

South Kohala Community Development Plan



FINAL
November, 2008

APPENDIX A
ORDINANCE NO. 2008 - 159

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Sunset viewed from Ohai'ula (Spencer Beach Park) November 2007

SOUTH KOHALA'S VISION STATEMENT

The people of South Kohala are united by our love and reverence for the beauty and peace of our land and waters and by our respect for the richness of our various cultures and traditions.

We desire to preserve the past, thrive in the present, and dream about a future that honors economic viability and environmental responsibility which is sustainable and desirable for current and future residents.

We are blessed to live in one of the most unique, exquisite places on the planet, and we know it. We promise to plan to do everything possible to live responsibly and wisely on this sacred island for current and future generations.

Our actions are guided by our Hawai'i State motto:

"Ua mau ke ea o ka 'aina i ka pono"

(The life of the land is perpetuated in righteousness.)

South Kohala Community Values

"We are a family oriented place."

"We love the old stories about our people and places and want them to live on in the hearts of our children."

"Our Hawaiian and Paniolo pasts contribute to our unique sense of place."

"We honor the kupuna by accepting the values and concerns of Native Hawaiians who have known for centuries the limits of island resources and the need to protect the 'āina."

"We understand that the natural and cultural resources of South Kohala are unique and to be cherished."

"We embrace rural values and lifestyle."

"The pu'u of South Kohala are of great cultural and scenic value and are loved by all."

"We treasure gathering places revered for cultural, historical, and social reasons."

"We enjoy moving about the South Kohala landscape: on foot, by bicycle, and on horseback."

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South Kohala Community Development Plan

FINAL

November, 2008

The County of Hawai'i General Plan section 15.1 (February 2005, as amended) calls for the preparation of community development plans "to translate the broad General Plan statements to specific actions as they apply to specific geographical areas." The General Plan requires CDPs be adopted as an "ordinance", giving the plans force of law. This is a long term plan with a planning horizon to year 2020, consistent with the General Plan. An electronic version of the plan is available for download at

<http://www.hcrc.info/community-planning/community-development-plans/>

Adopted: NOVEMBER 20, 2008

**PREPARED FOR:
THE COUNTY OF HAWAI'I**

**PREPARED BY:
THE SOUTH KOHALA COMMUNITY**

WITH THE ASSISTANCE OF:
**THE COUNTY OF HAWAI'I PLANNING DEPARTMENT
AND TOWNSCAPE, INC.**

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ACKNOWLEDGEMENTS

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Waikoloa Village Focus Group
Kawaihae Focus Group
Puakō Focus Group
(Due to a large number of participants names are listed in Appendix A)

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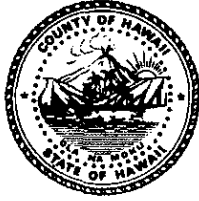
Townscape, Inc.
David Tamura
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Website:

<http://www.hcrc.info/community-planning/community-development-plans/>

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COUNTY OF HAWAI'I



STATE OF HAWAI'I

BILL NO. 369

ORDINANCE NO. 08 159

**AN ORDINANCE ADOPTING THE COUNTY OF HAWAI'I SOUTH KOHALA
COMMUNITY DEVELOPMENT PLAN.**

BE IT ORDAINED BY THE COUNCIL OF THE COUNTY OF HAWAI'I:

SECTION 1. Purpose. The purpose of this ordinance is to adopt the South Kohala Community Development Plan (attached hereto as Appendix A) pursuant to the County of Hawai'i General Plan. Section 15.1 (February 2005 as amended).

SECTION 2. Adoption. Chapter 16, section 16-2, Hawai'i County Code 1983 (2005 Edition, as amended), is amended to read as follows:

“Section 16-2. Adoption of community development plans. The community development plans listed below are adopted and incorporated by reference. A copy of the plans and amendments shall be available for public inspection at the Planning Department.

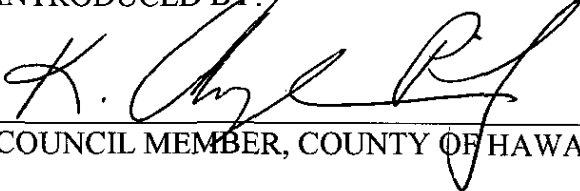
SOUTH KOHALA. The document identified as “South Kohala Community Development Plan” is adopted by reference subject to later amendments by ordinance, and may be cited as the “South Kohala CDP.” The planning area for the South Kohala CDP encompasses the judicial district of South Kohala.

SECTION 3. Severence. In the event that any portion of this ordinance is declared invalid, such invalidity shall not affect the other parts of this ordinance.

SECTION 4. Material to be repealed is bracketed and stricken. New material is underscored. In printing this ordinance, the brackets, bracketed and stricken material, and underscoring need not be included.

SECTION 5. Effective Date. This ordinance shall take effect upon its approval.

