements and new connections between roads will be needed to ease traffic circulation.

Pedestrian/Bicycle Paths. Developing paths connecting Kōloa, Po‘ipū and Kukui‘ula is a long-term goal of the community. Parts of the pathway along the shoreline between Po‘ipū and Kukui‘ula are in place. Missing pieces of the shoreline pathway and other parts of the network need to be acquired.

6.4.4 Land Use Map and Policies

The policy relating to the Kōloa-Po‘ipū-Kalāheo District is found in the Land Use Map and in the text statements below. General Plan policies focus on islandwide and regional issues relating to urban land use, development, and roads. Detailed policies for specific areas may be established through community-based development plans.

6.4.4.1 Land Use Map

Designated on Previous General Plan Map. The previous General Plan Land Use Map included several areas designated for future urban development but not developed or only partially developed as of 1999. These lands are contiguous to existing development with similar GP designations; some have received zoning. They are retained on the map. Major planned housing, resort hotel, and condominium projects in the Kōloa-Po‘ipū-Kalāheo District have an estimated capacity for about 2,820 single-family residential units, 530 multi-family residential units, and 2,490 visitor units (see Appendix Tables C and D).⁴

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

Designated Through General Plan Update. The Land Use Map incorporated in this General Plan includes three re-designations, itemized in Table 6-3. Both the Brydeswood area and the west Kōloa Town areas were shown on the “Major Planned and Proposed Projects” map, prepared as part of the GP Update and first exhibited in 1998.

An area west of Kalāheo, extending north of Kaumuali‘i Highway, is recommended for re-designation from Agriculture to Residential Community. Known as Brydeswood, this area is intended to provide expansion of residential development as well as needed sites for commercial facilities and schools.

As part of the transition to the new GP Land Use Map designations, the original area of Kukuiolono Park is re-designated from Public Facility to Park. An additional area to the west, also owned by the McBryde Trust, has also been re-designated from Agriculture to Park in order to enlarge the park and provide for expansion of its golf course to 18 holes.

An area between the existing town and the planned West Kōloa By-Pass Road, south of Kōloa Road, has been re-designated from Agriculture to Residential Community.

**Table 6-3
Lands Re-Designated on the General Plan Land Use Map, Kōloa-Po‘ipū-Kalāheo**

Location	Planned Use	Previous GP Land Use Map Designation	New GP Land Use Map Designation
Brydeswood	Residential (≈ 220 SF units), commercial, public facilities	Agriculture	Residential Community
Kukuiolono Park (additional area)	Park, golf course	Agriculture	Park
West Kōloa	Commercial	Agriculture, Open	Residential Community

New Road Corridors. Also shown on the Land Use Map are corridors for two future roadways. The West Kōloa By-Pass is designed to provide an alternate route for traffic between Maluhia Road and Kukui‘ula, as that project builds out. The corridor runs along the western edge of Kōloa Town and turns east to join Maluhia Road, opposite the East Kōloa By-Pass. This corridor is schematic. A specific alignment will be established based on future planning.

The corridor extending through Kukui‘ula to the west, paralleling the south shore, would provide an alternate route between Po‘ipū and Port Allen, giving access to the West Side without traveling north to pick up Kaumuali‘i Highway.

6.4.4.2 Policies

(a) Regional Growth and Public Facilities

- (1) Assure that adequate transportation facilities are provided in conjunction with the future development of lands in the Kukui‘ula-Po‘ipū area and in the Kalāheo-‘Ōma‘o area.

- (2) Preserve the Maluhia Road tree tunnel. When more lanes need to be built, design them as a second, parallel tree tunnel.
- (b) Kōloa
 - (1) Improve circulation within and around Kōloa Town.
 - (2) In conjunction with development of the West Kōloa By-Pass Road, extend Kōloa Town to the west and provide for traffic circulation between the town and the By-Pass Road.
 - (3) Confine commercial zoning and uses to Kōloa Town; refrain from commercial development along Maluhia Road and the East Kōloa By-Pass.
 - (c) Po‘ipū-Kukui‘ula
 - (1) Provide additional beach park areas and ocean recreation facilities. Encourage alternative recreational activities on private lands.
 - (2) Develop a network of pedestrian and bicycle trails connecting Kōloa, Po‘ipū, and Kukui‘ula.
 - (3) Expand Kukui‘ula Small Boat Harbor to accommodate growth in recreational and charter boating.
 - (d) Brydeswood. Commercial, public facility and residential uses shall be buffered from view of the highway; and access to the commercial center shall be provided through an internal road.
 - (e) Māhā‘ulepū. Involve the community in planning for the future of Māhā‘ulepū. Planning should take into consideration various interests and factors, including but not limited to: the long-term need for managing Māhā‘ulepū lands to preserve their significant natural and cultural features; the owner’s desire to develop revenue-producing uses in a way that is sensitive to the area’s unique qualities; the need to secure permanent public access to the shoreline; and the potential to create a coastal park.

6.4.4.3 Rationale for Map and Text Policies

West Kōloa. The intent is to expand Kōloa Town to the west and provide for circulation between the town and the West Kōloa By-Pass, while retaining the ‘Ōma‘o Stream gulch and flood hazard area in Open designation. Zoning should not be granted until funds are committed for building the By-Pass Road.

Kukuiolono Park. Owned by the McBryde Trust, Kukuiolono Park functions as a public park and provides a key recreation resource for the Kalāheo area. The expansion would allow the Trust to enlarge the golf course to 18 holes and to expand other park uses. The Conservation District rules prohibit development of golf courses. In accordance with its use as an active park, the original park area should be redistricted from State Conservation to Urban or Agriculture by the State Land Use Commission.

Brydeswood. The intent is to provide land area contiguous to Kalāheo Town as a site for future commercial development and for the potential development of a school, within the setting of a residential community. This is a logical extension of the existing residential community. Larger commercial sites that would accommodate a grocery store and other shopping facilities are not available within the town. In addition, Brydeswood could also provide for a school site, if needed.

Māhā‘ulepū. This area needs a community-based planning effort that engages the landowner and local community interests, drawing upon the County government, the State DLNR, and various professional experts, as needed. Options for the area include some development in exchange for a park and/or preservation areas; or purchase of the land for a State park.

6.5 WEST SIDE

For purposes of the General Plan, the two planning areas Waimea-Kekaha and Hanapēpē-‘Ele‘ele are combined. This section summarizes urban development policy for the entire West Side, from Mānā to Wahiawa. Noted for its low-key development, dry and sunny climate, and rural lifestyle, the West Side offers surprising diversity: small-towns; broad expanses of agricultural land; the unique resources of the Waimea Canyon and Kōke‘e State Parks and mauka wilderness areas; the high-technology Pacific Missile Range Facility; and the unique coastal sand dunes at Barking Sands and Polihale.

The West Side maintains an active sugar plantation, preserving the vast green sugar fields and the working sugar mill at Olokele. The “historic sugar corridor” links the plantation and mill with the towns and other historic sites. Visitors come to the West Side to enjoy the historic sugar corridor, shopping in the small towns, the Waimea Canyon and Kōke‘e parks and trails, and ocean activities out of the small boat harbors. During the last 20 years, the number of visitor units has grown to 500-600 – still less than ten percent of the island total. Businesses and employment have increased due not only to increased visitor activity, but also to an expansion of high technology activity associated with PMRF, and expansion of aquaculture and diversified agriculture.

6.5.1 Community Assets

During the 1998-’99 General Plan Update process, West Side residents and businesspeople attending community meetings listed assets of their communities. The entire list was long and diverse and is available in the GP Update Working Papers. Following is a selection of assets related to the West Side, particularly the physical environment:

- Discrete communities – i.e., the open space between communities, no urban sprawl.
- Low density; no tall buildings on the West Side.
- Sunny climate – no rain.
- The mountains, for hunting and for gathering maile and mokihana.

- Ancient Hawaiian sites, rich heritage and history.
- Camping grounds and beaches.

The special places named and drawn on maps included: Salt Pond; the tidepools around Pū‘olo Point; taro lands in Waimea and Hanapēpē; Waimea Landing; Menehune Ditch; Swinging Bridge; Waimea Theater; Davidson’s Beach; Kōke‘e. Many of these can be found on the Heritage Resources Map.

Key economic assets include the Pacific Missile Range Facility and the State parks, both of which generate jobs and business for the West Side. PMRF has evolved into a world-class testing and evaluation facility which, in addition to military testing, attracts business from private high-technology companies. A number of companies with work at PMRF have established offices at the Waimea High-Tech and Visitor Center, itself a joint project of the Kaua‘i Economic Development Board and the County that opened in 1999. Continued federal funding is important to maintain PMRF. Also important is maintaining agricultural use and pumping of groundwaters in the adjoining State-owned mauka lands; without pumping and use of the groundwater flooding down through upland dikes, the Mānā Plain (and PMRF) would revert to wetlands.

West Side residents and businesses also value Kaua‘i Veterans Memorial Hospital as an asset in terms of both hospital access and providing jobs for community residents.

Many visitors travel through Waimea and Kekaha to reach Kōke‘e and Waimea Canyon. Many also take a North Shore boat tour out of the small boat harbor at Pt. Allen. Vision 2020 addresses opportunities for developing visitor business and jobs on the West Side through (1) emphasizing outdoor recreation and cultural tours (mountains and ocean); and (2) building inn- and residential visitor accommodations that fit in with the architecture and lifestyle of the West Side community.

6.5.2 Preliminary Planning District Vision

The following is a preliminary vision for the planning district in 2020, based on community and CAC input. While it is intended to provide some guidance for specific areas, it did not have the benefit of a detailed community planning effort.

The West Side prides itself on its small towns and lack of urban sprawl. Agricultural lands have been preserved from sprawling subdivisions. Retail shops and commercial business are contained within the towns. New resort development occurs in village clusters, hidden from the highway except at Waimea Plantation Cottages at Kīkīaola. Kaumuali‘i Highway between Hanapēpē and the Russian Fort affords travelers broad views of sugar fields and natural features, looking both mauka and makai.

‘Ele‘ele and Hanapēpē are the gateway to the West Side. As Kaumuali‘i Highway turns south and descends from the uplands of Kalāheo, views of the ocean open up together with views of the Hanapēpē River valley. Over the years, residential developments in ‘Ele‘ele and on Hanapēpē Heights have brought more families to the area. ‘Ele‘ele businesses serve local residents, while visitors are especially attracted to Old Hanapēpē Town. The historic character of the town is cultivated through careful renovation of historic buildings and

appropriate design of new buildings. Hanapēpē is a center for artists and craftspeople, offering numerous shops, galleries, and restaurants.

Port Allen is a center for industrial and port activities. Expanded and improved commercial harbor facilities accommodate the new generation of large cruise ships and their large passenger loads. Around the small boat harbor, new shore facilities and adjacent commercial developments attract visitors to patronize commercial fishing charters, boat tours and other ocean recreation activities, while still providing ample access to commercial fishermen and recreational boaters.

Waimea is the civic center of the West Side, home to the high school and other community facilities as well as to a variety of restaurants and retail stores. As the gateway to Waimea Canyon and Kōkeʻe State Parks, the town attracts a large amount of business from visitors as well as from residents. Waimea also attracts visitors because of its many historic sites. The community continually seeks to enhance its historic sites, to improve walking connections among the sites and businesses, and to reinforce the historic character of the town. Historic buildings are well-maintained, and new buildings are designed to be consistent with the historic architecture. Well-located parking and good walkways help to minimize traffic congestion. The expanded High-Tech and Visitor Center attracts a wide range of both mainland- and locally-based companies. An expanded and improved Kīkīaola Harbor, with adjacent commercial facilities, supports ocean recreation and fishing for both residents and visitors. Small-scale visitor accommodations at Kapalawai and Waimea bring jobs and prosperity, while contributing to the historic and open space character of the region.

Framed by the ocean and by large open spaces being cultivated in various agriculture and aquaculture crops, **Kekaha** retains its simple, small-town charm. Diversified agriculture companies and small farmers now cultivate the lands once used by the Kekaha Sugar Company. The town looks out on a well-maintained beach park, which has parking, comfort stations, and “oases” of plantings and picnic facilities. The beach is enjoyed by residents and visitors from all over the island. Small-scale accommodations provide hospitality for a limited number of visitors. Good pedestrian walkways connect the beachfront with town stores located a few blocks mauka. The renovated sugar mill houses shops, a museum about West Side culture and history, and an area devoted to the making and sale of hand-crafted items. A small industrial area, set apart from residences, provides opportunities for manufacturers and other industrial businesses. The parks and streets are landscaped with trees and other vegetation that is suited to the sunny, dry climate and can be maintained with minimal irrigation.

6.5.3 Issues & Opportunities

Based on community feedback during the 1998-'99 General Plan Update process, this section outlines some important regional issues and opportunities that will be a subject for future community planning. Because most issues could be viewed as opportunities and vice-versa, they have been compiled as a single set.

Potential Loss of Sugar Plantations. As of 1999, two sugar companies remained in business. At Kekaha, Amfac/JMB continues to cultivate State lands but will close its Kekaha Sugar Mill. In Makaweli, Gay & Robinson continues to grow sugar and to operate a sugar mill at Kaumakani. Due to unfavorable economic conditions, Amfac/JMB is phasing out of

sugar; and Gay & Robinson has expressed concern for the long-term viability of its sugar operations. If sugar goes, new crops will be needed. Seed corn and shrimp aquaculture are growing agricultural industries, but could only use a fraction of the land that would be available if the sugar plantations closed. Impacts would include loss of agricultural jobs. On the positive side, the West Side has some of the best agricultural lands in the state and would be in a good position to compete for new agricultural operations.

Additional Development of Makaweli Lands. During the General Plan Update, the Robinson Family Partners proposed long-range plans for developing additional coastal lands for resort and marina use, and lands mauka of the highway for residential use. (This could also be listed as an issue.) Resort developments could provide replacement jobs, in the event that Gay & Robinson closes its sugar operations. Conversely, selective development could provide an economic return that would allow the continuation of less profitable agriculture.

Kekaha Landfill. Kaua‘i needs to expand the Kekaha Landfill or develop a replacement landfill facility within the next five years. Selecting the appropriate option is an islandwide issue, balancing environmental impacts, costs of operation and other factors. Consideration should be given to the fact that a local community – Kekaha today, and possibly in the future – must accept the impacts of an islandwide problem and play host to a service that all Kaua‘i citizens enjoy.

Long-Range Use of Pū‘olo Point. Pū‘olo Point includes Native Hawaiian salt ponds and Native Hawaiian sites, as well as pristine tidepools and offshore coral reef formations. The salt ponds are actively used to make salt. The shoreline area is frequently used for marine science field visits. Community members value the area and advocate redeveloping it as a park. Port Allen Airport currently occupies the site. Known by its original name, Burns Field, it is a single-runway general aviation airport with minimal facilities. It is used for helicopter tours and recreational aviation. The State DOT has proposed construction of heliport facilities at Burns Field. Many community groups are opposed to increased helicopter operations, asking instead that the airfield be converted to park use.

Commercial Boating. These businesses are growing and will provide job opportunities on the West Side. There is concern, however, that fishermen and recreational boaters may be squeezed out. State small boat harbor facilities need to be expanded and improved.

Access to Mountains and Beaches. Between Wahiawa and Waimea, access to the mountains and beaches is controlled by private landowners. Allowing limited access to some beaches and some hiking trails could provide new recreation opportunities for residents and economic opportunities for landowners.

Kekaha By-Pass Road. A mauka by-pass road could relieve traffic on the beachfront highway, providing an alternate route for heavy trucks traveling to and from the landfill, as well as for other through traffic serving PMRF and agricultural operations. If the County decides to expand the landfill, building a by-pass road is one way to mitigate impacts and support improvement of the beachfront roadway.

Kōke‘e State Park. As of the late 1990s, the State Department of Land & Natural Resources was preparing a new master plan for Kōke‘e. Its attractiveness to “ecotourists” and the many recreational activities at Kōke‘e could support increased visitors and new business

opportunities on the West Side. However, park roads, wastewater disposal, trails and other infrastructure need to be upgraded to support expected increases in use.

6.5.4 Land Use Map and Policies

The policy relating to the West Side is found in the Land Use Map and in the text statements below. General Plan policies focus on islandwide and regional issues relating to urban land use, development, and roads. Detailed policies for specific areas may be established through community-based development plans.

6.5.4.1 Land Use Map

Designated on Previous General Plan Land Use Map. The previous General Plan Land Use Map included several areas designated for future urban development. These lands are contiguous to existing development with similar GP designations. Some have received zoning. They are retained on the Land Use Map. Major planned housing, resort hotel, and condominium projects on the West Side have an estimated capacity for about 1,670 single-family residential units, 180 multi-family residential units, and 600 visitor units (see Appendix Tables C and D).

Designated Through General Plan Update. The Land Use Map incorporated in this General Plan includes five re-designations, itemized in Table 6-4. All except the Pū‘olo Point change were shown on the “Major Planned and Proposed Projects” map, prepared as part of the GP Update and first exhibited in 1998.

Table 6-4
Lands Re-Designated on the General Plan Land Use Map, West Side

Location	Planned Use	Previous GP Land Use Map Designation	New GP Land Use Map Designation¹
Kīkīaola Makai (partly developed)	Visitor units (≈ 250 units)	Urban Residential	Resort
Kīkīaola Harbor	Boat harbor, commercial, industrial	Urban Residential, Open	Residential Community
Waimea Expansion	Residential (≈ 270 SF units), golf course	Agriculture	Residential Community, Open
Kapalawai	Visitor units (≈ 250 units)	Open	Resort
Pū‘olo Point	Future park	Public Facility	Open

The area makai of the highway, including the Waimea Plantation Cottages and extending to the harbor lands, is re-designated “Resort” from “Urban Residential.” The shoreline buffer area is designated Open. The entire area, including the existing Cottages and the shoreline buffer is approximately 120 acres. The intent in designating Kīkīaola lands Resort is to provide for expansion of visitor accommodations in Waimea.

The area surrounding Kīkīaola Boat Harbor (approximately 35 acres) is recommended to be designated Residential Community, to be used for various activities serving the harbor. The shoreline buffer area would be designated “Open.” The intent in re-designating Kīkīaola Harbor lands is to provide for expanded small boat harbor facilities and related uses.

Commercial and industrial zoning and uses should be oriented to serving harbor users and should complement Waimea Town Center commercial area, rather than establishing a competing commercial node.

Lands mauka of Kaumuali‘i Highway up to the toe of the bluff, lying between Waimea Town and Kōke‘e Road, are recommended for re-designation from Agriculture to Open and Residential Community. The intent is to provide for future expansion of Waimea Town by re-designating “islands” of land to Residential Community. Uses in the mauka portion of the area are intended to be primarily residential. Uses in the makai, lowland area are designated Open and are intended for golf course and other recreation uses. The lands nearest the hospital may be used for expansion of high-technology offices.

Lands at Kapalawai, between Kaumuali‘i Highway and the coast, are recommended for re-designation to “Resort”; provided that a shoreline buffer area shall be designated “Open.” The intent in designating these lands Resort is to provide a second site for inn- and residential-style visitor accommodations on the West Side. Resort structures shall be screened from view of Kaumuali‘i Highway.

As of 2000, the State Department of Transportation controlled Pū‘olo Point, where the Airports Division maintains a small airfield. The General Plan Land Use Map re-designates Pū‘olo Point as Open with the intent that it be redeveloped within the next 20 years as a natural resource park.

6.5.4.2 Policies

(a) Regional Growth and Public Facilities

Resort structures shall be inn- or residential-style architecture, similar in style to the Waimea Plantation Cottages.

(b) Waimea Expansion

- (1) The lowlands shall be designated Open in order to provide for a golf course, other recreation facilities, a drainage detention basin, expansion of the County park, and the disposal of treated water from the Waimea Wastewater Treatment Plant.
- (2) The slopes and crest of the bluffs shall be preserved free of buildings. Views of the bluffs from the highway shall generally be preserved.
- (3) Residential Community areas shall be developed with open space breaks.

(c) Kapalawai

The resort shall be set back and screened from view of the highway.

(d) Pū‘olo Point

The State government is requested to plan for the long-range decommissioning of the airport and redevelopment of Pū‘olo Point to a natural resource park.

6.5.4.3 Rationale for Map and Text Policies

Kikīaola Makai. The Resort designation confirms the direction already taken with the Project District zoning and the development of the Waimea Plantation Cottages. Increasing the number of visitor units will provide additional jobs and bring more business to Waimea. Kaua‘i Vision 2020 foresees increased inn- and residential-style visitor accommodations on the West Side.