INTRODUCED BY:


COUNCIL MEMBER, COUNTY OF HAWAII

 Kona , Hawai'i
Date of Introduction: October 22, 2008
Date of 1st Reading: October 22, 2008
Date of 2nd Reading: November 7, 2008
Effective Date: December 1, 2008

REFERENCE: Comp. 1470

OFFICE OF THE COUNTY CLERK
 County of Hawai'i
 Kona, Hawai'i

RECEIVED

Introduced By: K. Angel Pilago
 Date Introduced: October 22, 2008
 First Reading: October 22, 2008
 Published: N/A

REMARKS: _____

Second Reading: November 7, 2008
 To Mayor: November 18, 2008
 Returned: November 20, 2008
 Effective: November 20, 2008
 Published: December 1, 2008

REMARKS: _____

ROLL CALL VOTE

NOV 20 AM 10 15

| | AYES | NOES | ABS | EX |
|-----------|------|------|-----|----|
| Ford | X | | | |
| Higa | X | | | |
| Hoffmann | X | | | |
| Ikeda | X | | | |
| Jacobson | X | | | |
| Naeole | X | | | |
| Pilago | X | | | |
| Yagong | X | | | |
| Yoshimoto | X | | | |
| | 9 | 0 | 0 | 0 |

ROLL CALL VOTE

| | AYES | NOES | ABS | EX |
|-----------|------|------|-----|----|
| Ford | X | | | |
| Higa | X | | | |
| Hoffmann | X | | | |
| Ikeda | X | | | |
| Jacobson | X | | | |
| Naeole | X | | | |
| Pilago | X | | | |
| Yagong | X | | | |
| Yoshimoto | X | | | |
| | 9 | 0 | 0 | 0 |

I DO HEREBY CERTIFY that the foregoing BILL was adopted by the County Council published as indicated above.

APPROVED AS TO
 FORM AND LEGALITY:

[Signature]
 DEPUTY CORPORATION COUNSEL
 COUNTY OF HAWAII

Date NOV 19 2008

[Signature]
 COUNCIL CHAIRMAN
[Signature]
 COUNTY CLERK

Approved/Disapproved this 20th day

of November, 2008
[Signature]
 MAYOR, COUNTY OF HAWAII

Bill No.: 369
 Reference: C-1470/PC-96
 Ord No.: 08 159

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LIST OF ACRONYMS

| | | | |
|-------|---|-------|--|
| ASEA | Aquifer Sector Area | GIS | Geographic Information System |
| ASYA | Aquifer System Areas | HCC | Hawai'i County Code |
| CDP | Community Development Plan | HPA | Hawai'i Preparatory Academy |
| CFD | Community Facilities District | HILT | Hawai'i Island Land Trust |
| CRP | Community Readiness Program | HICDC | Hawai'i Island Community Development Corporation |
| CWRM | State Commission on Water Resource Management | IAL | Important Agricultural Land |
| DBEDT | State Department of Business Economic Development and Tourism | LSB | Land Study Bureau |
| DHHL | State Department of Hawaiian Home Lands | LUD | Land Use District |
| DLNR | State Department of Land and Natural Resources | LUPAG | Land Use Pattern Allocation Guide |
| DOH | State Department of Health | MGD | Millions of Gallons per Day |
| DOT | State Department of Transportation | SLUD | State Land Use District |
| DWS | County of Hawai'i Department of Water Supply | OHCD | County Office of Housing and Community Development |
| EA | Environmental Assessment | PCA | Puakō Community Association |
| EIS | Environmental Impact Statement | PUC | Public Utilities Commission |
| EMS | Emergency Medical Service | SY | Sustainable Yield |
| FEMA | Federal Emergency Management Agency | TDR | Transfer of Development Rights |
| FIRM | Flood Insurance Rate Map | TMK | Tax Map Key |
| FUDS | Formerly Used Defense Site | USDA | U.S. Department of Agriculture |
| | | USGS | U.S. Geological Survey |
| | | WHWMO | West Hawai'i Wildfire Management Organization |
| | | WWTP | Waste water treatment plant |
| | | WVA | Waikoloa Village Association |

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EXECUTIVE SUMMARY

Adopted as an ordinance in 2005, the County General Plan is the policy document for the long range comprehensive development of the island of Hawai'i, encompassing County-wide goals.

The County of Hawai'i's South Kohala Community Development Plan (CDP) is intended to be the forum for translating South Kohala's community input into **Policies** and **Action Plans** that shape the future land use of the district and translate broad General Plan statements into specific actions.