Kikīaola Harbor. The State and Federal governments have budgeted funds for major improvements to the small boat harbor, including dredging, piers, and shoreline enhancement. Additional development is needed around the harbor. Plans call for parking, additional piers, support facilities for commercial fishing, a staging area for cruise ship tenders, and other harbor- and visitor-related commercial and industrial uses. Improving the harbor facilities will attract increased harbor use, harbor-related businesses, and jobs.

Waimea Expansion. There is little land around Waimea and Kekaha for future residential use. Most lands planned for future Residential Community development belong to the Department of Hawaiian Home Lands, which limits their use to Native Hawaiians. On the entire West Side, the only non-DHHL lands designated for future residential development are the A&B lands at ‘Ele‘ele Nani. Lying directly adjacent to Waimea Town, the designated lands constitute the logical area for future urban expansion. The mauka boundary of the Waimea Expansion is the elevation where the land breaks from a gentle slope into the steep bluff. Designated Open, the bluffs are an important land feature marking the edge of the coastal plain and establishing a sense of place; therefore, they should be preserved free of development. The golf course and other recreation activities provide amenities for the community, as well as complementing the low-scale resort use. In addition to affording disposal of wastewater effluent, preserving wetland area, and providing a stormwater detention basin, the Open-designated lowlands will ensure that open space and views are preserved along the highway.

Kapalawai. There is a proposal to construct 250 hotel units on 170 acres of land surrounding the old Robinson family estate. The density and scale of the proposed development is in keeping with the inn- and residential-style visitor accommodations foreseen in Kaua‘i Vision 2020 (Ch. 2). The resort will not be visible from the highway and will therefore preserve open space and views along the Scenic Roadway Corridor. In addition, the development will rehabilitate the historic Robinson residence and the fishpond that is located within the site. In addition to complementing other visitor attractions on the West Side, the Kapalawai resort would provide jobs and create business for Waimea Town.

6.6 ENHANCING TOWNS & COMMERCIAL AREAS

6.6.1 Overview

Historically, residential communities have been centered around towns where stores, the post office, churches, and other business and civic uses are located. Following the national pattern, Kaua‘i has also developed shopping centers of various types that are typically located on large sites outside of historic towns.

Kaua‘i residents place a high value on their historic small towns and local businesses. Efforts to preserve historic character and revitalize businesses are ongoing in Waimea, Hanapēpē, Kōloa, Kapa‘a and Hanalei. The character and vitality of these towns is found in several common characteristics:

- Historic buildings.
- Direct access from the highway or an arterial road.
- Buildings built up to the property line, with entrances directly from the public sidewalk.
- Buildings enclosing a small-scale “public space” consisting of the roadway, on-street parking, sidewalks, and storefronts.
- A variety of small storefronts along the sidewalk creating an interesting pedestrian experience.

On a parallel track, Kaua‘i continues to develop small and large shopping centers, as well as stand-alone “big box” stores such as Wal-Mart. Some are visitor-oriented, though most are oriented to residents and general business. The advantage of the larger shopping centers is access to ample parking and major stores. Kukui Grove is Kaua‘i’s largest mall and the only one of regional scale, with a full variety of department and specialty stores. Other large centers are anchored by major grocery stores, such as Safeway and Foodland. What they all have in common is large areas of parking separating storefronts from the public sidewalk – sacrificing pedestrian-friendliness for automobile accessibility.

6.6.2 Policy

Town Centers are shown on the General Plan Land Use Map as a red boundary within Residential Communities. They are intended to represent: (a) the historic town areas of Kōloa and Kapa‘a, which have been designated as special districts under the CZO and the Development Plan Ordinance; and (b) for other towns, the primary area for commercial and other non-residential uses.

(a) To enhance Town Centers, the County should:

- (1) Provide sidewalks or unpaved pedestrian pathways along the main roads, matching the character of the town.
- (2) Provide passive parks with trees, landscaping, and inviting places to picnic and relax.
- (3) Modify the CZO to allow historic buildings and other older structures on small commercial lots to redevelop, without imposing new building setbacks or off-street parking requirements.
- (4) Where parking is provided onsite, encourage placement of the storefront next to the sidewalk and parking the rear of the lot.

- (5) Provide on-street parking and/or develop a Town Center parking lot to serve older structures in towns that have critical parking needs. Consider using an improvement district or other funding mechanism where landowners contribute to funding the improvements.
 - (6) Assure that the aesthetic character of buildings blends in and matches the general scale and character of the town, through the development of town design standards
- (b) Wherever possible, new large retail centers or stores (to include shopping centers, grocery stores) shall be located contiguous to existing towns, within walking distance of residential development.
 - (c) When zoning is granted for new commercial development at the edge of a town, it should be sited on an axis perpendicular to the highway or arterial road and screened from the road by a landscape buffer. Access to the shopping center should be provided via an access road off of the main roadway.
 - (d) New “big-box” stores shall be allowed only in Urban Center-designated areas. “Big-box stores are generally those of 60,000 to 100,000 square feet or greater.

6.6.3 Implementing Actions

- (a) The Planning Department shall prepare amendments to the CZO providing design standards for commercial development in existing towns and new commercial projects, based on General Plan policy. The design standards shall be general in nature and shall address the size, scale and character of buildings. They shall take into account the operational needs of businesses, while giving precedence to regional character over chain branding.
- (b) More detailed design standards may be developed through a development plan or other study of a specific town or urban center. Detailed standards shall be adopted as a Special Treatment District.
- (c) The Planning Department shall review zone change applications involving the development of a major store or a shopping center for consistency with adopted General Plan, development plan, and CZO policies concerning commercial development.

7. Building Public Facilities and Services

In order to preserve rural character and provide for growth in jobs, businesses and households, the County will need to support development within planned urban centers and residential communities. Building basic services involves both the County and State governments. Following is a list of the services covered in this chapter. This chapter addresses the basic services that will be needed to support projected economic and population growth by the year 2020.

**Table 7-1
Public Facilities and Services and Primary Agencies**

Section	Service	Primary Agency	
7.1	Regional Highways and Roads	State Department of Transportation (DOT), Highways Division; and County Department of Public Works (DPW)	
7.2	Bus Transit	County	County Transportation Agency
7.3	Bikeways	State DOT and County DPW	
7.4	Water Supply	County	Board, Department of Water Supply
7.5	Wastewater Treatment	County	DPW, Division of Wastewater Mgmt.
7.6	Drainage and Flood Control	County	DPW, Division of Engineering
7.7	Electrical Power	Private	Kaua'i Electric (public utility)
7.8	Solid Waste	County	DPW
7.9	Parks and Recreation	State DLNR, Division of Parks, and County DPW, Division of Parks	
7.11	Police and Fire Safety	County	Police Department, Fire Department
7.12	Schools	State	Department of Education

The Planning Department's projections for the year 2020 are expressed as a low-to-high range. For purposes of long-range public facilities planning, agencies should use the high end of the range. As of 1999, the high end of the range consists of a daily visitor population of 28,000, a resident population of approximately 74,300, and total jobs of about 45,000. The projections will be revised by the Planning Department at least every five years and/or when new information becomes available – e.g., new Census information or new official State projections.

7.1 REGIONAL HIGHWAYS AND ROADS

7.1.1 Existing Highway System

Kaua'i's regional roadway system consists of two-lane roads connecting major developed areas on the island. These two-lane facilities vary in quality from a narrow, winding highway north of Hanalei to high-quality arterial highways, such as Kūhiō Highway, Kaunali'i Highway, and Kapule Highway. A short segment of four-lane, undivided highway is located in Līhu'e town and a three-lane section is located between Hanamā'ulu and Waipouli.

Kaua‘i is served by two major highways that connect in Līhu‘e. The southern and western parts of the island are served by Kaumuali‘i Highway (Route 50), which begins at its intersection with Kūhiō Highway (Route 56) in Līhu‘e, and ends at Mānā on the west shore of Kaua‘i. The east and northern sections of the island are served by Kūhiō Highway, which begins at its intersection with Kaumuali‘i Highway in Līhu‘e and ends at Hā‘ena on the Kaua‘i’s north shore.

The existing roadways serving the various regions of Kaua‘i are summarized below:

- **West Side** – Kaumuali‘i Highway, a two-lane State arterial road, is the primary highway connecting the West Side to Kalāheo, Līhu‘e, and points eastward. Kaumuali‘i Highway extends west from ‘Ele‘ele/Port Allen to Mānā. Kōke‘e Road is the main route providing access mauka to Waimea Canyon and Kōke‘e State Park.
- **Kalāheo-Po‘ipū-Kōloa** – Kaumuali‘i Highway is the primary highway connecting the Kalāheo-Po‘ipū-Kōloa Planning District to Līhu‘e on the east and to Port Allen/‘Ele‘ele on the west. Other major roads are County-owned. They include Maluhia Road, Po‘ipū Road, the Po‘ipū By-pass, and Kōloa Road.
- **Līhu‘e** – This region is the hub which connects the two belt highways, Kaumuali‘i Highway (serving west Kaua‘i) and Kūhiō Highway (serving east Kaua‘i). Kapule Highway has been constructed to bypass Līhu‘e Town, connecting the Airport, Harbor, and industrial areas with Wailua-Kapa‘a and other points on the east side.
- **Kawaihau** – Kūhiō Highway is the primary roadway serving the Kawaihau Planning District. It is a three-lane State arterial highway between its junction with Kapule Highway and Kamoā Road in Waipouli. Two lanes are northbound, and one lane is southbound; using contra-flow, the lane usage is reversed during the morning peak hour in order to accommodate Līhu‘e-bound commuters. Between Kamoā Road and Waikaea Canal at the edge of Kapa‘a Town, the third lane is used for left turns in both directions. In Kapa‘a Town, Kūhiō Highway becomes two lanes with on-street parking through the town center. From the north edge of Kapa‘a Town to Moloa‘a, Kūhiō Highway is a two-lane arterial highway.

In 1995, a temporary Kapa‘a by-pass route was opened to traffic during daylight hours. The route runs mauka of Kūhiō Highway, utilizing private cane haul roads. It has provided some relief for Kūhiō Highway traffic through Waipouli and most of Kapa‘a Town.

Major two-lane collector roads include Kuamo‘o Road (State) and Olohena Road (County), which provide access to the Wailua Homesteads area from Kūhiō Highway in Wailua and Kapa‘a. Kawaihau Road is a County-owned two-lane collector road connecting Kapa‘a Homesteads with Kūhiō Highway.

- **North Shore** – Kūhiō Highway is the only arterial road connecting the North Shore with the rest of Kaua‘i. Throughout the North Shore, Kūhiō Highway is

a two-lane road. The highway has been improved from Moloa‘a to Princeville. From Princeville to Hā‘ena, the road has narrow pavement widths, hazardous curves, and minimal shoulders. The narrow pavement and the ten one-lane bridges between Princeville and Hā‘ena give the roadway a unique character. Only the Lumaha‘i Bridge is a modern two-lane bridge. The one-lane bridges preclude large tour buses from entering Hanalei Town, as well as precluding the entry of heavy trucks and construction equipment.

7.1.2 Existing Highway Conditions

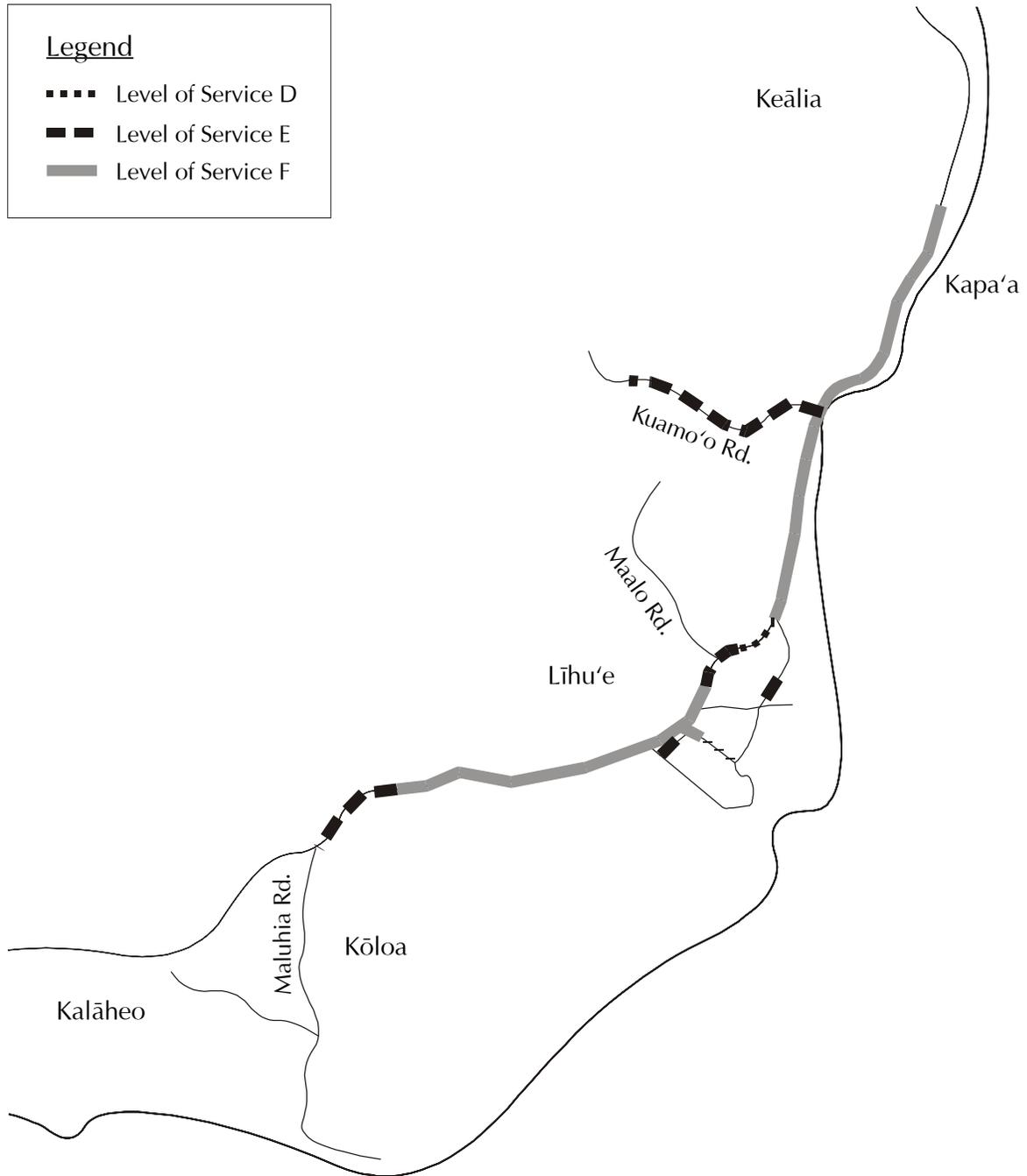
Existing traffic conditions are poor in the central part of the island. As documented in the *Kaua‘i Long-Range Land Transportation Plan* (1997), major roads in Līhu‘e, west to Maluhia Road, and east to Kapa‘a are rated Level of Service D, E or F for average daily traffic (ADT). (The Plan uses traffic data from 1995, but existing conditions are similar or worse.) Extremely poor conditions can be observed in Kapa‘a Town and during peak hours on Kaumuali‘i Highway leading into Līhu‘e. Collector roads, such as Kuamo‘o Road in Wailua, also suffer congestion during peak hours. Figure 7-1 shows the roadway segments that have existing deficiencies. Following is a summary of the needs

Curing the existing deficiencies would require widening Kaumuali‘i Highway between Līhu‘e and Maluhia Road, as well as providing a permanent by-pass for Kapa‘a. The estimated cost of building these currently-needed improvements is approximately \$97 million. This amounts to about 30 percent of highway funding needed through 2020.

Following is a brief summary of regional road conditions:

- **Kōloa-Po‘ipū-Kalāheo** – Residential growth in the Lāwa‘i-Kalāheo area, coupled with increased commuting to Līhu‘e, has caused traffic congestion on Kaumuali‘i Highway eastbound toward Līhu‘e during the morning peak hour. The level of service has declined to E and F. Improvements currently in process of design include (1) Phase 2 of the Kōloa By-Pass, connecting to Maluhia Road; and (2) improvement and signalization of the intersection of Kaumuali‘i Highway and Kōloa Road.
- **Līhu‘e** – The construction of Kapule Highway has improved traffic flow in the eastward direction. To the west, however, traffic flow into Līhu‘e is constrained by the limited capacity of the two-lane Kaumuali‘i Highway.
- **Kawaihau** – State traffic survey data for Kūhiō Highway indicate that the average daily volume exceeds capacity for the one southbound lane at Wailua, but that otherwise the highway was adequate to accommodate both daily and peak hour volumes. Traffic is generally congested along the Waipouli-Kapa‘a highway segment. The temporary Kapa‘a by-pass route has provided some relief for Kūhiō Highway traffic through Waipouli and most of Kapa‘a Town.
- **North Shore** – There is increasing traffic burden on Lighthouse Road through Kīlauea Town. There is a need for a by-pass road linking the Lighthouse Road north of the town center with the highway west of the town entry.

Figure 7-1
Regional Roadways with Level of Service D, E, or F, Kaua'i 1995



Source: *Kauai Long Range Land Transportation Plan*,
State Department of Transportation, 1997, Figure 5, Page II-19

7.1.3 New Facilities Needed by 2020

The magnitude of improvements needed by 2020 reflects already-existing road capacity problems as well as growth. If growth occurs without correcting existing deficiencies, then traffic congestion will worsen.

Section 1.6 discusses the 2020 growth projections and a traffic analysis was prepared for alternative 2020 growth scenarios as part of the General Plan Update project. Traffic modeling was performed on two lower-growth scenarios, in comparison with the high growth projection used in the *Kaua'i Long-Range Land Transportation Plan* (May 1997). As shown in Appendix Table A-1, the results were summarized in terms of the number and cost of road improvements that would be needed under the each of the three scenarios.

Following is a list of roadway improvements which, according to analysis of projected travel demand based on the Planning Department's 2020 Projections, would be needed in order to accommodate daily traffic at an acceptable level of service.¹: The total order-of-magnitude cost for this 20-year list of improvements is approximately \$320 to \$330 million.

Please note that the improvements listed below are based on traffic modeling only. They represent needed roadway capacity, not actual projects. Only a few have undergone actual physical planning studies – e.g., the planned widening of Kaumuali'i Highway between Līhu'e and Maluhia Road. Most have not. Some are probably infeasible, such as the widening of Kuamo'o Road to four lanes. Others, such as the six-lane highway, would be undesirable. As stated in Section 5.5, Scenic Roadway Corridors, the County's policy is to have no roads larger than four lanes. Even if it were technically feasible to build four lanes on Kuamo'o Road, such a project may never be constructed due to topography, historic sites, and scenic features.

The following list of improvements illustrates the location and magnitude of 2020 traffic needs. It is not an endorsement of the projects listed. Those projects that are recommended as part of the General Plan are noted with an asterisk.

- **Waimea to Port Allen Area** – Widen Kaumuali'i Highway to 4 lanes from Waimea to 'Ele'ele.
- **Port Allen to Po'ipū Area**
 - ❖ Widen Kaumuali'i Highway to a 4-lane divided roadway between Kalāheo Town and Kōloa Road.
 - ❖ Construct a new two-lane connector road between Port Allen and Po'ipū.**
- **Po'ipū to Līhu'e Area**
 - ❖ Widen Kaumuali'i Highway to a four-lane divided highway between Kōloa Road and Kūhiō Highway/Rice Street intersection.*

¹ Kaku Associates. *Alternative Projections of Traffic and Transportation Improvements for Kaua'i*. August 27, 1999.

- ❖ Construct a new 2-lane connector road between Po‘ipū and Kīpū.
- ❖ Widen Kōloa By-Pass/Maluhia Road to 4 lanes.*
- **Lihu‘e Area**
 - ❖ Construct a new 2-lane Lihu‘e-Hanamā‘ulu By-Pass Road.**
 - ❖ Widen Kapule Highway to a 4-lane divided roadway.*
- **Kapa‘a Area**
 - ❖ Widen Kūhiō Highway to a 6-lane divided roadway between Hanamā‘ulu and the Kapa‘a By-Pass Road.
 - ❖ Construct a new 4-lane Kapa‘a By-Pass Road.**
 - ❖ Widen Kuamo‘o Road to 4 lanes between Kūhiō Highway and Kamalu Road.
 - ❖ Widen Olohena Road to 4 lanes between the Kapa‘a By-Pass Road and Kūhiō Highway.
 - ❖ Widen Kawaihau Road to 4 lanes between Kūhiō Highway and Mailihuna Road.

Note: The LRTP recommends a special study of the Kapa‘a-Wailua roadway network and future transportation needs. Adding new roads may be preferable to the widenings proposed in the LRTP. As discussed above, the listing of a long-range improvement project only indicates a need for additional roadway capacity.

* These projects are consistent with the General Plan.

** The General Plan Land Use Map shows general corridors for these new roads.

In addition to the above, the following improvements may also be needed by 2020:

- **Po‘ipū to Lihu‘e Area** – Widen Po‘ipū Road to a 4-lane divided roadway between Lāwa‘i Road and the Kōloa By-Pass Road.
- **Lihu‘e Area** – Construct a new 4-lane Nuhou Road between Puhi Road and Nāwiliwili Road.
- **Kapa‘a Area** – Widen Olohena Road to 4 lanes between Kaapuni Road and the Kapa‘a By-Pass Road.

7.1.4 Status of Long-Range Plan

The *Kaua‘i Long-Range Land Transportation Plan* (LRTP, May 1997) was prepared by the State DOT in conjunction with the County Planning Department. Although the 1997 LRTP

and the General Plan share the 2020 planning horizon, the LRTP uses a State-generated set of economic and population projections that is substantially higher than the Planning Department's 2020 Projections.

The LRTP is prepared in accordance with federal requirements, as a prerequisite to receiving federal highway transportation funds. Any project for which the DOT might wish to budget federal funds – even if only for preliminary planning – needs to be listed in the LRTP. Given the critical impact of highway planning on Kaua'i's growth, however, and given the County's policy to maintain rural character, potential highway improvements listed in the plan should at least be assessed for feasibility and desirability.

The DOT is planning to prepare an updated land transportation plan that will extend to the year 2025. In this next long-range highway planning effort, it would be useful to analyze potential projects and rate them in terms of feasibility.

7.1.5 Policy

- (a) Use General Plan policies concerning rural character, preservation of historic and scenic resources, and scenic roadway corridors as part of the criteria for long-range highway planning and design. The goal of efficient movement of through traffic should be weighed against community goals and policies relating to community character, livability, and natural beauty.
- (b) Consider transportation alternatives to increasing the size and capacity of roadways. Alternatives include increased utilization of public transit.
- (c) Planning for the Kapa'a By-Pass should incorporate connector roads between the By-Pass and the coastal highway and between the By-Pass and roads serving the valley.
- (d) The State and the County should jointly undertake a study of the existing roadway network and the future transportation needs within the Kapa'a-Wailua homesteads area.
- (e) Reserve corridors for future roadways as shown on the General Plan Land Use Map. The corridors are conceptual only and are subject to environmental assessment and evaluation of alternative alignments.

7.1.6 Implementing Actions

- (a) In preparing the Long-Range Land Transportation Plan for Kaua'i, the State DOT should screen projects in the following ways:
 - (1) Consider County policies about preserving rural character and roadway design and propose alternative transportation improvements.
 - (2) Test the feasibility of proposed long-range improvements, especially those that pass through towns. Prepare schematic maps and cross-sections of proposed road widenings in towns in order to assess potential impacts on parking, sidewalks, and abutting properties
- (b) In preparing the Long-Range Land Transportation Plan for Kaua'i, the State DOT should develop realistic scenarios for executing projects during the 20-year planning

period, considering resource constraints, statewide needs for highway improvements, and the time needed to plan, design, and build the facility.

- (c) In order to provide better coordination between land use planning and road planning, the State should assess all Phase I highway projects and arrive at tentative preferred routes and designs, with input from the affected communities and road-users.

7.2 BUS TRANSIT

The Kaua‘i Bus operates a public (fixed route) bus service and a paratransit (door-to-door) bus service from Hanalei to Kekaha daily except on Sundays and County holidays. The paratransit service is for senior citizens, participants in certain agency programs, individuals at the Wilcox Hospital Adult Day Care Center, and residents with disabilities. Currently, the system has 30 buses servicing six bus routes (see Table 7-2). There is no service to the Līhu‘e Airport and limited service to Kōloa/Po‘ipū. In 1998, the Kaua‘i Bus averaged about 18,120 one-way riders per month.

Route Number	General Service Area
100	Kekaha to Līhu‘e
200	Līhu‘e to Kekaha
400	Hanalei to Līhu‘e
500	Līhu‘e to Hanalei
600	Līhu‘e to Kapahi
700	Līhu‘e Extension (Kukui Grove, Nāwiliwili, Rice Street/Eiwa Street, Kūhiō Highway, Hardy Street)

Source: County of Kaua‘i Transportation Agency.

New or additional services and facilities that would be needed to serve Kaua‘i’s projected 2020 population include:

- Increased bus service in Kōloa/Po‘ipū;
- Increased paratransit service in various regions of the island;
- Improvements to pullover areas along roadways in order to create safe and accessible bus stops; and
- Designated areas at housing projects (particularly those with elderly and disabled residents) that provide safe and accessible paratransit stops.

To meet current and future needs, an Airport stop should be established.

7.2.1 Policy

- (a) Continue to operate The Kaua'i Bus; seek to increase ridership and expand service, subject to the availability of funds.
- (b) Improve bus stops to increase safety and convenience of service.

7.3 BIKEWAYS

Kaua'i has 3.8 miles of existing bikeways. The island's existing bikeway system consists of a bike route along Kapule Highway in Līhu'e and a bike path along the coast fronting Kapa'a Beach Park.

7.3.1 Status of Long-Range Plan

Bike Plan Hawai'i (1994), a State master plan for bikeways, proposes another 173 miles islandwide. The timetable for development will depend upon construction feasibility (including right-of-way acquisition) and funding. *Bike Plan Hawai'i* defines the various types of bikeways. Each type of facility fulfills a specific as well as general function:

- **Bicycle Route** – Any street or highway so designated, for the shared use of bicycles and motor vehicles or pedestrians or both. Bike routes are of two types: a) a widened curb lane in an urban-type area; and b) a paved right shoulder in a rural-type area.
- **Bicycle Lane** – A portion of a roadway designated by striping, signing, and pavement markings for the preferential or exclusive use of bicycles. Through travel by motor vehicles or pedestrians is not allowed unless specified by law, rule, or ordinance; however, vehicle parking may be allowed for emergencies. Crossflows by motorists to gain access to driveways or parking facilities are allowed; pedestrian crossflows to gain access to parked vehicles, bus stops, or associated land use is allowed.
- **Bicycle Path** – A completely separated right-of-way normally designated for the exclusive or semi-exclusive use of bicycles. Through travel by motor vehicles is not allowed unless specified by law, rule, or ordinance. Where such a facility is adjacent to a roadway, it is separated from the roadway by a significant amount of open space and/or a major physical barrier (such as trees or a considerable change in ground elevation).

The Master Plan proposes the development of 173 new bikeway miles distributed along both the general circumference of the island as well as in the more urbanized section of Līhu'e, Kapa'a, and in the general thoroughfare along Maluhia Road, Po'ipū Road, and Lāwa'i Road which leads to Kōloa. Proposed bike routes would extend from the West Side to the North Shore. Bicycle lanes are planned for Līhu'e, and bicycle paths are proposed for portions of the North Shore and along the coastline from Nāwiliwili to Anahola. Of the 173 proposed bikeway miles, there are 136.4 miles of bicycle routes, 8.2 miles of bicycle lanes, and 28.4 miles of bicycle paths. These proposed facilities are intended to serve as the basis for future bikeway planning and development decisions.

Areas that will require special design considerations include, but are not limited to:

- **Kōloa-Po‘ipū-Lāwa‘i** – This area requires special attention because of the high level of resident and visitor traffic in and out of the area. Roadways along the Kōloa section of the island are relatively narrow past Maluhia Road on the way towards the Po‘ipū Road/Lāwa‘i Road juncture. Major road right-of-way acquisition and possible realignment will be required to provide for sufficient bikeway development.
- **Kapa‘a** – To accommodate future bikeway development along Kūhiō Highway, the road segment between Waipouli and Keālia would have to be widened along with acquisition of sufficient right-of-way.

There is good potential for a bike path that would span 16 miles along the coast from Anahola to Nāwiliwili. This proposed bike path would offer scenic views of the Kapa‘a-Līhu‘e coastline, and would offer an excellent alternative for bicyclists commuting between Kapa‘a and Līhu‘e. In order for future bikeway development to occur, however, major efforts will be needed to acquire sufficient right-of-way, and to gain public and landowner support for a continuous bike path.

- **Princeville to Hanalei Bay to Hā‘ena** – Bicycle access in this area will require special consideration given narrow rights-of-way, especially at Hanalei Valley with its numerous one-lane bridges, narrow roads, and periodic drainage problems. A fully developed bicycle facility in this area, however, would provide coastal access and scenic views that are unique to Kaua‘i’s North Shore.

The proposed additions to Kaua‘i’s bikeway system are estimated to cost a total of approximately \$39.3 million. About 103.3 miles would be under the jurisdiction of the State at a cost of \$22.5 million, and 63.1 miles would be under the jurisdiction of the County of Kaua‘i at a cost of \$15.2 million. Approximately 6.6 proposed bikeway miles could fall under either jurisdiction and would cost \$1.6 million.

7.3.2 Policy

Support funding to develop Kaua‘i’s bikeway system to provide for alternative means of transportation, recreation, and visitor activities (economic development).

7.4 WATER SUPPLY

7.4.1 Description of Existing System

The Department of Water (DOW) of the County of Kaua‘i is a semi-autonomous agency responsible for the management, control, and operation of the island’s municipal water system. DOW’s mission is to provide “safe, affordable, and sufficient drinking water.” DOW’s primary intent is to serve activities in urban and rural communities that have health and safety needs for pure water and fire protection.

DOW supplies water to 13 geographic service areas, each of which is served by a single system or linked subsystems (see Figure 7-2). The service areas are listed by district below:

- **West Side** – Hanapēpē-‘Ele‘ele and Waimea-Kekaha.
- **Kalāheo-Po‘ipū-Kōloa** – Kalāheo, Kōloa-Po‘ipū, and Lāwa‘i-‘Ōma‘o.
- **Līhu‘e** – Puhi-Līhu‘e-Hanamā‘ulu.
- **Kawaihau** – Anahola, Moloa‘a, and Kapa‘a-Wailua.
- **North Shore** – ‘Anini, Hanalei, Kīlauea-Waipake-Kalihiwai, and Wainiha-Hā‘ena.

There are several private potable water systems. The largest is operated by Princeville as a private utility. It serves the entire Princeville community from water sources located on mauka Princeville lands. The DOW contracts with Princeville to supply water to its small ‘Anini system.

The DOW also supplies potable water at a reduced price to a limited number of *bona fide* agricultural businesses. As of 1998, the DOW had approximately 300 agricultural users islandwide. DOW does not own or operate any of the island’s agricultural irrigation systems.

As of 1999, the DOW maintained 52 separate groundwater sources comprised of wells, shafts, and tunnels. There are 46 tanks ranging in size from 5,000 gallons to two million gallons, with a total storage capacity of approximately 18.5 million gallons. The DOW also has 16 booster pump stations. In 1999, the average daily demand for municipal water on Kaua‘i was approximately 10.6 million gallons per day (mgd). The maximum or peak demand was about 15.9 mgd. Table 7-3 shows 1999 water demand by district.

District	Average Water Demand (mgd)	Maximum Water Demand (mgd)
West Side	2.01	3.01
Kalāheo-Po‘ipū-Kōloa	2.83	4.24
Līhu‘e	2.53	3.80
Kawaihau	2.59	3.88
North Shore	0.65	0.97
Island Total	10.60	15.91

Source: County of Kaua‘i, Department of Water.

In general, Kaua‘i’s municipal water systems have adequate source and storage capacity to support the existing maximum water demand and provide storage for fire emergencies. Many systems, however, operate at or near capacity. As a result, DOW places certain operational restrictions on requests for new service. In order to accommodate future growth, most of the water systems would need to be expanded. Table 7-4 summarizes the status of existing water systems noting DOW administrative restrictions current as of 1998.

Figure 7-2
Water Service Areas, County of Kaua'i



As the notes to the table indicate, the calculation of facility capacity is based not only on existing water use, but also on future obligations. Often, an owner will pay the “Facility Reserve Charge” at time of subdivision, even though he has no current plan to build. That payment obligates the DOW to reserve capacity for water supply to the property. Restrictions reflect the level of capacity remaining, with one meter being equivalent to 500 gpd supply, the standard projection for a single-family dwelling. The restriction “Large Projects” generally means that DOW can support whatever use zoning allows but may require a large subdivision or other new development to provide either water source or storage capacity. In local areas, there may also be restrictions due to limited capacity of the water lines.

**Table 7-4
Status of Municipal Water Systems, 1998**

Water System or Sub-System	Water Source Availability¹	Water Storage Availability¹	Current Restrictions²
Kekaha	<i>Near Capacity</i>	Adequate	Large Projects
Waimea	AT CAPACITY	Adequate	1 Meter per Lot
Hanapēpē	AT CAPACITY	Adequate	Large Projects
‘Ele‘ele	Adequate	Adequate	Large Projects
Kalāheo	Adequate	Adequate	----
Lāwa‘i-‘Ōma‘o	Adequate	AT CAPACITY	2 Meters per Lot
Kōloa	Adequate	Adequate	----
Po‘ipū	Adequate	AT CAPACITY	2 Meters per Lot
Puhi	AT CAPACITY	Adequate	1 Meter per Lot
Līhu‘e-Hanamā‘ulu	AT CAPACITY	Adequate	3 Meters per Lot
Wailua Homesteads	<i>Near Capacity</i>	Adequate	----
Upper Wailua	<i>Near Capacity</i>	<i>Near Capacity</i>	2 Meters per Lot
Wailua-Kapa‘a Hmstds.	Adequate	Adequate	----
Anahola	AT CAPACITY	AT CAPACITY	No Meters Available
Moloa‘a	AT CAPACITY	AT CAPACITY	No Meters Available
Kīlauea, East	<i>Near Capacity</i>	AT CAPACITY	1 Meter per Lot
Kīlauea-Kalihiwai	<i>Near Capacity</i>	AT CAPACITY	5 Meters per Lot
‘Anini	AT CAPACITY	AT CAPACITY	1 Meter per Lot
Hanalei	<i>Near Capacity</i>	Adequate	----
Wainiha-Hā‘ena	<i>Near Capacity</i>	AT CAPACITY	3 Meters per Lot

¹“Availability” = Total Facility Capacity *minus* (Existing Use + Obligations for Future Service)

²“Current Restrictions” are DOW’s administrative limits for approving new meters and subdivision applications.

Source: County of Kaua‘i, Department of Water, 1998

7.4.2 New Facilities Needed by 2020

In long-range planning for water supply, the Department of Water will project future water demand based on the County’s economic and population projections. The DOW will use projected demand for each of its systems to estimate additional source and storage capacity required for each of its systems.

While finding and tapping groundwater may be difficult in some parts of the island, Kauaʻi has potential water sources in the millions of gallons per day. According to the U.S. Geological Survey Report, *Water Budget for the Island of Kauaʻi, Hawaiʻi* (1995), the estimated amount of water recharging Kauaʻi’s aquifers was 652 million gallons per day (mgd). By comparison, total pumpage of groundwater was 46 mgd, most of which was for agricultural use. Because there is no threat of exceeding sustainable levels of withdrawal from Kauaʻi’s aquifers, no part of Kauaʻi has been declared a Groundwater Management Area by the State Commission on Water Resources Management (CWRM).

Water supply in Līhuʻe is constrained by a lack of new groundwater sources. For geologic reasons, the Līhuʻe area is not favorable for development of water wells, which typically have been low yielding. This difficult problem constrains future development of Grove Farm’s Puakea master-planned project, the Līhuʻe-Hanamāʻulu Infill project, and redevelopment within Līhuʻe Town itself. Both Grove Farm and Amfac/JMB are obligated under their zoning ordinances to provide water source, transmission and storage facilities. Both control large acreages of mauka lands, but face the same geological constraints. One possibility under consideration is the use of surface waters which would require the construction and operation of water treatment plants.

Throughout the North Shore, water supply available from County water systems is limited. Expansion of these systems requires development of new sources and major improvements to transmission and storage facilities. Princeville Corporation plans to develop additional water sources and system improvements to serve future development of its properties.

7.4.3 Status of Long-Range Plans

In 1987, the State enacted the Water Code (HRS Chapter 174C) in order to protect, control, and regulate the use of the State’s water resources. The Code is implemented through the Hawaiʻi Water Plan which addresses water conservation and supply issues throughout the state. The Hawaiʻi Water Plan has various components, among them Water Use and Development Plans to be prepared by each county. The DOW prepared and submitted the *Kauaʻi Water Use and Development Plan*, and it was adopted by the State Commission on Water Resources Management in 1990. The Commission has not adopted an update prepared in 1992. Instead, the Commission plans to adopt a new “Integrated Resource Plan” framework to guide future County planning.

The water planning mandated by the State is broad and all-encompassing. It asks the DOW and the County to plan comprehensively for all water use and development on Kauaʻi, including agricultural water demand, irrigation systems and privately-owned potable water systems. The counties may need funding from the State in order to take on such broad water planning responsibilities.

In 1999, the DOW initiated preparation of a new 20-year master plan to address specifically and in detail the expansion and rehabilitation needs of Kauaʻi’s municipal drinking water systems. “Kauaʻi Water Plan 2020” will include existing and future water requirements, a financial plan, capital improvements plan, capital rehabilitation plan, and a rate study. The master plan effort includes modeling of future water demand for each water system. Future demand will be based on the Planning Department’s year 2020 economic and population projections. The planning effort will also address level-of-service standards, set service areas,

and review the cost of extending service to new areas. It is scheduled for completion in the latter part of 2000.

It will be important to coordinate Water Plan 2020 with the General Plan. DOW has been willing in the past to extend its systems to support agricultural subdivisions. This has resulted in long pipeline networks serving sparsely populated areas, which is uneconomic in terms of operation costs over revenues and in terms of long-term capital rehabilitation needs. In addition, as much as 40 percent of the potable water supplied by the Kīlauea-Waipake-Kalihiwai system is used for agricultural irrigation at subsidized rates. The General Plan responds to this problem through the policy to recognize Agricultural Communities and control future development of new tracts of Agriculture-zoned land. Conversely, the DOW should actively support development in areas planned for urban expansion.

7.4.4 Policy

- (a) Develop a long-range plan to guide expansion, improvement, and rehabilitation of County water systems.
- (b) Coordinate planning of future water system development and rate structures with General Plan policies and guidelines.
- (c) Support compact development by giving priority to water supply improvements for existing and planned Urban Center, Residential Community, and Resort areas, while also supporting development in already-established Agricultural Communities.

7.4.5 Implementing Actions

- (a) DOW should develop and update a long-range water systems plan to guide decisions on the Capital Improvement Program, improvement financing, and water rates.
- (b) DOW should establish water service area boundaries and criteria to limit expansion of service outside of areas zoned for urban use or agricultural community use.
- (c) DOW should establish criteria for funding CIP projects that give priority to system expansion and improvement in areas designated as Urban Center, Residential Community and Resort, while also supporting development in already-established Agricultural Communities.

7.5 WASTEWATER TREATMENT

7.5.1 Description of Existing Facilities

Wastewater treatment varies from community to community. The County provides service to a few communities; other communities and larger developments have private treatment systems; and many residents and businesses rely on Individual Wastewater Systems (IWSs) – i.e., cesspools and septic tank systems.

In general, wastewater disposal is adequate and does not pose a significant public health or environmental threat. The State Department of Health (DOH) regulates the operations of both County and private wastewater systems. The effluent of most County and private plants

is used for irrigation. Service needs include a few areas of Kaua‘i that have failing individual IWSs, but commercial pumping services keep these from becoming a significant problem.

7.5.1.1 County Sewer Service

The County operates four wastewater systems serving Waimea, Hanapēpē-‘Ele‘ele, Līhu‘e-Hanamā‘ulu, and the Kūhiō Highway corridor between Wailua and Kapa‘a (see Figure 7-3).

As of 1999, these systems served 3,700 business and residential customers, only one-fifth of the number of County water service accounts. County systems are operated by the Division of Wastewater Management, Department of Public Works. Table 7-5 summarizes the County systems and their status.

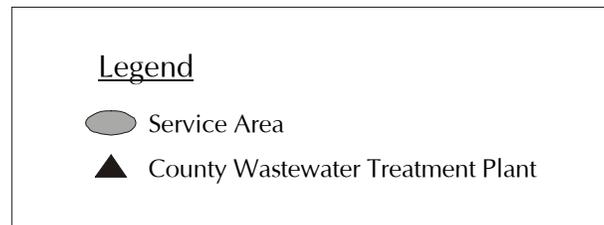
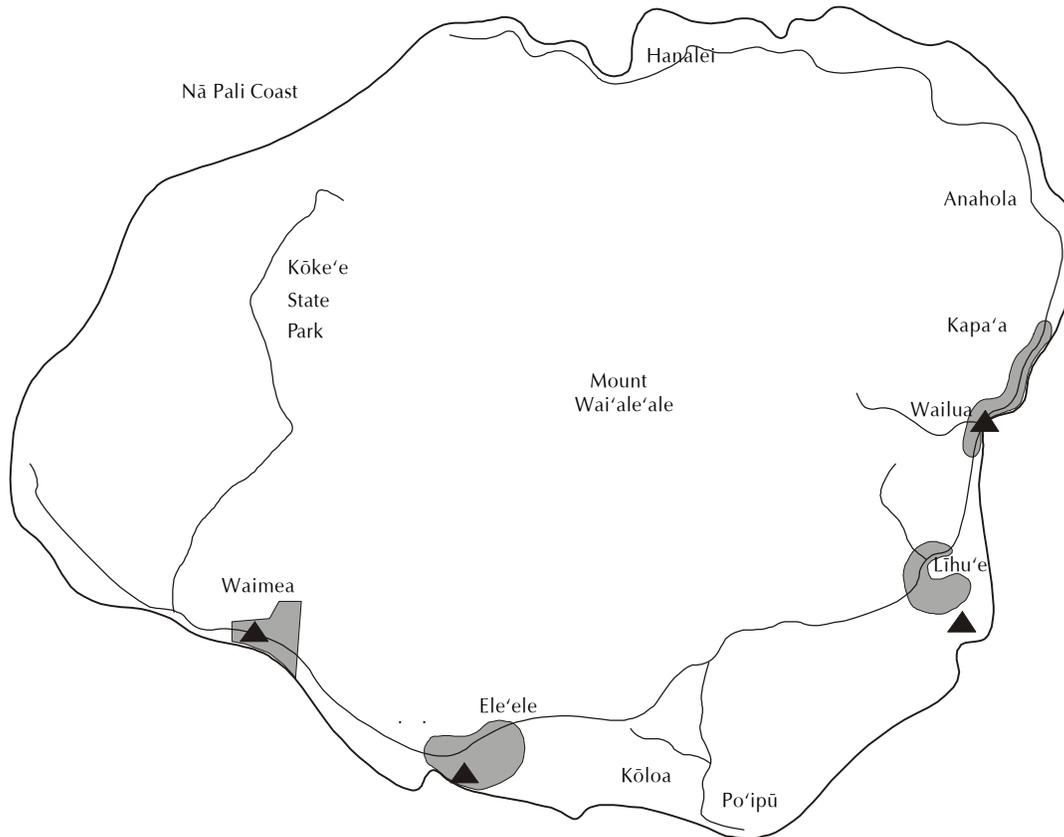
**Table 7-5
County Wastewater Systems and Status, 1999**

Treatment Plant	Service Area	Design Capacity	Status
Waimea	Waimea business district, about 90% of Waimea residences	0.3 mgd	Operating at full capacity; inability to accept additional users limits new development in Waimea. Future plant expansion is limited by availability of land and users for effluent disposal via irrigation. Kekaha remains unserved.
‘Ele‘ele	Port Allen, ‘Ele‘ele, Hanapēpē business and residential areas	0.8mgd	Operating at 50% of capacity. Expansion completed in 1995 to accommodate existing and planned development. Collection system needed to extend service to Hanapēpē Heights. Further expansion will be needed to accommodate future Dept. of Hawaiian Homelands development on Hanapēpē Heights.
Līhu‘e	Līhu‘e, Nāwiliwili and Hanamā‘ulu (most areas)	2.5 mgd	Operating at approximately 50% of capacity. Plant sufficient to serve existing unsewered areas, but funding is needed to construct collection and transmission facilities. Plant expansion will be needed to accommodate Amfac Līhu‘e Infill development, but is limited by availability of land and users for effluent disposal via irrigation.
Wailua	Wailua-Waipouli-Kapa‘a corridor along Kūhiō Hwy	1.5 mgd	Operating at approximately 50% of capacity. The transmission system has been extended to provide future service to Kapa‘a but collection systems makai of the highway have not been built. Capacity is being reserved for future development of vacant resort lots in Waipouli.

Source: County of Kaua‘i, Department of Public Works, Division of Wastewater Management, 1999.

All but the Waimea plant have substantial amounts of available treatment plant capacity, but this capacity is already committed to existing and planned developments. Capacity at the ‘Ele‘ele plant is intended to serve the existing residential community on Hanapēpē Heights and new residential development in ‘Ele‘ele Nani and the ‘Ele‘ele industrial area.

Figure 7-3
Wastewater Systems, County of Kaua'i



Note: Does not include private wastewater treatment systems.

Capacity in the Lihū'e plant is being reserved for the Hanamā'ulu triangle, Molokoa residential subdivision, existing residential and industrial areas off lower Rice Street, and a second hotel at Kaua'i Lagoons. Collection systems are needed in the areas off lower Rice Street. Available capacity in the Wailua plant is reserved to extend service to areas between the highway and the ocean, but collection systems are needed.

7.5.1.2 Private Sewage Treatment Plants

Over 30 private sewage treatment plants serve small and large individual developments, such as Kaua'i Community College, the Hyatt Regency Hotel, Lāwa'i Beach Resort, and Outrigger Kaua'i Beach. Owners of large master-planned developments have formed private utility companies to operate collection, treatment and disposal systems in Princeville, Puakea-Puhi, and Kukui'ula. Princeville operates a system serving the entire Princeville community. In addition, some hotels, apartment complexes and businesses operate package treatment systems primarily serving their own properties.

7.5.1.3 Individual Wastewater Systems

Most residential areas and some commercial areas are not sewered and rely instead on individual wastewater systems (IWSs), for which the State DOH administers permits. Historically, most IWSs were constructed as cesspools. DOH changed the regulations, however, so that septic tank systems are now required. There are no communities with cesspool problems threatening public health, but some areas with poor subsurface conditions experience overflow problems.² Private firms provide pump-out service on a fee basis to properties with failed or over-taxed systems. Septage disposal records from 1997 show some septage pumping in all communities. Records show frequent pumping on properties in Kōloa Town and Lāwa'i Valley Estates, indicating that these areas may need a treatment system in the future.

7.5.2 New Facilities Needed by 2020

New wastewater treatment facilities will be needed by 2020 to support potential new urban development in the areas listed in Table 7-6.

Future Development	Plan for Wastewater Treatment	Effect on County System
Kikīaola, Waimea	Developer to partner with County to fund plant expansion.	Secure long-term agreement for disposal of effluent on Kikīaola lands.
Kapalawai Resort, Robinson Family Partners	Developer to provide package plant onsite.	None
Hanapēpē Heights, DHHL	DHHL to fund. No plans to date. Possible DHHL plant at Hanapēpē; possible expansion of County 'Ele'ele plant.	Possible joint development of collection system for existing residences and new DHHL development.

² State of Hawai'i, Department of Health; and County of Kaua'i (prepared by KRP Information Services). *Water Quality Management Plan for the County of Kaua'i*. November 1993.

Table 7-6, continued
Wastewater Treatment Plans for Future Developments

Future Development	Plan for Wastewater Treatment	Effect on County System
Kukui'ula, A&B Properties	Private WWTP constructed, to be expanded as needed.	None
Vacant Po'ipū Resort & Residential Lands	Developers to provide facilities. No plans at present.	None
Puakea-Puhi, Grove Farm	Private WWTP constructed, to be expanded as needed.	None
Līhu'e-Hanamā'ulu Infill, Amfac/JMB	Plan to construct a private WWTP.	None
Vacant Kapa'a Urban Center lands	No plan as yet.	Possible need to expand Wailua plant.
Anahola, DHHL Master Plan	Plan to construct a WWTP onsite.	None
Kilauea Town Expansion	Developer to provide a package plant onsite.	None
Princeville	Operates own wastewater utility. Will expand existing or build new facilities within Princeville.	None

The *Water Quality Management Plan for the County of Kaua'i* (November 1993) discusses the need to create a regional system serving Kōloa Town, which has subsurface disposal problems, and Po'ipū, where smaller visitor properties and residences are currently served by a variety of small private plants. Because these plants dispose of effluent by ground injection, there is a long-term risk of polluting adjacent ocean waters. The long-range concept is for the County to develop the regional system by expanding the Kukui'ula sewage treatment plant and assuming responsibility for plant operation. Effluent disposal is a critical factor hindering development of a regional system.

7.5.3 Status of Long-Range Plans

7.5.3.1 County Facility Plans

The County prepares facility plans for its systems as needed to support plant expansions or new collection systems. As of 1999, the DPW has no facility plans for future plant expansions. It is uncertain when the County will budget funds and prepare plans for the planned new collection systems to serve existing developed areas in Hanapēpē, Hanamā'ulu, Līhu'e and Kapa'a. Following is a summary of potential needs for future plant improvements.

In Waimea, it appears feasible to expand the County plant to support new development at Kīkīaola if the DPW can continue to dispose of effluent – and increase flows – in the low-lying agricultural fields mauka of the highway. Under the Kīkīaola master plan, this area is planned for a future golf course and constructive wetland that would accept wastewater effluent.

In ‘Ele‘ele, the largest area of planned new development lies on the western portion of Hanapēpē Heights. The feasibility of expanding the ‘Ele‘ele plant needs to be weighed against the feasibility of a new plant at Hanapēpē.

In Līhu‘e, the DPW has an agreement with the Kaua‘i Lagoons to accept up to 1.5 mgd of effluent per day for irrigation of its golf course. To increase service to the design capacity of 2.5 mgd, the DPW is planning to construct injection wells. However, this will not be sufficient to accommodate the Līhu‘e-Hanamā‘ulu Infill project. As with other large master-planned projects, the developer is required to provide a wastewater treatment system. The 1.5 mgd private plant would be sited on Industrial-zoned lands near the Airport. Various alternatives are being considered for disposal of effluent.

The County has taken no action to implement the 208 Plan’s recommendation for a regional system to serve Kōloa-Po‘ipū-Kukui‘ula. A&B has constructed a WWTP to serve its Kukui‘ula project, and the site is large enough to be converted to a County regional facility in the future. There are two constraints. First, the existing developed areas that need wastewater service are Kōloa Town and the smaller resort properties at the eastern end of the Po‘ipū coastal area, both some distance from the Kukui‘ula plant. The larger hotels nearer Kukui‘ula (Sheraton, Waiohai) use the Kiahuna private system, and Hyatt has its own system.

7.5.3.2 Strategic Planning for Wastewater Systems

Most County wastewater plants were originally constructed using federal grant funds provided through the Clean Water Act. Such grants are no longer available. In addition, costs of operating the plants are high. Under terms of the federal construction grants, the County is mandated to charge user fees sufficient to provide adequate operations, maintenance, and equipment replacement.

It is difficult to increase sewer rates to the relatively small portion of residents and businesses that receive County service. The environmental benefits of wastewater treatment systems consist of reducing the potential risk of groundwater contamination and coastal water pollution. Wastewater treatment also allows for high-density use in urban areas. Given that all Kaua‘i residents share the benefits, it seems fair that costs should be shared islandwide.

In general, the County is reluctant to expend scarce CIP resources on expanding municipal wastewater systems. Each new plant increases the County’s liability to provide future service and meet State and Federal plant operation requirements. In some areas, such as Wailua Houselots, residents have opposed sewer service because of connection costs and ongoing service charges.

The State DOH requires that wastewater treatment be provided for any project that exceeds 50 dwelling units. Although not stated as formal policy, it has been the County’s practice to require through zoning that the land developer build and operate the wastewater treatment system. In some areas served by County systems, however, planned development may not be feasible without County investment.

Given that the County manages four disparate systems and is not seeking to develop an islandwide program, it would not be productive to develop a “master plan” for County wastewater service. Instead, it would be more useful to focus on strategic issues and funding

priorities, in order to give direction to the program and provide a higher level of certainty for developers and potential service customers. Some key strategic issues:

- The County has unused capacity in three of its four plants. This is an asset. Connecting additional customers would increase revenues to the wastewater program at marginal cost for increased plant operations. There are two options: (1) proceed with constructing planned collection systems to serve existing developed areas; or (2) provide plant capacity to new development on a first-come, first-served basis. Facility charges could be reformulated to recapture a larger portion of the cost of plant expansion.
- In Kōloa-Po‘ipū-Kukui‘ula, the County has deferred planning for a regional system. In fact, the cost, increased County liability, and physical challenges of a regional system (how to dispose of large flows) may make it infeasible. Instead, the County might investigate the potential of building two smaller package plants to serve Kōloa Town and east Po‘ipū.
- In general, the County appears to have abandoned the model of a single, large regional wastewater system in favor of many dispersed systems. This makes sense for several reasons. First, smaller flows can be more readily reused as irrigation for a nearby golf course or agricultural operation. Second, the costs of transmission are minimized. Electricity costs for pumping long distances can be expensive. If the County were to adopt this as a formal policy, then it could reorient its own planning and give clearer guidance on community plans and major new development proposals.
- The availability of CIP funding for County wastewater system improvements is uncertain. A long-range County CIP financial plan could weigh the competing CIP needs of various County services and programs and set approximate funding levels for each. This would give the wastewater program practical information and would assist in making strategic decisions, such as whether or not to build planned collection systems or to abandon those plans and use plant capacity to stimulate new development.
- Should future users bear the capital cost of building new collection systems (i.e., through an improvement district), or should the County finance such improvements using tax revenues? County financing would share the burden of paying for wastewater treatment more broadly.

7.5.4 Policy

- (a) The County and private utilities shall develop and operate wastewater collection, treatment and disposal systems as necessary to serve urban areas for the purposes of safeguarding public health, potable water supplies, and the quality of stream and ocean waters.
- (b) The County and private developers should coordinate planning, development, and operation and management of wastewater systems in accordance with long-range facility plans.

- (c) Wastewater effluent shall be reused for irrigation wherever economically feasible, in order to avoid costly and disposal facilities and to conserve potable water supplies.
- (d) The County shall seek to develop additional means of wastewater diversion and reuse, such as a graywater program.
- (e) The County shall develop a policy plan to guide future decisions regarding the allocation of unused treatment plant capacity, the expansion of municipal wastewater systems, and improvement priorities.

7.5.5 Implementing Actions

- (a) The Department of Public Works (DPW) shall prepare a long-range wastewater policy plan, to be adopted by the County Council and to be updated every five years.
- (b) The DPW shall prepare and update facility master plans as needed.
- (c) The DPW shall work with the State Department of Health to develop new methods for reusing wastewater, such as a graywater program.

7.6 DRAINAGE AND FLOOD CONTROL

Kaua‘i Vision 2020 (Chapter 2) describes a future in which “Kaua‘i streams run freely in their natural courses . . . Because of careful land management, Kaua‘i is free of concrete-lined drainage channels.” The Vision and the policy statements that follow describe Kaua‘i’s present situation as well as goals for the future. The policy statements on drainage also reinforce the policy statements on watersheds and water quality, found in the previous chapter “Caring for Land, Waters and Culture.”

The County manages urban stormwater runoff through the Drainage Standards applied to new developments by the Department of Public Works. Because most communities are situated on the coastal plain, the County must cope with upland runoff from conservation and agricultural lands. The County manages flood hazards through the Flood Control Ordinance, based on flood zones mapped by the Federal Emergency Management Agency. The County has not to date prepared a Drainage Master Plan, as required under the existing General Plan and the Comprehensive Zoning Ordinance.

In past, the chief purpose of most drainage ordinances was to convey stormwater quickly and efficiently away from urban areas, providing the maximum amount of land for development. Under this philosophy, the City & County of Honolulu and the County of Maui have built numerous concrete channels discharging stormwaters to the ocean. Such channels are extremely efficient at delivering large amounts of polluted runoff to coastal waters.

Kaua‘i’s Department of Public Works has historically followed an unwritten policy to avoid construction of concrete-lined channels. DPW’s original objective was to avoid the expenses and liabilities of maintaining structured channels. As a bonus, Kaua‘i has avoided the environmental consequences of channelization. As of 1999, Kaua‘i was virtually free of lined channels. The DPW has constructed only one, which resulted from litigation. Two have been constructed within private subdivisions.

7.6.1 Status of Long-Range Plans

The 1984 General Plan mandated the preparation of a “Drainage Master Plan.” While such a plan has not been prepared, in 1998 the DPW initiated a project to revise the County’s drainage standards. The intent of the revision is both (a) to provide adequate flood protection that is not structure-oriented and (b) to reduce polluted runoff in accordance with State and Federal nonpoint pollution management policies. These standards will guide future development and aid in avoiding future problems.

According to the DPW, there are existing drainage problems in Wailua-Kapa‘a, Nāwiliwili and Po‘ipū. Rather than prepare a “master plan” for the island, the DPW intends to focus on specific problem areas and watersheds, with the objective of developing strategic plans that specify preventive as well as remedial actions.

7.6.2 Policy

- (a) Establish zoning and subdivision regulations that (1) strictly limit development on lands that are steeply-sloped and/or have highly erodible soils, in order to prevent flooding, landslides and nonpoint pollution; and (2) strictly limit development on shoreline lands within coastal flood hazard areas or susceptible to shoreline erosion.
- (b) Focusing on the most heavily impacted urban watersheds, evaluate flooding and erosion risks and develop long-range plans for drainage and flood hazard management. Establish an ongoing program to clear streams and drainageways and maintain their capacity to accommodate stormwater flows.
- (c) Establish erosion control and drainage regulations that incorporate best management practices for controlling nonpoint source pollution.
- (d) Regulations and drainage improvements shall be consistent with the following principles:
 - (1) Use natural drainageways for storm runoff waterways wherever possible.
 - (2) Avoid channelization or alteration of natural drainageways.
 - (3) Avoid diversion of storm runoff from one basin to another.
 - (4) Do not replace natural drainageways with structured, closed systems, except at road crossings.
 - (5) Require detention basins in new developments, in order to maintain pre-development stormwater flow rates. Requirements shall be based on the two-year storm but may be increased.
 - (6) To conserve land, develop detention basins in conjunction with park or open lands and design for multiple uses.
 - (7) Protect buildings from the 100-year flood.

- (8) Where there are no downstream drainage systems or if the downstream systems lacks sufficient capacity, require retention facilities sufficient to maintain 100-year storm flows at pre-development rates and conditions.

7.6.3 Implementing Actions

- (a) The Planning Department shall review and revise the Subdivision Ordinance and the Comprehensive Zoning Ordinance, including the regulations for the Open District and the Constraint Districts, in order to: (1) assure effective regulation of steeply-sloped lands and drainageways; and (2) eliminate ineffective regulations and reduce unnecessary application requirements.
- (b) The Department of Public Works shall identify critical urban watersheds and develop strategic Flood Prevention and Drainage Plans to guide future County actions.
 - (1) Develop plans incrementally, evaluating watersheds according to the potential extent of future problems and the potential to achieve viable solutions.
 - (2) Each Flood Prevention and Drainage Plan should provide a capital improvement program, estimated project costs, project priorities, and schedule.
- (c) The Department of Public Works shall review and revise the Grading Ordinance and the Drainage Standards to incorporate the policies above and other management measures for reducing nonpoint pollution.
 - (1) The Department shall submit a bill for a Drainage Ordinance to the County Council for adoption.
 - (2) The revised grading and drainage regulations shall be consistent with current State and Federal policies, such as those set forth in the *Hawai'i Coastal Nonpoint Pollution Control Program Management Plan* and the *Hawai'i Nonpoint Source Management Program Update*.

7.7 ENERGY

7.7.1 Overview

The County's chartered electrical public utility, Kaua'i Electric (KE), builds and operates power generating and distribution systems. In 2000, a locally-owned cooperative sought to purchase Kaua'i Electric from Citizens Utilities. The Gas Company (GASCO) distributes LP-Gas by truck, primarily to commercial and industrial customers. The State Public Utility Commission (PUC) regulates the rates and operations of KE and GASCO.

While not a service provider, the County is a major electric power consumer and plays important roles in consumer advocacy and in administering development regulations. The County staffs an Energy Coordinator position in the Office of Economic Development. This position is responsible for developing energy efficiency in County government operations; advocating on behalf of Kaua'i consumers before the Public Utility Commission; planning energy emergency preparedness; and providing training and grant-funded programs through the County Energy Extension Service.

In the long term, energy generation and use on Kaua‘i will be affected by the cost of imported fuels, technological innovations in energy generation, and deregulation of energy utilities. The cost of imported fuel will drive innovation and encourage energy self-sufficiency. Future development of fuel cell technology and cost-effective photovoltaic generation may enable households and businesses to generate much of their own electrical energy. This in turn may reduce the need for distribution systems. It may also enable broad use of net metering, by which individual establishments can sell energy back to the utility.

Purchase of fuel constitutes a substantial flow of money out of the local economy. Replacement of imported fuel with renewable energy produced on Kaua‘i would provide jobs and retain money to circulate and strengthen the island’s economy. Opportunities include generating energy from solid waste or from biomass crops; producing liquid fuels from biomass crops; and developing solar and wind generation facilities, either large- or small-scale. Developing additional hydro-electric power should be considered.

7.7.2 Kaua‘i Electric System

7.7.2.1 Existing System

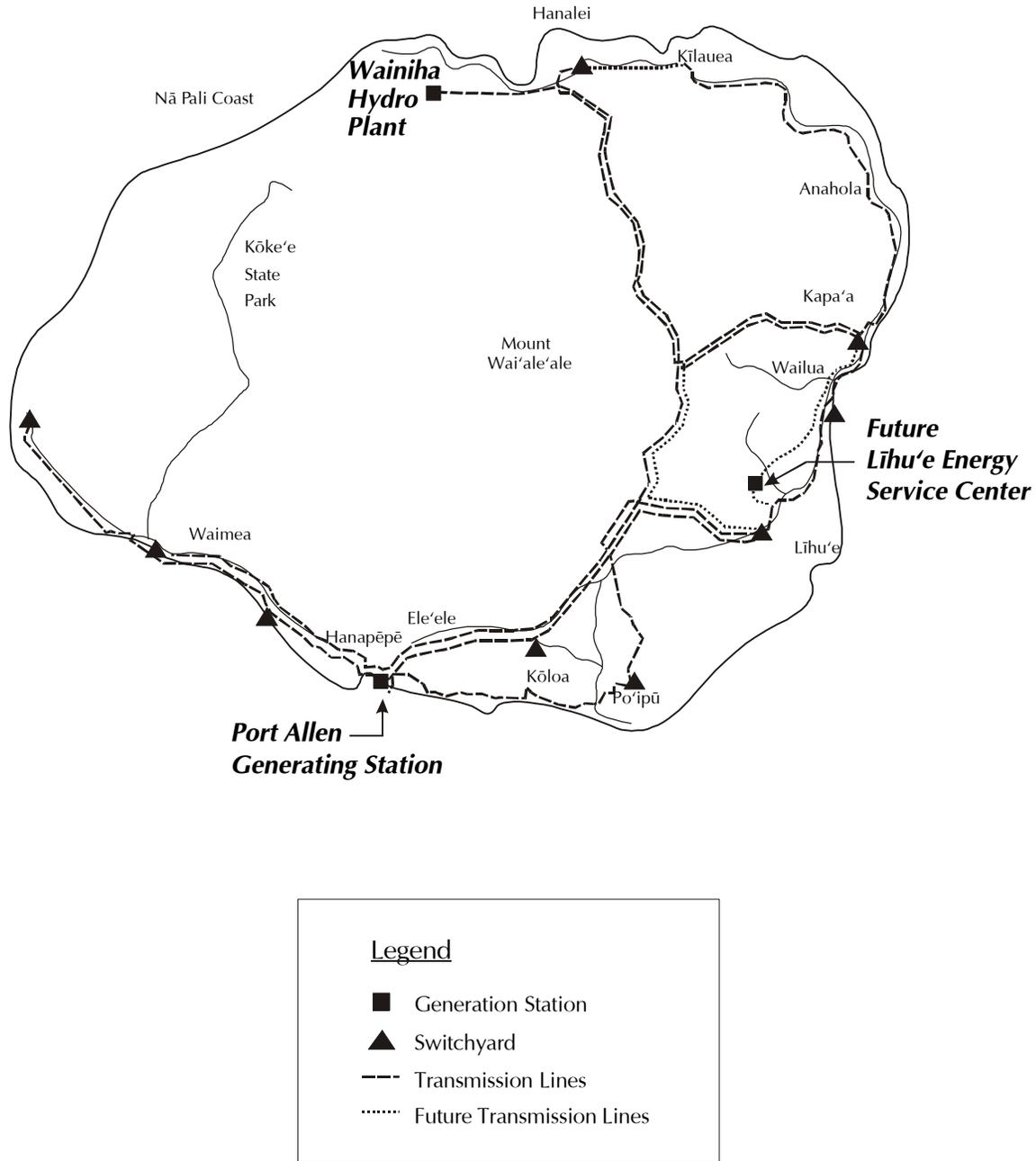
In 1999, Kaua‘i Electric served approximately 29,300 customers. KE provides four levels of basic service: residential, commercial, large power, and street lighting. Major load centers are Kapa‘a-Wailua, Līhu‘e, and Kōloa-Po‘ipū. KE’s existing transmission system is shown in Figure 7-4.

The total firm electrical generating capacity on Kaua‘i is presently slightly over 110 megawatts (MW). KE generates its own power from a 96-megawatt (MW), diesel-fired power plant located at Port Allen and purchases 14 MW of firm capacity from Līhu‘e Plantation. The utility also purchases non-firm power from Island Coffee and the Gay & Robinson sugar mill. This nominal amount is acquired under “surplus power” contracts with the companies and cannot be relied upon to meet peak demand. These non-firm sources generate a total of approximately 4.1 MW of power. About 20 percent of KE's power output is generated from renewable resources including bagasse, a sugar cane by-product, and hydropower.

The following briefly describes how electric power is distributed to the various regions of Kaua‘i:

- **West Side** – The main transmission line for the West Side extends from Pt. Allen to Mānā along Kaumuali‘i Highway, including double circuits between Pt. Allen and Kekaha. Switchyards are located at Port Allen and Kekaha, with substations in Mānā and Kaumakani.
- **Kalāheo-Po‘ipū-Kōloa** – This region is served by four transmission circuits – one extending east from Pt. Allen and another extending south from Kaumuali‘i Highway. There is a switchyard in Kōloa and a substation in Lāwa‘i.

Figure 7-4
Electric Transmission System, County of Kaua'i



Līhu‘e – This area is served by four transmission circuits from KE’s islandwide transmission system. Although Līhu‘e Plantation provides power to the system, the primary source of electricity is the Pt. Allen Generating Station.

- **Kawaihau** – This region is served via a tap off of the mauka transmission line that connects the Wainiha Hydroelectric Plant with Port Allen. This tap provides power via the Kapa‘a Switchyard to Kapa‘a Town and other developed coastal areas, as well as to residential communities in Kapa‘a and Wailua homestead areas. Kapa‘a Switchyard is also linked to the Lydgate Substation and the Līhu‘e Switchyard.
- **North Shore** – This area is served by electrical power provided by transmission lines along the Power Line Trail supplemented by power from the Wainiha Hydroelectric Plant.

The County has the ability to guide the location, siting, and design of electrical generation and transmission facilities through a combination of land use policies, zoning regulations, and design guidelines. Electric and other energy-related utilities are considered industrial uses. Generating stations involve heavy machinery and trucking, create air pollution, use water for cooling or generating processes, and impact scenic resources. For these reasons, siting and impact mitigation are carefully considered in the planning, environmental assessment, and permitting of new generating facilities.

Overhead transmission and utility lines affect the scenic quality of viewplanes and open spaces, as well as the visual appearance of urbanized areas. View impacts can be reduced by simple measures such as painting transmission towers and utility poles a color that visually blends with the natural landscape. A complete though costly solution to visual impacts is to place utility lines underground. During the 1998-1999 General Plan Update, the Kaua‘i Outdoor Circle and other community members expressed interest in undergrounding. Responding to the concerns of various communities around the State, the Public Utilities Commission has opened a docket to examine the visual, technical and cost issues related to placing electrical lines underground. In recognition of the cost and feasibility factors involved, the CAC deferred this issue to the PUC.

7.7.2.2 New Facilities Needed by 2020

Kaua‘i Electric is proposing to develop the Līhu‘e Energy Service Center, which will provide sufficient space for incremental additions to meet power generation needs over the next 50 years. The Center would also decentralize power generation (which is now concentrated in Port Allen), and provide greater reliability in avoiding widespread power failure. Within the 20-year horizon, KE’s current plan is to add generating capacity at the Līhu‘e Energy Service Center in 2002 and 2012. Aside from lines serving the Līhu‘e Energy Service Center, new transmission lines will be needed only in the Līhu‘e-Wailua corridor and from Kīlauea to the Princeville substation. No other transmission lines are currently planned through 2020. New lines are shown schematically in Figure 7-4.

7.7.2.3 Status of Long-Range Plan

Under State PUC regulations, Kaua‘i Electric is required to prepare a long-range (20-year) Integrated Resource Plan (IRP), to be updated every three years. The IRP guides KE’s

service delivery and capital improvement programming. The current long-range plan guiding KE is the *1997 Integrated Resource Plan*. An update is scheduled for submittal in 2000.

7.7.3 Policy

The following general policies provide guidance to the County in areas in which it has decision-making capacity and also supports state-level policies and PUC-mandated laws:

- (a) Promote renewable energy sources to reduce Kaua‘i’s dependence on imported fossil fuels, taking into consideration cost, reliability, and environmental impacts.
- (b) Actively promote solar water-heating and other energy-saving devices such as roof insulation and natural ventilation and cooling of buildings.
- (c) Develop low-cost financing programs to enable households and small businesses to invest in solar water-heating and other energy-saving technologies.
- (d) Minimize health, safety, cultural and scenic impacts of electrical power installations. In particular, seek opportunities and economic methods to render power generation facilities and transmission lines inconspicuous in order to preserve and enhance a park-like appearance throughout the Garden Island.
- (e) Require new buildings to incorporate economically-feasible design and equipment to save energy.
- (f) Establish a set of measurable goals to evaluate energy conservation and self-sufficiency.

7.7.4 Implementing Actions

The County government shall:

- (a) Actively participate in preparing the long-range Integrated Resource Plan with the franchised electric power public utility company; advocate in favor of transition to technologies, facilities, and practices that use renewable fuels, conserve nonrenewable resources, and reduce payments for and reliance on imported fuels.
- (b) Maintain an energy advocacy/coordination function in County government.
- (c) Advocate on behalf of Kaua‘i residents and businesses before the State Public Utilities Commission with regard to the regulation of utility companies and the setting of electrical rates. Attend especially to the needs of lower-income residents and small businesses.
- (d) Continually review and revise the Building Code to mandate energy efficiency in buildings.
- (e) Invest capital funds to make County facilities energy-efficient and to reduce operating costs.

The County shall work with the electric power public utility company(nies) to:

- (a) Site and design power generation plants and transmission facilities to blend with the natural landscape and to avoid impacts to important historic sites and viewplanes. Solutions include constructing underground facilities when economically feasible. While other factors are also important in site selection and design, the County of Kaua'i places a high value on historic sites and views of the natural landscape.
- (b) Develop a proactive process for siting and designing power generation plants and transmission lines that incorporates early and detailed consultation and negotiation among the utility, the County government, community stakeholders, and the general public.

7.8 SOLID WASTE

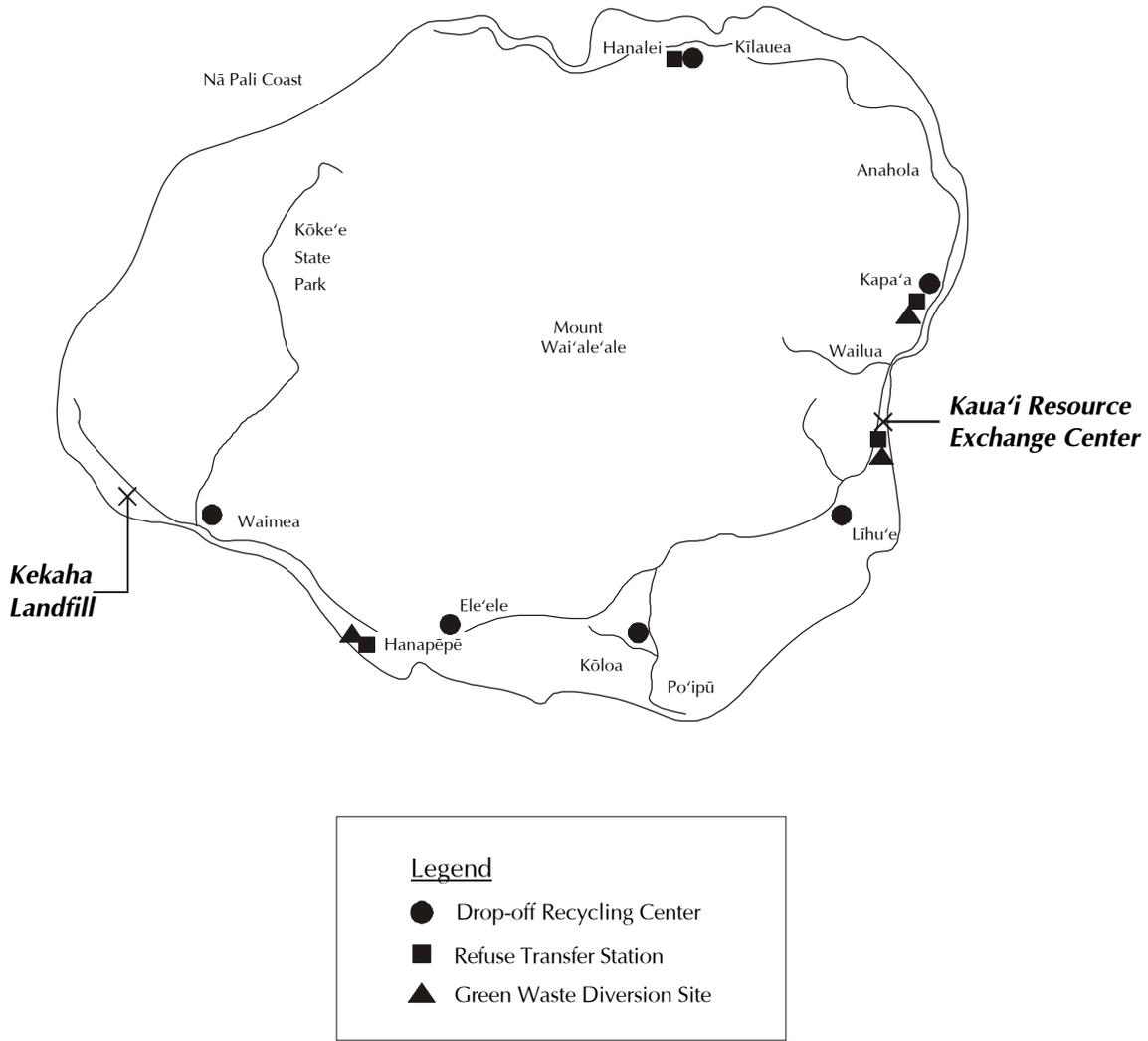
The County government plays the primary role in solid waste management, guided by federal and state laws and regulations. The County provides direct service to the public by collecting solid waste and operating facilities and programs for reuse and disposal. With the exception of hazardous materials, the County is also responsible for regulating the disposal of solid waste. The 2020 Vision (Chapter 2) foresees the County of Kaua'i having the lowest per capita rate of waste generation and the highest rate of reuse and recycling statewide.

7.8.1 Description of Existing System

Kaua'i County maintains an islandwide system of solid waste collection and disposal which serves its resident and visitor population. County solid waste facilities and services are administered by the Road Construction and Maintenance Division of the Department of Public Works. The County has one solid waste coordinator and one clerk who are responsible for the overall management of the landfill and administration and budgeting of solid waste programs. The County's solid waste program has its own annual operation cost supported by the Solid Waste Enterprise Fund and subsidized by the General Fund. Components of Kaua'i's solid waste system are briefly described below and shown in Figure 7-5:

- **Kekaha Landfill Phase II** – This facility began operation in 1993 and is the primary disposal site for solid waste on Kaua'i. In FY 1999, the Kekaha Landfill Phase II accepted approximately 67,590 tons of solid waste. This facility also serves as a drop-off point for segregated recoverable waste. During FY 1999, approximately 10.6 tons of recoverable materials (e.g., cardboard, newspaper, glass, aluminum cans, batteries) and 1,000 gallons of used oil were recovered and/or recycled from the Kekaha Phase II operations.
- **Refuse Transfer Stations** – The County operates four refuse transfer stations which are located in Hanalei, Kapa'a, Līhu'e, and Hanapēpē. In FY 1999, a total of approximately 24,930 tons of solid waste was collected at all stations and transferred to the Kekaha Landfill Phase II. In addition, the Hanalei, Kapa'a, and Hanapēpē stations receive used oil through the Do-it Yourselfer (DIY) program. The Līhu'e station also receives scrap metal, white goods, and greenwaste. The latter is also received at the Kapa'a and Hanapēpē station.

Figure 7-5
Solid Waste Facilities, County of Kaua'i



Kekaha Debris Recycling Station (KDRS) – This facility, also known as the Kekaha Landfill Phase I, was used for Hurricane Iniki debris and stopped accepting solid waste in 1993. In FY 1999, approximately 404 tons of white goods and scrap metals was received at the station and subsequently shipped off-island for recycling. The KDRS also serves as a recovery facility for segregated greenwaste. In addition, the facility accepts and shreds used automobile and truck tires which are used as alternate landfill daily cover at the Kekaha Phase II operations.

Neighborhood Recycling – The County currently has in place six stations islandwide that receive newspaper, glass, aluminum, and paper products. Private contractors are responsible for providing the containers, hauling the materials, and servicing the site.

- **Plastic Recycling** – This effort is being mounted by Princeville Corporation and volunteers in North Shore communities. Volunteers in Līhu‘e have also made efforts to recycle plastic.
- **Glass Recycling** – Through a State-subsidized program, the County contracts with a local firm to operate a glass recycling program.
- **Green Waste Diversion Program** – Green waste represents the largest component of the residential waste stream. Currently, the County grinds the green waste and distributes it to Kaua‘i residents, other government agencies, and businesses.
- **Kaua‘i Resource Exchange Center** – This new facility, located next to the Līhu‘e Transfer Station, is intended to serve as a market for discarded materials such as major appliances, furniture, building materials, and electronic.

From 1997 to 1999, municipal solid waste that was diverted from the landfill accounted for approximately 19 percent of the total amount of solid waste generated on the island.

7.8.2 New Facilities Needed by 2020

Over the next two decades, the amount of solid waste generated by residents and visitors on Kaua‘i is expected to increase by nearly 50 percent from approximately 67,590 tons in FY 1999 to a projected 100,840 tons in 2020.³ New facilities needed by 2020 to accommodate this increase and changes to existing facilities are highlighted below:

- **Additional Landfill Capacity** – Basic disposal capacity is rapidly disappearing on Kaua‘i. The 34-acre Kekaha Landfill Phase II opened in 1993 and was allowed by the State in 1998 to have its height limit increased to 60 feet. With the addition of this vertical expansion, the remaining lifespan of the landfill, assuming current waste levels, is about five to six years. A new landfill site should be identified in about one year and the cost of developing the facility is estimated at \$37 million. Factors that may limit expansion capacity is the availability of feasible sites.

³ Solid waste generation is estimated at 5.4 pounds per person per day.

- **New Refuse Transfer Station** – A facility is planned for Kōloa. It is expected to cost approximately \$3 million to develop.
- **Kekaha Debris Recycling Station** – This facility will be used less as collection of metals becomes more centralized at the Puhi Metals Recycling Center and more conveniently located private facilities divert greenwaste from KDRS.

7.8.3 Status of Long-Range Plan

In 1994, the Kaua‘i County Council approved the *County of Kaua‘i Integrated Solid Waste Management Plan* (SWMP). The SWMP fulfills requirements of Chapter 342G, Hawai‘i Revised Statutes. The SWMP strongly emphasizes recycling as a means of diverting materials from the island’s Kekaha landfill. According to state law, the SWMP must be updated and submitted to the State once every five years.

Despite having limited resources and funding, the County has implemented major action items stated in the 1994 SWMP, particularly in the area of source reduction. More needs to be done, however, in the areas of recycling, education, public information, and program funding.

7.8.4 Policy

The following general policies apply to solid waste management on Kaua‘i. Specific policies to guide solid waste programs should be provided in the long-range SWMP.

- (a) Using long-range integrated resource planning, the County shall manage an islandwide system of solid waste collection, reuse, recycling and disposal that (1) is environmentally sound and cost-effective; (2) increases diversion of waste from the island’s landfill(s); and (3) provides for the timely and orderly expansion of solid waste facilities.
- (b) Through a multi-faceted program of education, management measures, and financial incentives, the County shall support and stimulate Kaua‘i businesses and residents to reduce their solid waste generation and increase the reuse and recycling of materials.
- (c) The County shall incorporate entrepreneurial principles in managing solid waste, involve private businesses, and support market-oriented innovations and initiatives. Among other options, the County shall consider opportunities for utilizing the waste stream for energy generation.

7.8.5 Implementing Actions

The County government shall:

- (a) Prepare a long-range Solid Waste Integrated Management Plan, to be adopted by the County Council and updated every five years. The SWMP shall set policies to guide solid waste programs, facility planning, capital improvements, operations, user fees, and financing.

- (b) Commit the necessary funding and staff resources to implement the County Integrated Solid Waste Management Plan.
- (c) Increase the effectiveness of the County's solid waste system by maximizing the convenience of reuse and recycling centers for users.
- (d) Establish a set of measurable goals to evaluate County efforts to divert solid waste from the island's landfill.
- (e) Develop a proactive process for siting and designing sanitary landfills and other facilities that incorporates early and detailed consultation and negotiation among the utility, the County government, community stakeholders, and the general public.

7.9 POLICE AND FIRE SAFETY

7.9.1 Police

The Kaua'i Police Department has three stations, located approximately 25 miles apart. The main station and administrative headquarters is in Līhu'e. Smaller stations at Waimea and Hanalei are co-located with fire stations.

To ensure continued levels of public safety, a new County police headquarters is being planned to serve the Sector 5 area and the County. The current main station in Līhu'e, built in 1953, is outdated and overcrowded with no room for further expansion for a crime laboratory and future staffing needs. The new facility will house the Kaua'i Police Department, Kaua'i County Civil Defense, and the Kaua'i County Prosecuting Attorney's Office. It will be constructed on a 18.5-acre site owned by the County of Kaua'i near Kapule Highway and between Vidinha Memorial Stadium and Ahukini Road. The site adjacent to the site of the planned Kaua'i Judiciary Complex.

The new facility is expected to have a total area of 58,000 to 60,000 gross square feet for the Main Police Station/Emergency Operating Center and 9,400 square feet for the Office of Prosecuting Attorney. Construction is scheduled to begin in mid-2000. The Kaua'i Police Department does not have any other long-range facility plans.

In 1999, the Police Department had 145 officers islandwide and 35 civilian employees. In order to provide adequate service to Kaua'i's projected 2020 population of 74,300, an additional 41 officers would be needed.⁴

7.9.2 Fire

The Kaua'i Fire Department has a main station and administrative headquarters in Līhu'e. Other fire stations are located in Waimea, Hanapēpē, Kalāheo, Kōloa, Kapa'a, and Hanalei. The County has a unified, islandwide system of fire protection and rescue services. Stations located at Waimea and Hanalei anchor the system, providing service to the farthest settled areas. Other stations located in major towns provide service to both the towns and outlying rural areas.

⁴ The Kaua'i Police Department assumes 2.5 officers per 1,000 residents.

In fiscal year 1999, the Kaua'i Fire Department had a total workforce of 126. There were three crews per station for a total of 114 firefighters. The Fire Department in fiscal year 1999 responded to approximately 3,800 calls. Over 60 percent of these calls were for emergency medical services. About 300 calls were for fires and 400 were visitor related.

In order to improve its resources and capabilities, the Fire Department plans to add two satellite stations and replace the existing Kapa'a Station, which is presently located in a flood zone. Satellite stations typically have two to three men per station and provide quick response to medical emergency calls. The Kaua'i Fire Department plans to add satellite stations in Anahola and the Wailua Homesteads area. The Department also plans to replace the existing Kapa'a Station with one in Kapa'a Heights on a site near Mahelona Hospital. These projects have not received funding, and there is no estimated time schedule for completion.

7.9.3 Policy

- (a) Provide adequate staffing and facilities to ensure effective and efficient delivery of basic police and fire protection.
- (b) To improve fire protection, develop additional facilities according to a long-range system plan.
- (c) Evaluate fire protection service islandwide, with particular attention to the east side, from Wailua to Anahola.

7.9.4 Implementing Actions

Working with the Water Department, the County shall prepare a long-range plan for fire protection, to include the following elements:

- (a) Evaluation of existing level-of-service and response time for all communities, work with the Water Department to determine fire flow levels.
- (b) Development of standards for urban and rural levels of service, including response time and fire flow requirements.
- (c) Development of a long-range, phased facilities plan to attain an adequate level of service islandwide.

8. Improving Housing, Parks and Schools

This chapter addresses housing, parks (primarily County parks), and schools, all of which relate to the quality of life experienced by Kaua‘i’s citizens. The first section reviews housing supply, affordability, and the County’s housing program. The second section focuses on County parks. (Chapter 4 has a substantial discussion of State parks, in relation to the visitor industry.) The final section outlines school needs, recognizing that public education is primarily a State responsibility.

8.1 HOUSING

8.1.1 Overview

During the plantation era, many Kaua‘i residents lived in plantation-owned houses. As people moved off the plantations, the Territorial Government sold off land for agricultural homesteading and house-lots. The belt highway built in the early part of the 20th century opened up new lands for housing. The latter part of the century saw intensive residential development in the homestead areas and the conversion of former plantation lands to residential subdivisions.

Other long-term changes and housing market cycles have been strongly influenced by the visitor industry. From 1970 to Hurricane Iniki, the daily visitor population on Kaua‘i increased at an average annual rates of 8.7 percent. With the proportion of the visitor population increasing relative to the resident population, visitors exerted increasing pressure on real estate and building construction. Over time, more people traveled as “FITs” (free and independent travelers), rather than in tour groups. This led to increasing demand for apartment rentals, followed by a new market for timeshare interval ownership. People who first saw Kaua‘i as tourists began in the 1970s to purchase condominiums and single-family houses not only in resort areas, but also in nearby local communities.

8.1.1.1 Off-Island Market

Data on in-migration and the proportion of residential units purchased by people migrating to Hawai‘i or non-residents are not readily available. Some off-island buyers are retirees, some are part-time residents or vacation homeowners, and an increasing number are independent businesspeople enabled by the Internet to move their home-office to a remote location. More of these buyers are seeking single-family homes than in the past. In the late 1990s, a large influx of mainland buyers stimulated a boom in high-end residential real estate – much of it single-family. This affluent market is focused in and around resort communities such as Princeville and Po‘ipū, though some buyers are seeking out local communities like Kīlauea and Lāwa‘i.

In reviewing the supply of units and land for resident housing, it is important to consider the price profile of each location. Communities with lots and homes in the upper price categories will serve a relatively limited segment of the local market and have a proportionately larger share of off-island buyers. Conversely, overall demand is increased by in-migrants, part-time residents, and vacation homeowners.

8.1.1.2 Housing Market Cycles

The housing market reacts to general economic conditions, which are strongly influenced by the visitor industry. A downturn in visitors affects the housing market in several ways. First, as in any economy, housing demand drops when the number of jobs decline. Residents who cannot find jobs either move away or “double-up” with family in order to reduce expenses. The share of occupied housing units with overcrowded conditions (more than one person per room) was approximately 17 percent in 1992 (post-Iniki) and nine percent in 1997. Despite a decline in the number of persons living in overcrowded conditions, the number of multiple-family households has not appreciably declined during the five years. As shown in Table 8-1, multiple-family households accounted for about one-fourth of total occupied housing units on Kaua‘i in 1997.

Household Type ¹	Percent of Kaua‘i Households	
	1992 ²	1997
Total Occupied Housing Units	16,980	18,820
Single Member Household	12.7%	13.2%
Married, no Children	26.1%	27.1%
Parent(s) and Children	31.0%	30.0%
Unrelated Roommates	0.5%	1.7%
Multiple Families	26.3%	25.4%
Undetermined	3.5%	2.5%
TOTAL	100.0%	100.0%

¹ Household type was measured differently in 1992 and 1997.

² Pre-Hurricane Iniki.

State Housing Finance and Development Corporation; City and County of Honolulu; Counties of Hawaii, Maui and Kauai (Prepared by Prudential Locations, Inc. and SMS Research). *Hawai‘i Housing Policy Study, 1997 Update*. February 1998.

The second way in which a downturn in the visitor industry affects Kaua‘i’s housing market is the shifting of condominium units from the visitor pool to long-term rentals, thus increasing the supply of housing. These factors lead to a soft rental market and low rent prices – as was the case with the post-hurricane depression of the 1990s.

When the visitor industry and the overall economy improve, the opposite circumstances prevail. More employment stimulates in-migration (and reduces out-migration). With increased earnings, people doubling up with relatives are able to move into their own unit. With increasing numbers of visitors, units are shifted back into the visitor pool, in effect reducing the supply of long-term rentals. With reduced supply and increased demand, rent and sales prices trend upward.

The inter-relationship between transient and long-term rentals tends to exaggerate the fluctuations in Kaua‘i’s housing market, affecting landlords as well as renters. It suggests that government participation in the development of affordable housing should be targeted to increase rental units during economic upturns and should avoid over-supplying the market during downturns.

Cycles in the housing market are felt most intensely on the North Shore, where a relatively large portion of units available for rent – particularly condominium units in Princeville – shift to the visitor market during economic upturns. Conversely, it is risky for the government/non-profit sector to develop affordable rentals in a small market like the North Shore, because such housing may experience a high vacancy rate during downturns.

8.1.2 Affordability

The cost of housing, including both owner-occupied and rental units, continues to be one of the biggest economic obstacles facing most Kaua‘i residents.

The proportion of homeowners occupying housing units on Kaua‘i was 50 percent in 1995, the most recent year for which statistics are available. This compares to a statewide homeownership rate of 52.8 percent in 1998, and a national rate of 66.3 percent for the same year. According to the vision statement (Chapter 2), Kaua‘i will meet or exceed the national average for homeownership by 2020.

In 1997, Kaua‘i had the third highest median household income of Hawai‘i’s four counties. Kaua‘i’s 1997 median household income of \$34,890 was approximately 14 percent below the statewide median figure of \$39,883.¹ Between 1992 (pre-Hurricane Iniki) and 1997, Kaua‘i’s median household income decreased by about \$2,000 or nearly six percent.

As shown in Table 8-2 on the following page, in 1997 approximately 35 percent of Kaua‘i’s households earned 80 percent or less of the County’s median household income. Made up primarily of renters and including most of the unemployed, this group is essentially “stuck.” Wage gains in a strong economy tend to be eaten up by higher rents and other costs, and opportunities for homeownership are few.

A common indicator of housing cost burden is the monthly shelter-to-income ratio. The optimum shelter-to-income ratio should not exceed 30 percent. The share of Kaua‘i households with a housing cost burden in excess of this optimum ratio increased from about 31 percent in 1992 to 43 percent in 1997, as shown in Table 8-3.

Furthermore, a greater proportion of rental households have a monthly shelter-to-income ratio in excess of 30 percent than do owner-occupied households. In 1997, more than one-half of rental households paid more than 30 percent of their monthly income on housing, compared to about 46 percent for owner-occupied households. Because housing is such a large expense for many of the rental households on Kaua‘i, it is often difficult for them to save for a downpayment and make the transition to homeownership.

¹ Based on survey data, excluding refusals. Survey was conducted by SMS Research & Marketing Services, Inc. as part of the *Hawai‘i Housing Policy Study, 1997 Update* (February 1998).

Table 8-2
Kaua'i Income Distribution, 1997

Percent of Median Income	Number of Households	Percent of Total Households
Less than 30%	1,290	6.8%
30% to 50%	2,000	10.6%
Over 50% to 80%	3,290	17.4%
Over 80% to 100%	1,990	10.6%
Over 100% to 120%	1,640	8.7%
Over 120% to 140%	1,600	8.5%
Over 140% to 180%	3,220	17.0%
Over 180%	3,850	20.4%
TOTAL	18,870	100.0%
Median Income	\$34,890	

Source: State Housing Finance and Development Corporation; City and County of Honolulu; Counties of Hawaii, Maui and Kauai (Prepared by Prudential Locations, Inc. and SMS Research). *Hawai'i Housing Policy Study, 1997 Update*. February 1998.

Table 8-3
Shelter-to-Income Ratios, 1992 and 1997

	Percent of Kaua'i Households	
	1992 ¹	1997
Monthly Shelter Payment as a Percentage of Income:		
Under 30%	60.3%	44.9%
30 to 40%	17.7%	18.7%
Over 40%	13.7%	24.7%
Not enough information	8.1%	11.7%
Shelter-to-Income Ratio of 30 Percent or More, by Tenancy:		
Rented or no cash	36.9%	53.4%
Owner occupied	28.1%	46.1%

¹ Pre-Hurricane Iniki.

Source: State Housing Finance and Development Corporation; City and County of Honolulu; Counties of Hawaii, Maui and Kauai (Prepared by Prudential Locations, Inc. and SMS Research). *Hawai'i Housing Policy Study, 1997 Update*. February 1998.

The 1992 to 1997 increase in share of rental households paying more than 30 percent of their monthly income on housing is due mostly to a decline in household income, as discussed earlier. The average annual monthly rent for both single family homes (three- and four-bedroom) and apartments (one- and two-bedroom) was lower in 1997 compared to 1992.² For single-family homes, the average monthly rent increased from approximately \$1,050 in 1992 to an all time high of about \$1,370 in 1994. The monthly rent dropped sharply in 1995, and then leveled off to about \$1,000 in 1997. For apartments, the average monthly rent was about \$925 in 1992. Rents increased slightly in 1993 and then started a steady downward decline. In 1997, the average monthly apartment rent was approximately \$675.

With the economic recovery of 1998-'99, rent prices again started rising, and vacancies became fewer. Housing officials reported that recipients of Section 8 vouchers were having difficulty finding a unit that fell within the "fair market rent." County rental housing projects achieved 100 percent occupancy for the first time in 1999.

8.1.3 Elderly Housing Needs

The future composition of Kaua'i's population could have an impact on the island's housing market. Kaua'i has a significant and growing proportion of elderly residents. In 1990, 17.3 percent of the island's population was 60 years of age or older, an increase from 15.7 percent in 1980. Statewide, 15.7 percent of the 1990 resident population was 60 years of age or older.

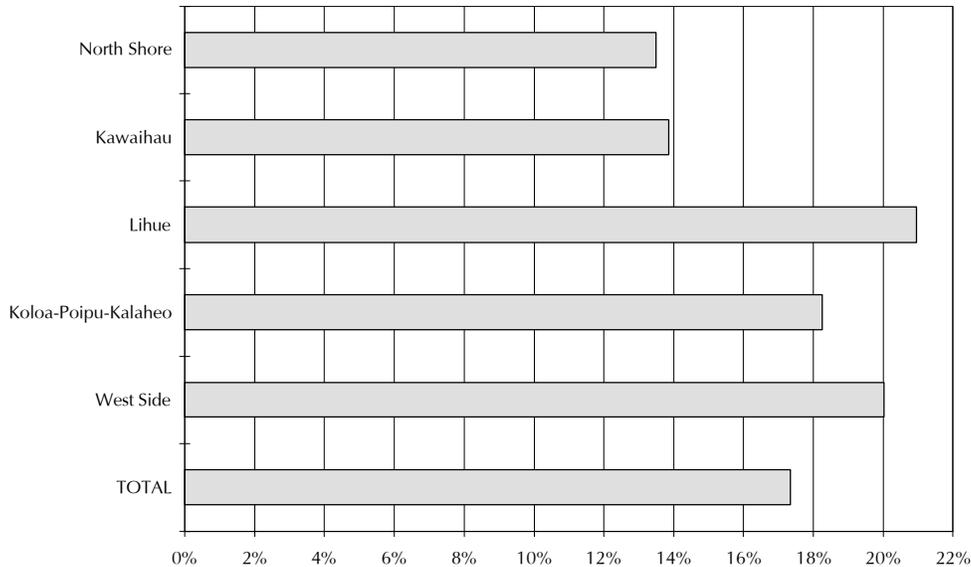
Some areas of Kaua'i have exceptionally high proportions of older adults (see Figure 8-1). In 1990, about one in five residents was 60 years and older in the districts of Līhu'e, Kōloa-Po'ipū-Kalāheo, and the West Side.

Kaua'i's elderly residents are increasing at a pace faster than the island's total population. Between 1980 and 1990, Kaua'i residents 60 years of age and older increased at an annual growth rate of 3.8 percent, compared to 2.7 percent for the total population. Furthermore, a sizeable segment of Kaua'i's elderly population, nearly 13 percent, is categorized as low-income.

The aging of Kaua'i's population is expected to continue over the next several decades. This indicates an increasing need for geriatric services, including long-term and home care services. It also indicates a need for alternative living accommodations, such as retirement communities and group homes. The special needs of the elderly, such as access to health care, social services, transportation and other supportive services, compounds the difficulty experienced in securing adequate housing at affordable rates.

² State Housing Finance and Development Corporation; City and County of Honolulu; Counties of Hawaii, Maui and Kauai (Prepared by Prudential Locations, Inc. and SMS Research). *Hawaii Housing Policy Study, 1997 Update*. February 1998.

Figure 8-1
Residents 60 Years of Age and Older as a Percent of Total Population
Kaua'i County, 1990



Source: Executive Office on Aging, State of Hawai'i, February 1993. Compiled from U.S. Department of Commerce, Bureau of the Census.

8.1.4 Projected Housing Demand to 2020

According to the Planning Department's Economic and Population Projections, Kaua'i is projected to have a resident population of between 65,300 and 74,300 in 2020. In order to support the 2020 resident population, Kaua'i is projected to need a total of 20,400 to 23,300 additional housing units (see Table 8-4). The projection of housing units is based on the following assumptions: (1) the ratio of single family units to multi-family units will remain the same over the next 20 years; and (2) the average household size will be 3.30 persons for single-family units and 2.10 persons for multi-family units.

Table 8-4
2020 Projections, Resident Population and Housing Units

	Actual 1997	Range of 2020 Projection	Range of Increase 1997-2020
Resident Population	56,420	65,300 – 74,300	8,900 – 17,900
Single Family Units	16,310	18,600 – 21,200	2,300 – 4,900
Multi-Family Units ¹	1,600	1,800 – 2,100	200 – 500
Total Housing Units	17,910	20,400 – 23,300	2,500 – 5,400

¹ Excludes multi-family units that are used primarily as transient vacation rentals.

8.1.5 Supply of Housing Units

8.1.5.1 Existing Housing Inventory

According to the Kaua'i County Planning Department, Kaua'i had a total of approximately 17,900 housing units in 1997 (excludes resort multi-family units that are used primarily as transient vacation rentals), as shown in Table 8-5.³ Approximately one-half of these units are located in the Kawaihau and Līhu'e Planning Districts. The majority, or about 84 percent, of housing units on Kaua'i are single family homes located in areas designated Urban Center and Residential Community on the General Plan Land Use Map.

Table 8-5
Existing Housing Inventory, by Type of Unit and Planning District, 1997

Planning District	Multi-Family Residential ¹		Single Family Residential (Urban & Rural)		Single Family Residential (Agricultural)		Total Housing Units ¹	
	Units	Percent of Total	Units	Percent of Total	Units	Percent of Total	Units	Percent of Total
North Shore	410	25.9%	1,820	12.1%	270	22.1%	2,500	14.0%
Kawaihau	150	9.3%	5,060	33.6%	360	29.9%	5,580	31.1%
Līhu'e	860	53.4%	2,660	17.6%	70	5.6%	3,590	20.0%
Kōloa-Po'ipū-Kalaheo	90	5.8%	2,600	17.3%	470	38.8%	3,170	17.7%
West Side	90	5.6%	2,940	19.5%	50	3.7%	3,070	17.2%
Total	1,600	100.0%	15,090	100.0%	1,220	100.0%	17,900	100.0%
Percent of Total Housing Units		8.9%		84.3%		6.8%		100.0%

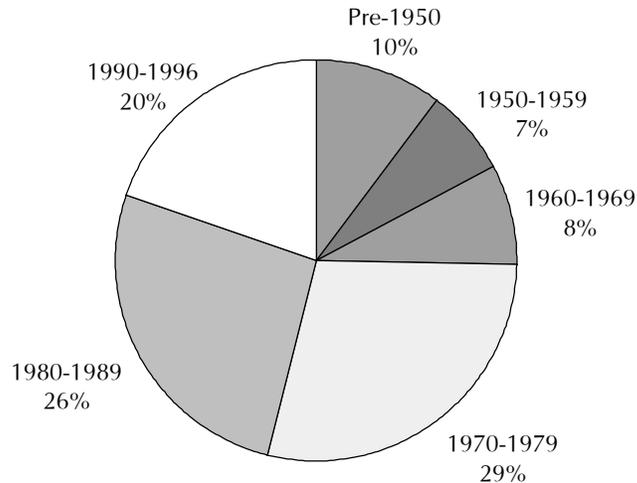
¹ Excludes resort multi-family units that are used primarily for transient users.

Source: Kaua'i County Planning Department.

As shown in Figure 8-2, Kaua'i has a relatively new housing inventory with about three-fourths of the housing units built after 1970. The West Side has the oldest housing stock with nearly 30 percent of housing units built pre-1950. More than one-half of housing units were built during the 1970s and 1980s in Kōloa-Po'ipū-Kalāheo, Kawaihau, and the North Shore. About 53 percent of Līhu'e's housing inventory was constructed during the 1980s and first half of the 1990s.

³ Note that housing inventory data from the Kaua'i Planning Department differs slightly from the data used in the *Hawaii Housing Policy Study, 1997 Update* (February 1998).

Figure 8-2
Distribution of Housing Units by Year Built ¹
Kaua'i County



¹ Does not account for 74 military units on the West Side.

Source: State Housing Finance and Development Corporation; City and County of Honolulu; Counties of Hawaii, Maui and Kauai (Prepared by Prudential Locations, Inc. and SMS Research). *Hawai'i Housing Policy Study, 1997 Update*. February 1998.

8.1.5.2 Major Planned Housing Projects

An inventory of major planned housing projects is shown in Appendix Table D and summarized below in Table 8-6. A project is considered “planned” if it is designated for residential use on the General Plan Land Use Map. The table shows projects planned previous to the General Plan Update and projects re-designated for future residential use through the Update. Residential uses, excluding agricultural houselots, are allowed in areas with a General Plan designation of Urban Center, Residential Community, or Resort. Planned residential projects that have a strong likelihood of being used as transient vacation units have been omitted. These projects are included in the visitor unit inventory (see Table 4-3 and Appendix Table C).

The total of planned single family units and multi-family units is approximately 10,210 and 4,310, respectively. This is significantly more than the projected number of housing units needed between 1997 and 2020. Not all of these units, however, are expected to be resident-occupied. In Princeville, Kawaihau, and Kōloa-Po‘ipū-Kalāheo, several of the multi-family projects may have a combination of resident-occupied units and transient vacation rentals. For these projects, it was assumed that 35 percent of units would be used by residents (65

percent by visitors).⁴ Based on this assumption, an estimated 2,720 multi-family units in the major planned housing projects are expected to be resident-occupied, as shown at the bottom of Table 8-6. It was assumed that all of the single family units will be resident occupied.

Table 8-6
Summary of Major Planned Housing Projects, by Status and Area ¹

Status and Geographic Area	Estimated Additional SF Units ²	Estimated Additional MF Units ²
Designated on Previous GP Land Use Map	8,600	3,830
North Shore	950	940
Kawaihau	1,730	150
Līhu'e	1,430	1,050
Kōloa-Po'ipū-Kalāheo	2,820	1,500
West Side	1,670	180
Designated Through 1998-1999 GP Update	1,600	490
North Shore	210	490
Kawaihau	0	0
Līhu'e	900	0
Kōloa-Po'ipū-Kalāheo	220	0
West Side	270	0
ISLANDWIDE TOTAL	10,210	4,310
ISLANDWIDE TOTAL – ADJUSTED FOR POTENTIAL VISITOR USE ³	10,210	2,720

¹ See Appendix Table D for details.

² "Estimated Additional Units" based on current or past proposals.

³ For several of the planned multi-family housing projects in Princeville, Kawaihau, and Kōloa-Po'ipū-Kalāheo, it was assumed that 35 percent of the units will be used as permanent residences and 65 percent will be used as transient vacation rentals.

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

Note that not all of the units in these major projects will be built during the 20-year planning period. For market reasons, some may not start until late in the planning period. Others will build out gradually. Master-planned projects such as Princeville and Kukui'ula typically take 30 years or more to build out.

⁴ Based on 1997 housing 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.

8.1.6 County Housing Programs

The Kaua'i County Housing Agency (KCHA) is one of three agencies under the Offices of Community Assistance (OCA). The KCHA was created by ordinance in 1976 to administer the County's federal Department of Housing and Urban Development's (HUD) Section 8 Existing Rental Assistance Payments Program and to formulate the County's housing policy. The goal of the KCHA is to provide affordable housing for residents and to meet the special needs of the homeless and persons with disabilities.

The County's strategy for meeting the island's housing needs is to increase the supply of affordable rentals and to expand housing opportunities for first-time homebuyers. The KCHA plays a major role in the actual development and acquisition or rehabilitation of housing units, with support from private for-profit and non-profit developers. Non-profit organizations, and State and County health and social service agencies provide necessary support services.

8.1.6.1 Funding Sources

The KCHA uses a number of resources to provide housing assistance and community development in the County of Kaua'i. The KCHA receives annual funding, approximately \$1.8 million, from the federal Community Development Block Grant (CDBG) program and HOME program. The KCHA receives other federal funding, as well as funding from state, local, and private sources.

The KCHA established the Housing and Community Development Revolving Fund in the early 1980s as a vehicle for reinvesting program income from federal grant programs. Revenues increased in the late 1990s because of funds returning to the County from projects of the Paku'i Housing Program, funded with \$41.2 million in federal Iniki disaster grants. Substantial amounts of these funds were invested in housing projects and first-time homebuyer mortgages. These capital investments will be repaid to the Revolving Fund, providing long-term support for County housing programs. Net program income in FY98 and FY99 was \$1.8 and \$2.1 million, respectively. Projected program income for FY00 is about \$3.2 million.

8.1.6.2 Section 8 Rental Assistance Program

The KCHA administers a federally-funded Section 8 Rental Assistance Program to subsidize rentals for income-eligible tenants. Recipients use the vouchers to locate and rent housing on the open market. Most vouchers are used to rent privately-owned units. As of December 1999, KCHA was providing 906 households with Section 8 rental assistance, and 630 households were wait-listed for the program. The average tenant rent contribution and average HUD subsidy were \$205 and \$470, respectively.

8.1.6.3 County-Owned Housing Projects

The KCHA's role in delivering affordable housing also includes the County owned Paanau Village and Kalepa Village affordable multi-family rental projects. The County owns and administers the two projects that have a total of 120 units. Both projects are operated with private on-site management and are maintained in excellent physical condition.

Located in Kōloa, Paanau was completed in 1994 and has 60 two-bedroom units. As of March 2000, the project was 100 percent occupied. Rents range from \$325 to \$750 per

month, and many tenants receive rent subsidies through Section 8 or through the State Rental Assistance Program. Kalepa Village was completed in 1997 and has a mix of one-, two-, and three-bedroom units. Rents range from \$550 to \$750 per month, with some tenants receiving Section 8 subsidies. Kalepa Village achieved full occupancy in 1999. A description of the projects is provided in Table 8-7 below.

	Paanau Village	Kalepa Village
Completion Date	February 1994	February 1997
Number of Units	60	60
Type of Units	2-bedroom	1-, 2-, and 3-bedroom
Vacant Units ¹	None	None
Range of Monthly Rent ¹	\$325 - \$625	\$550 - \$750
Subsidy	State and HOME (HUD)	Section 8 vouchers (HUD)
Expansion Potential	60 units	120 units

¹ As of March 2000.

Source: County of Kaua'i, Offices of Community Assistance, Kaua'i County Housing Agency.

8.1.6.4 Paku'i Housing Program

In 1992 and 1993, a Supplemental Appropriations Act approved by Congress provided jurisdictions severely impacted by natural disasters with HOME and CDBG disaster relief funds. Grant agreements between HUD and the County of Kaua'i were executed to provide the County of Kaua'i with \$41.2 million in grant funds to help meet Kaua'i's recovery needs from the devastating effects of Hurricane Iniki.

The Paku'i Housing Program was established in 1994 and is funded by this special appropriation. The program consists of a variety of projects initiated by the County and by both nonprofit and for-profit organizations. The primary objective of the Paku'i Housing Program is to increase housing opportunities for very low- and low-income families with emphasis on developing rental and home ownership housing projects. Other program objectives include the support of at least one County owned rental property with no debt service, the development of adequate water and sewer infrastructure facilities in areas that lack adequate service, and leveraging federal disaster funds with other private and public funding sources.

Since inception of the Paku'i Housing Program, a significant number of housing units have been added to the inventory of low-income rental and for-sale housing units on Kaua'i. Most of the original Paku'i projects have been completed, and the remaining projects are in various stages of completion. Table 8-8 summarizes Paku'i Housing Program projects funded with disaster HOME and CDBG funds.

Paku'i funds were also used to support community development. About \$4.4 million was granted to the Department of Water to develop wells in Hanamā'ulu and Waimea-Kekaha. The projects will provide additional water supply to support new development in these communities.

**Table 8-8
Paku'i Housing Projects, as of March 2000**

Project Name	Rental Units	For-Sale Units
Iniki Rebuild Loans		10
Hale Kupuna Elderly Rental	28	
Lihu'e Court Elderly Rental	21	
Lihu'e Court Townhomes Refinance	179	
Plantation Traditional Living	14	
Kalepa Village (pads avail. for 120 add'l units)	60	
Hale Holopono (Special Needs)	2	
Hokulei Self-Help		17
Hanapēpē Self-Help		23
Kīlauea Estates		49
'Ele'ele I'Luna (site acquired, not built-out)		95
Habitat Owner Builder (not built-out)		20
Habitat "Building Kaua'i with Aloha"		51
Ohana Loan Program		1
TOTAL UNITS	304	266

Source: County of Kaua'i, Offices of Community Assistance, Kaua'i County Housing Agency, March 2000.

8.1.6.5 Other County Programs

The KCHA's role in delivering affordable housing also includes the Home-Buyer Loan Program and homeownership counseling. These programs are designed to assist renters to become first-time homeowners. In addition to partnering with private housing developers to construct new affordable housing units for moderate-income households, the KCHA has also assisted non-profits such as Habitat for Humanity and Hawai'i Self-Help Housing Corporation to develop homeowner projects for low-income families.

The KCHA operates a Rehabilitation Loan Program that provides assistance to low-moderate-income homeowners for the purpose of rehabilitating their homes. To meet the needs of special groups and the homeless, the County continues to financially support the Kaua'i Housing Development Corporation and other non-profit organizations to develop projects and services to these groups.

8.1.7 State Housing Programs

The State also plays a significant role in expanding affordable housing opportunities for Kaua'i residents. The Kaua'i office of the State Housing and Community Development Corporation of Hawaii (HCDCH) administers federal low-rent public housing projects, a State rent supplement program, and Section 8 rental vouchers.

As of December 1999, HCDCH had ten low-rent public housing projects on Kaua'i with a total of 347 units. All of the units were reported to be in good condition, and there was no wait-list for handicap accessible units. The wait-list for non-handicap accessible rental units was 19 elderly and 72 families. The State HCDCH's project-based rent supplement program

had 46 people waitlisted, as of December 1999. As of March 2000, HCDCH administered 14 tenant-based Section 8 vouchers on Kaua'i.

8.1.8 Affordable Housing Requirements Related to New Development

As documented in the *Hawai'i Housing Policy Study* and discussed in Section 8.1.2 above, Kaua'i – like the rest of the State – has very high housing costs. Many households are priced out of the market. Along with the other counties and the State Land Use Commission, Kaua'i County has adopted the practice of requiring developers of large projects to provide a certain amount of affordable housing. Typically, the County imposes affordable housing requirements as a condition of granting zoning for new urban development. Administered by the KCHA, affordable housing requirements have varied relative to individual projects and economic conditions.

In the case of resort and other job-producing projects, the intent is to provide affordable housing for employees. One suggested approach is to project the future number of employee households, their household income levels, and their housing needs. That analysis would serve to guide the County and the developer in determining employee housing needs and the number of units and sales or rental prices that should be provided by the new business.

In the case of housing developments, the intent is to ensure that housing opportunities are afforded to all income groups. In the 1990s, Princeville fulfilled part of its employee housing requirement by supporting the development of Kīlauea Estates; and Grove Farm developed the Hokulei Estates project to meet its affordable housing requirements for the Līhu'e-Puhi Project District (Puakea).

In general, affordable housing requirements have been successful in providing affordable units. Developers, however, have criticized such requirements as increasing the costs of development and forcing them to raise prices on market units in order to subsidize affordable housing.

The KCHA has identified a need to standardize affordable housing requirements, in order to assure fairness and to make the requirements predictable for developers. The KCHA is seeking to establish a formal program with standards and rules, with the intent of streamlining administration of the requirements and reducing the number of ad hoc decisions. After consulting with developers and housing advocates, the KCHA prepared a proposal for the County of Kaua'i Affordable Housing Program and recommended that it be adopted by the County Council. The KCHA subsequently submitted a revised second draft dated February 7, 1996.

The proposed program would establish an affordable housing requirement for projects seeking Residential zoning for 15 units or more, and projects seeking resort, commercial and industrial zoning that will employ more than 100 people. To apply affordable housing requirements equally, the KCHA should consider ways of applying the program to residential developments on Agriculture land as well. Many agricultural subdivisions exceed 15 units in size, and most are priced beyond the affordable range.

8.1.9 Status of Long-Range Plan

To receive federal CDBG grants, HOME program funds and other federal funding, the County is required to prepare and update a Five-Year Consolidated Plan. Prepared by the KCHA and adopted by the County Council, the Plan addresses housing and community development needs and establishes strategies and priorities for funding and program development. The KCHA also prepares one-year Action Plans for Council adoption. The County will adopt a new Five-Year Consolidated Plan in mid-2000. In preparing the Consolidated Plan, the KCHA enlists the participation of non-profit housing developers, service agencies, and organizations advocating on behalf of disadvantaged populations.

The County is fortunate to have a substantial revolving fund, an experienced housing agency, and lands available for developing additional rental housing (Kalepa and Paanau). The County needs to adopt a flexible policy that responds to current economic trends. When the housing market tightens due to strong economic conditions, the KCHA should be able to shift its strategy and devote more resources to increasing the supply of affordable housing, especially affordable rentals.

The County should consider using additional federal housing and community development funds to leverage County, State, private, and possibly improvement district funding in meeting the deferred infrastructure needs of older communities. Rehabilitation and improvement of water systems and roadway networks are particularly needed in the Wailua-Kapa‘a and Kalāheo homestead communities.

8.1.10 Policy

Following are policies to guide housing and community development programs on Kaua‘i.

- (a) Increase the supply of affordable rental housing, as indicated by market conditions.
- (b) Increase opportunities for moderate- and low-income households to become homeowners. Work from the bottom up, serving the 35 percent of residents whose income is 80 percent of the median or less. The intent is to move families out of expensive rental subsidy programs into homeownership, developing housing at a very low cost through self-help programs and reduced-rate mortgage financing.
- (c) Acquire and bank land and infrastructure improvements for future housing development.
- (d) Support the development of housing and support services for elderly and special needs groups, including persons with disabilities, the homeless, and other at-risk populations needing shelter and rehabilitation programs.
- (e) Reserve the program income from the HOME and CDBG disaster grants to fund housing and community development projects. Use the Housing and Community Development Revolving Fund to finance projects and maintain capital.
- (f) Continue to prepare and adopt a five-year Consolidated Plan and one-year Action Plans, with community participation.

- (g) Continue to partner with for-profit and nonprofit organizations in order to provide the highest level of housing and community development assistance possible.
- (h) Develop a flexible planning process for housing programs that monitors current real estate and socio-economic conditions and allows the County to make timely changes in strategy and resource allocation.
- (i) Develop an Affordable Housing Program to standardize the application and administration of affordable housing requirements within the County of Kauaʻi.

8.1.11 Implementing Actions

- (a) Build capacity to monitor real estate and socio-economic trends and to formulate responsive strategies. (OCA/KCHA).
- (b) Adopt an Affordable Housing Program that provides standards and procedures for establishing and administering affordable housing requirements applied to private developments. (OCA/KCHA, County Council).
- (c) Review and revise the Comprehensive Zoning Ordinance as necessary to facilitate the development of assisted living units and continuing care communities serving the elderly.

8.2 PARKS AND RECREATION

Both the State and the County operate parks on Kauaʻi. The State parks are typically based larger and based on natural resources, in much the same fashion as national parks. State parks and natural areas are addressed in Chapters 3 and 4. This section focuses on parks that are managed and maintained and by the County Department of Public Works (DPW), Division of Parks.

8.2.1 Description of Existing Facilities

Kauaʻi has a total of approximately 400 acres of County parks, of which the largest is the 49-acre Lydgate Park in Wailua. Altogether, there are 64 parks under county jurisdiction.

Table 8-9 summarizes county parks by district and type. Descriptions of the different park types are provided below. In general, park areas that serve more localized populations are classified as district, community, and neighborhood parks.

- **Regional Parks** – Large areas that may serve the entire island or a region of the island and may include a variety of recreation park types and facilities, natural and cultural sites.
- **Beach Parks** – Areas and sites along the shoreline that may include facilities and support services for water activities, sunbathing, picnicking, and other passive activities.
- **Passive Parks** – Maintained primarily to preserve or conserve unique natural features.

- **District** – May have playfields, playcourts, passive areas, gym/recreation complex, and swimming pool.
- **Community** – May have playfields, playcourts, passive areas, and recreation building.
- **Neighborhood** – May have playfields, playcourts, passive areas, and comfort station.

Some regional and beach parks have overnight camping.

District/Park Type	Acres	District/Park Type	Acres
North Shore	38.7	Kōloa-Po‘ipū-Kalāheo	61.3
Beach Parks	28.3	Beach Parks	6.4
Community Parks	10.4	Passive Park	4.4
		District Parks	32.3
Kawaihau	134.3	Community Parks	9.1
Regional Park	48.9	Neighborhood Park	9.0
Beach Parks	22.0		
District Park	18.1	West Side	80.0
Community Parks	45.4	Beach Parks	20.9
		District Parks	34.9
Līhu‘e	86.8	Community Parks	24.2
District Park	34.0		
Beach Parks	16.1	ISLANDWIDE TOTAL	401.0
Community Parks	36.6		

Source: County of Kaua‘i, Department of Public Works, Parks Division.

County parks are typically smaller, more urban and designed for active use by larger numbers of people. They are “active use” rather than “resource-based” parks. In general, County parks have not experienced the stresses found at State facilities. Residents coexist with visitors in popular parks such as Salt Pond, Anahola, and Po‘ipū. However, there has been conflict over County boat ramps (notably, Black Pot and ‘Anini), which have been heavily used by both independent visitors and commercial tours.

The DPW classifies parks into five categories of varying levels of use. Class I and Class II are considered “extremely high use” and “high use”, respectively. These parks are used most heavily by both residents and visitors (see Table 8-10).

**Table 8-10
County Parks with High Levels of Use**

Use Category/Park	Park Type	Acres	Use Category/Park	Park Type	Acres
EXTREMELY HIGH USE			HIGH USE:		
North Shore			North Shore		
‘Anini Beach Park	Beach	12.5	Hanalei Black Pot	Beach	2.5
Kauai			Kauai		
Lydgate Park	Regional	48.9	Hanalei Pavilion	Beach	1.3
Kapa‘a New Park	District	18.1	Hā‘ena Park	Beach	5.5
Oahu			Oahu		
Vidinha Stadium	District	34.0	Kīlauea Park	Community	4.9
Isenberg Park	Community	9.2	Molokai		
Molokai			Molokai		
Po‘ipū Beach Park	Beach	5.4	Anahola Beach Park	Beach	1.5
Spouting Horn Park	Passive	4.4	Kapahi Park	Community	4.0
Kalawai Park	District	21.0	Wailua Houselots Park	Community	10.1
Kōloa Park	District	11.3	Hawaii		
Hawaii			Hawaii		
Hanapēpē Pavilion	Beach	0.8	Līhu‘e County Park	Community	3.3
Salt Pond Park	Beach	5.9	Kōloa-Po‘ipū-Kalāheo		
Hanapēpē Stadium	District	14.7	Kalāheo Little League	Community	1.4
Kekaha Faye Park	District	8.5			
Waimea Athletic Field	District	11.7			

Source: County of Kaua‘i, Department of Public Works, Parks Division.

County parks also actively support and enhance ecotourism activities offered by State parks. 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 also include camping, and ocean-based tours and recreational activities, such as windsurfing and snorkeling. Many small commercial businesses are renting equipment or providing tours to this market. Among visitors to the State, visitors to Kaua‘i tend to be the most interested in ecotourism and outdoor recreation.

County parks, specifically those offering camping, play an active role in supporting ecotourism activity. Lucy Wright Park, Hanapēpē Pavilion, Hanamā‘ulu Beach Park, Anahola Beach Park, ‘Anini Beach Park, and Hā‘ena Beach Park are often visited in succession by visitors and organized tour groups as they camp their way around the island. County parks often serve as staging areas with overnight camping before and after excursions into the State parks (e.g., Nā Pali Coast trail trips). ‘Anini Beach Park and Hā‘ena Beach Park are especially popular since they are located at the gateway to the Nā Pali coast.

8.2.2 New Facilities Needed by 2020

In order to adequately accommodate the projected growth in residents and visitors, improvements are needed at County parks. The DPW's priorities for development are as follows:

- Land acquisition to expand Po'ipū Beach towards the Waiohai (acquireouselots), additional parking and restrooms.
- Land acquisition to expand Salt Pond Park, relocation of camping to a mauka site.
- Development of a comfort station at Kekaha Beach Park.
- Implementation of the master plan for Nāwiliwili Beach Park.
- Implementation of the master plan for the expansion of Lydgate Park, including camping sites, restrooms and parking.
- Improvement of the Keālia cane haul road as an increment of the planned regional shoreline bikeway extending from Ninini to Anahola.
- 'Anini Beach Park – additional parking and restrooms.
- Hanalei Black Pot Park – acquire, subject to funding, additional park land for separate camping and picnicking areas, and additional parking and restrooms.
- Addition of comfort station, parking and staff person at Hā'ena Beach Park.

This is not intended to be a complete listing – improvements are also needed at other County parks. Identifying, costing and prioritizing parks improvements should be undertaken through a comprehensive revision of the County Parks Plan.

8.2.3 Policy

- (a) Develop and maintain Kaua'i's parks to meet the needs of the island's various communities and of both residents and visitors.
- (b) Provide convenient access to all of Kaua'i's beaches and inland recreation areas.
- (c) Provide for the safe and secure use of public parks and recreation facilities.
- (d) Give high priority to improving maintenance of grounds and comfort stations.
- (e) Give high priority to acquiring and developing additional beach parks and community or neighborhood parks in communities that are under-served or experiencing growth. Consider community concerns in all planning efforts.
- (f) Provide for flexibility in administering the park dedication requirements, so that developer land dedication or fee payments result in a usable park complete with facilities. Create new parks through County-developer partnerships.

8.2.4 Implementing Actions

8.2.4.1 County Park System

- (a) Review, evaluate, and update, where needed, the *Kaua'i Parks & Recreation Master Plan* (April 1978) so that it reflects current needs and capabilities, as well as the policies of the General Plan. Identify and prioritize park acquisition needs.
- (b) Manage County parks according to the following policies, in order of priority:
 - (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.
- (c) Review and, as needed, revise the park dedication regulations so that it is a more effective tool for developing needed parks.

8.2.4.2 Operations

- (a) Develop physical objectives and standards for maintenance for the various types of County parks.
- (b) Commit the necessary staffing and funding for maintenance of existing facilities, capital improvements, expansion of recreational offerings, and enforcement.
- (c) Evaluate, on a regular and as-need basis, State and County park facilities and operations in order to streamline and achieve a better division of responsibility.
- (d) The County DPW 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. Enforcement measures will be taken to ensure compliance with the system.
- (e) Permit commercial activities, such as windsurfing and kayaking at certain parks and under specified conditions.

8.2.4.3 New Sites and Facilities

- (a) Develop new sites, facilities, and recreational opportunities in areas that are deficient in outdoor recreational opportunities or overburdened by the number of park users.
- (b) To the extent possible, utilize land area in existing County parks that has not been fully developed for recreation uses.
- (c) Construct park facilities in a manner which avoids adverse impacts on natural resources or processes in the coastal zone or any other environmentally sensitive area. In the design of recreation areas, incorporate natural features of the site and use landscape materials that are indigenous to the area where feasible in order to retain a sense of place.

- (d) Link recreational attractions, that may be designed to have distinct identities and entries, with surrounding areas through the use of connecting roadways, bikeways, walkways, landscape features and/or architectural design.
- (e) Emphasize developing large regional recreation parks rather than many small parks.
- (f) Supplement recreational and ecotourism activities in State and County parks with bikeways, particularly along scenic coastlines, as planned for in the State's master plan, *Bike Plan Hawai'i* (1994). This includes a bikeway along the windward coast from Ninini to Anahola.
- (g) The State and County shall explore lease agreements to open up the old cane haul road to the approximately six beaches that extend beyond Donkey Beach to Anahola.

8.2.4.4 Active Parks

- (a) Carefully site active playfields and supporting facilities intended for intensive use, and use generous landscape screening to reduce the potential impacts on surrounding areas.
- (b) Develop criteria for park land donations to ensure that parcels received are usable for active recreational purposes.
- (c) Review and evaluate the utilization of fields and scheduled sporting events at County parks that offer such activities.

8.3 EDUCATION

Public schools on Kaua'i are part of the State of Hawai'i Department of Education's (DOE) Kaua'i District. As of 1999, there were 10,700 students enrolled in Kaua'i's 14 public schools (see Table 8-11). In addition, Kauai has a number of small but active private schools. Some of these schools are based on religious belief; others provide alternative educational experiences.

A strong public education system is crucial in preparing students for higher education and employment. As in the rest of the State, there is room for improvement in Kaua'i's schools. While there are many excellent students, others never become engaged in school and some leave school lacking basic skills. The DOE is engaged in a statewide effort to revitalize the school system and increase students' level of success. While much work is needed within the DOE itself, many people believe that local efforts can contribute significantly to school renewal. School Community-Based Management is one of several avenues for hands-on community "ownership" and participation in school affairs.

Since public education is a State responsibility, the County's role is to support excellence in schools through youth programs and other efforts. The availability of adequate school facilities is a concern that the County must address with the DOE in considering the location of new development.

**Table 8-11
Public School Enrollment and Capacity, 1999**

Planning District/School	Grades	Enrollment	Student Capacity	Surplus (Deficit) in Student Capacity
North Shore		605	666	61
Hanalei Elementary	K-6	298	268	(30)
Kīlauea Elementary	K-6	307	398	91
Kawaihau		3,197	3,760	563
Kapa‘a Elementary	K-5	1,110	1,447	337
Kapa‘a High/Intermediate	9-12	1,216	1,283	67
Kapa‘a Middle	6-8	871	1,030	159
Līhu‘e		3,655	3,661	6
Kaua‘i High/Intermediate	7-12	1,797	1,804	7
Kaumuali‘i Elementary	K-6	840	793	(47)
Wilcox Elementary	K-6	1,018	1,064	46
Kōloa-Po‘ipū-Kalāheo		926	1,035	109
Kalāheo Elementary	K-6	616	586	(30)
Kōloa Elementary	K-6	310	449	139
West Side		2,388	2,721	333
‘Ele‘ele Elementary	K-6	545	536	(9)
Kekaha Elementary	K-6	310	426	116
Waimea Canyon	K-8	655	725	70
Waimea High	9-12	878	1,034	156
ISLANDWIDE TOTAL		10,771	11,843	1,072

Source: State of Hawai‘i, Department of Education.

Recent enrollment figures for Kaua‘i’s public schools show that on an islandwide basis there is existing capacity to accommodate approximately 1,100 more students. However, while most schools are operating under capacity, several exceeded their 1999 capacity level. Hanalei Elementary, Kaumuali‘i Elementary, Kalāheo Elementary, and ‘Ele‘ele Elementary, were operating over capacity in 1999.

Based on the Planning Department’s 2020 Projection, enrollment is projected to increase from 10,770 in 1999 to 12,570 in 2020, or by about 17 percent.⁵ In order to accommodate

⁵ Based on DOE assumption of 54 students per 100 housing units. The Planning Department projects about 23,300 housing units on Kaua‘i in 2020.

future demand, DOE plans to increase capacity through a combination of additional classrooms and facilities at existing schools and the building of new schools.

Islandwide, existing schools are projected to have a net increase of only seven classrooms (see Table 8-12). Existing schools in Kawaihau and Līhu‘e will have a surplus of classrooms, due to enrollment shifts and new school openings. Schools on the North Shore, Kōloa-Po‘ipū-Kalāheo, and the West Side are projected to need a total of approximately 50 additional classrooms over the next two decades. Most of the new classrooms will be needed in Kōloa-Po‘ipū-Kalāheo and the West Side.

Planning District	Actual 1999	Projected 2020	1999-2020 Change
North Shore	34	38	4
Kawaihau	188	174	(14)
Līhu‘e	191	161	(30)
Kōloa-Po‘ipū-Kalāheo	53	73	20
West Side	136	163	27
ISLANDWIDE TOTAL	602	609	7

Source: State of Hawai‘i, Department of Education.

There are three high schools, located in Waimea, Līhu‘e and Kapa‘a. North Shore residents are pressing to have a Middle/High School built on the North Shore. In addition to new classrooms and facilities at existing schools, DOE currently has plans for four new schools within the planning period (see Table 8-13). As of 1999, the DOE was not planning to develop a middle school on the North Shore.

School	Projected Opening	Location	Comments
Kaua‘i Middle	2000	Puakea, near Kaumuali‘i Highway, between Kukui Grove Center and Puhi.	Will have grades 6 to 8. Feeder schools include Kōloa, Kalāheo, Kaumuali‘i, and Wilcox Elem. (grade 6); and Kaua‘i High/Int. (grades 7 and 8).
Kapa‘a II Elementary	2005	Near Wailua Houselots (tentative)	
Līhu‘e/Puhi Elementary	2006-2020	Not yet determined	
Kukui‘ula Elementary	2006-2020	Not yet determined	A 12-acre site for a new elem. school is planned as part of A&B’s overall Kukui‘ula project.

Source: State of Hawai‘i, Department of Education.

Private schools seek large, low-cost sites, and many of them attempt to locate in the Agriculture and Open zones (State Agricultural District). While agricultural lots may be the appropriate size, strict zoning and fire-flow standards for water supply hamper the establishment of new private schools. Most water supply systems in rural areas do not have adequate fire-flow to meet the standard for a school.

8.3.1 Policy

- (a) Strive for a strong education system which provides Kaua‘i’s children, teens, college students, and adults with the knowledge and skills needed to obtain a well-paying job on Kaua‘i.
- (b) Approve new residential developments only after the State DOE certifies that adequate school facilities, either at existing schools or at new school sites, will be available when the development is completed.
- (c) Have developers pay their fair share of all costs needed to ensure provision of adequate school facilities for the children living in their developments.
- (d) Consider schools as community resources for learning about specialized environmental, cultural, and historic subjects related to Kaua‘i and each of its communities. Schools should also assume important community functions such as recreational centers, meeting facilities, and emergency shelters.

8.3.2 Implementing Actions

- (a) The County should support the State DOE’s requests for fair share contributions from developers to ensure that adequate school facilities are in place.
- (b) The State DOE should design school facilities to facilitate community use during non-school hours and weekends.
- (c) The State DOE should design and construct school buildings so that these facilities also serve as public hurricane shelters.

9. Implementation

Implementation of the General Plan will be a challenge for the County’s planners, engineers, and other technical and policy level personnel, as well as for elected officials who determine the allocation of County resources. In contrast to its predecessor, which had very broad goals and policy statements, this General Plan provides more detailed policy direction and more detail in terms of implementation. This General Plan seeks to implement a vision for the future by providing wider guidance for decisions and actions related to plans for communities and public facilities; zoning and land use regulation; and capital programs for public facilities and services. The provisions of the General Plan reflect consultations with implementing agencies and community input that occurred throughout the planning process.

Many counties and other local jurisdictions on the U.S. mainland have instituted planning programs that emphasize proactive, community-based planning and implementation processes. These local governments have sought to establish a strong link between planning policies and guidelines, and the specific organization, funding and actions needed to implement a variety of public and private projects and programs. The following sections are intended to strengthen the linkage to implementation to realize the vision for the future articulated in this Plan.

Implementation of the General Plan will be accomplished by a variety of means. Major efforts include the following:

- initiating zoning map and development code amendments to conform to the policies of the General Plan;
- undertaking planning for infrastructure systems and facilities, parks and housing in order to guide public investment in support of the vision and policies of the General Plan;
- recommending approval, approval with modifications or denial of developments seeking zoning or other land use permits, based on their conformance to GP policies and how well they support the vision for Kaua‘i’s development;
- preparing development plans for Kaua‘i’s various communities in collaboration with community coalitions;
- developing indicators and reporting progress on achieving General Plan vision and policies; and
- conducting a comprehensive review of the General Plan every 10 years and recommending revisions as necessary.

9.1 PUBLIC FACILITY PLANS AND FINANCING

Public facility planning is the process through which various County agencies determine needs, assign priorities, phase projects, and propose project financing to implement the vision and policies stated in the General Plan. Carrying out public facility plans is dependent

on funding availability and financing options; and a long-range financing strategy that takes into consideration the priority of various improvements.

As provided in Chapter 1 and discussed further in Chapter 7, some County facilities and programs, such as County roads, drainage, and wastewater systems are better treated with individual facility plans focussed on specific problems in specific geographic areas. Compiling an islandwide “master plan” for such facilities would be misspent effort.

Systemwide, comprehensive plans are required for islandwide County services such as Water Supply, Housing, Parks & Recreation, Solid Waste Management, and Regional Land Transportation (major roads and highways). Typical elements of system plans include the following:

- Service and facility design standards, including level of service standards for determining adequacy.
- A resource-constrained long-range capital improvement program. A "resource-constrained" program is one that identifies the fiscal resources that can be reasonably expected to be available to finance the improvements.
- A long-range financing plan, with identification of necessary new revenue measures or opportunities.
- A development schedule based on stated priorities.

The Long-Range Land Transportation Plan (primarily State-operated regional roadways) and the Integrated Solid Waste Management Plan are mandated by Federal and/or State law. The State DOT directly funds and manages the Long-Range Land Transportation Plan. The federal Department of Housing and Urban Development requires the County to prepare a Consolidated Plan for housing and community development activities. Due to funding and environmental sanctions, the County routinely prepares and updates these plans.

Other public facility plans are prepared at the County’s initiative, primarily using County funds. Priorities for the funding and preparation of public facility plans shall be decided by the County Council, based on the recommendations of the Planning Department and the agency charged with responsibility for the particular public facility or service.

System and facility plans will set forth costs and priorities. Even without completing these plans, it is clear that the County will be hard-pressed to fund all the needed projects and improvements. For this reason, the County should develop an overall strategy for setting priorities and financing capital improvements. Such a strategy would become the basis for the Capital Improvement Program, County-private partnerships, and development of alternative financing capabilities.

In addition to general obligation financing, the County relies heavily on developer contributions to support the development of public facilities. With the exception of standardized water and sewer facility charges, the contributions required of developers tend to be adopted ad hoc in association with specific zone change applications. These need to be standardized, made more predictable, and perhaps applied differently. In addition, the County should consider using finance options such as improvement districts and community

facility districts. Improvement districts could be used to generate financing for needed road and drainage improvements in existing communities, such as the Wailua, Kapa‘a, and Kalāheo homestead areas. Community facility districts could be used in conjunction with new developments that entail significant infrastructure improvements, such as improvement or construction of a wastewater treatment system. Useful references include the Infrastructure Financing Report and related studies prepared for the County in 1991.

9.2 DEVELOPMENT PLANS FOR COMMUNITIES

Chapter 1 sets forth the purpose and range of future Development Plans, which will be oriented to specific communities rather than to whole regions (Section 1.4, Planning System). The form and content of the plans is flexible, depending on the issues and opportunities facing the particular geographic area. Chapter 1 also sets forth the procedure for organizing a Development Plan effort and carrying out the planning project (Section 1.5, Citizen Participation). Initiating a DP project from the community level involves (1) organizing a steering committee that is broadly representative of residents and businesses in the planning area; and (2) setting objectives for the planning effort. A DP project may also be initiated by the Planning Department in response to particular issues or opportunities facing County government, particularly those that relate to important County zoning decisions and/or County facilities.

Priorities for the funding and preparation of Development Plans shall be decided by the County Council, based on the recommendations of the Planning Department and the Planning Commission. Many communities could benefit from a Development Plan, but the County’s capacity to prepare such plans will be limited by Planning Department staff resources and funding for assistance from outside professionals. A preliminary outline of potential community planning projects can be developed from the issues and opportunities affecting various communities presented in Chapter 6 (organized by planning district).

Review of the previous Development Plan should be a first step in preparing a new Development Plan. Although the previous plans are generally more than 20 years old, each has elements that are relevant to the communities’ present condition and future development.

9.3 PLANNING DEPARTMENT IMPLEMENTATION ACTIONS

Implementing the General Plan will require changes to the Comprehensive Zoning Ordinance and to the zoning maps. Following is a list of key implementing actions to be undertaken by the Planning Department.

- (a) Preparation of revised zoning maps to conform to the General Plan Land Use Map and narrative policies.
 - (1) Most of the zoning map changes will relate to the redefinition of the Open land use designation and zoning. This includes the redesignation of some Agriculture lands and a small amount of urban lands to Open and redesignation of some former Open lands to Agriculture.

- (2) Redesignations to Resort, Residential Community, and other urban uses shown on the new GP Land Use Map will not cause a change in the zoning. Application for any “upzoning” will be the responsibility of the landowner.
 - (3) Lands designated Park, Transportation and Military are generally under public ownership. Redesignations will have no effect on the user, except in specific cases such as the expansion of Kukuiohono and the redesignation of Puolo Point. The Planning Department should adopt a standard policy about the appropriate underlying zoning for these uses.
 - (4) Public facility uses indicated by symbol on the Land Use Map should retain existing zoning.
- (b) Preparation of amendments to the CZO to conform to General Plan policy. Listed in general order of priority, amendments to be prepared include but are not limited to the following:
- (1) Regulation for alternative visitor activities and accommodations, including B&B vacation rental units.
 - (2) Transfer of zoning regulations from Chapter 10 into Chapter 8, R.C.O.
 - (3) Review and revision of the Open zoning district and the Constraint Districts.
 - (4) Review and revision of zoning requirements for residential use in Agriculture zoning districts.
 - (5) Development of Scenic Roadway Corridor regulations, based on preparation of a study assessing scenic qualities of Kaua‘i’s major roadway corridors.
 - (6) General review and revision of zoning regulations for Resort, Industrial and Commercial districts. Regulations should incorporate revised standards that reflect ongoing practice, with reference to the typical conditions placed by the Planning Department on zoning and use permits. Wherever possible, discretionary zoning permits should be eliminated or reduced in favor of clear standards that are included in the CZO. This is intended to reduce uncertainty for landowners and developers, and to eliminate unnecessary permit actions to save time for applicants and County staff.

Apart from the CZO and zoning map amendments, other important implementation tasks for the Planning Department include the following:

- (a) Establishment and operation of the Community Input and Information System (high priority).
- (b) Advocating with the Legislature for a statute amendment to allow retreat centers, inns and other alternative visitor activities and accommodations in the State Agriculture District.
- (c) Assisting DLNR in developing Archaeological Resource Potential Maps.

9.4 REVIEW OF ZONE CHANGES

In addition to guiding revisions to the Comprehensive Zoning Ordinance and other land use regulations, the General Plan policies on land use are intended to guide County actions on zone change applications. As discussed in Chapter 1, zone changes represent major policy decisions on specific parcels of land.

9.4.1 Adequate Facilities Requirement

All projects requesting zone changes shall be reviewed to determine if adequate public facilities and infrastructure will be available to meet the needs created as a result of the development. Each agency shall establish level of service standards to define adequate public facilities.

In order to guide development and growth in an orderly manner as required by the General Plan, zone changes and other land development permits should be approved only if the responsible County and State agencies indicate that adequate public facilities and utilities will be available at the time of occupancy, or if the developer commits to conditions to provide adequate facilities.

The Planning Department, as part of its report on the consistency of the project with the General Plan, will review and summarize any individual agency's findings regarding public facilities and utilities adequacy that are raised as part of the review process. The Department will address these findings and any additional agency comments submitted as part of the agency review of the zone change application and recommend conditions that should be included in the zoning amendment ordinance.

9.5 GENERAL PLAN MONITORING AND REVIEW

As stated in the General Plan Ordinance, the Planning Department will conduct a comprehensive review of the General Plan every ten years. This plan review should involve community organizations and the general public in a meaningful citizen participation process. The Planning Department will report its findings and recommended revisions to the Planning Commission and the County Council.

To monitor progress toward the 2020 Vision and conformance with General Plan policies, the Department should define indicators (measures) of progress and report on them at least every two years to the Planning Commission, the County Council, and the public. As stated in Chapter 1, the Planning Department should collaborate with a coalition of community organizations to develop an overall set of economic, environmental, and quality of life indicators for Kaua'i. While the County should not lead such an effort, its participation would be essential. It would be desirable to incorporate County progress indicators in a broader array of community indicators and benchmarks.