South Kohala has many sites and landscapes that have significant cultural and historical value to the Native Hawaiian people. It is also the birthplace of the *Paniolo* or "Hawaiian Cowboy." The district is home to one of the fastest growing communities in the County, Waikoloa Village. Several of the best white sand beaches on the island are located on South Kohala's Coast. Three world famous resorts are found here: Mauna Kea, Mauna Lani, and Waikoloa Resorts. Also, one of only two commercial harbors in the County is located in South Kohala. Recognizing the uniqueness and special qualities of the different communities in the South Kohala District, the South Kohala Community Development Plan has been organized into four specific area plans for the communities of Waimea, Waikoloa Village, Kawaihae, and Puakō. The CDP also contains policies and guidelines that address the entire district and are not specific to one particular community.

A note to the reader on ways to read this document: The South Kohala Community Development Plan is divided into nine chapters. The chapters do not have to be read sequentially. Chapters One and Two provide background information and the context for the policies, programs, and actions that are presented in later chapters. The reader may choose to skip the first two chapters and go straight to the policies, programs, and actions in the later chapters, referring back to the first two chapters as they wish.

Chapter 3: District-Wide Policies, outlines policies related to four issue areas: Preserve Culture/Sense of Place, Transportation, Emergency Preparedness, and Environmental Stewardship / Sustainability.

Chapters 4 thru 7 outline plans for four specific communities in South Kohala. The key element of the **Waimea Town Plan** is a "Responsible Growth" policy intended to preserve Waimea's sense of place. In the **Waikoloa Village Plan**, the key element of the plan calls for the provision of adequate infrastructure and public services for a growing community. The **Kawaihae Community Plan** calls for a balance of recreational, commercial, residential, and industrial uses around the harbor area and the restoration of marine waters of Pelekane Bay. In the **Puakō Community Plan**, the plan addresses strategies to manage growth, mitigate the impacts of natural disasters to the community, and also to preserve the near shore marine water quality.

Towards the end of each Community area plan, are sections entitled "**Action Programs.**" **Action Program** details outline the following:

- **Who** will take the lead in implementing these actions
- **What** needs to be done
- **When** should actions take place
- **How much** will it cost
- **Intended outcome** of the actions

Chapter 8: CDP Implementation covers details of the "CDP Action Committee the future community-based implementing body of the Community Development Plan.

Chapter 9: Monitoring Plan provides a systematic way to evaluate the progress of CDP implementation.

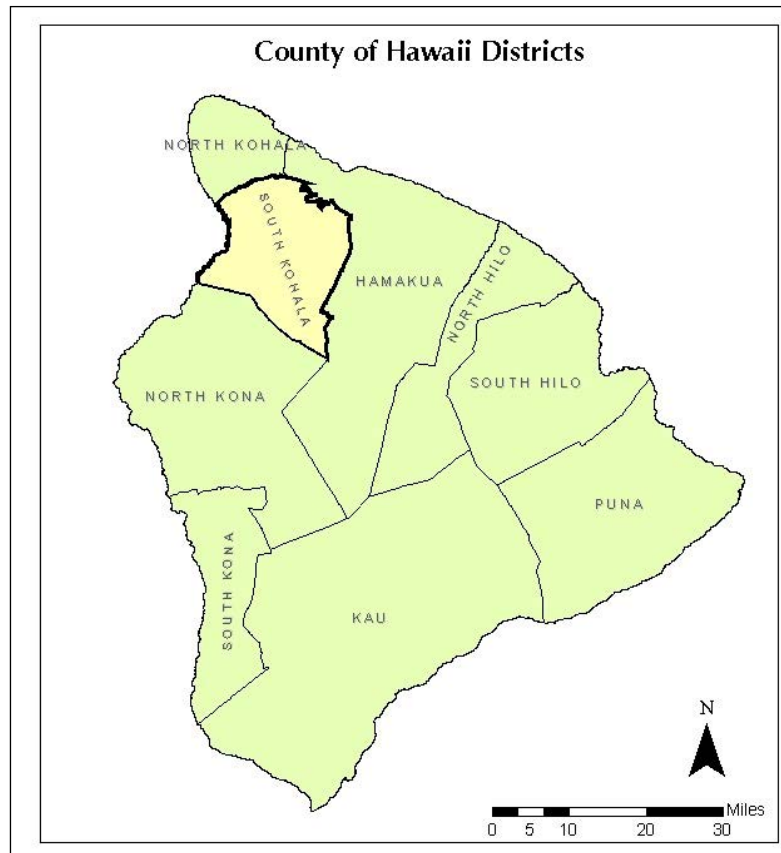
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1 INTRODUCTION

1.1 PLANNING AREA

The South Kohala District lies in the northwest sector of the Island of Hawai'i. Neighboring districts North Kohala to the north, Hāmākua to the East; and North Kona to the south. The Pacific Ocean defines the district's western border. The South Kohala District consists of approximately 176,500 acres and makes up approximately 6.8% of the land area of the County of Hawai'i.

FIGURE 1.1: DISTRICT OF SOUTH KOHALA



1.2 PURPOSE OF THE CDP

The purposes of the South Kohala Community Development Plan (CDP) are to:

- Identify the South Kohala community's **Priority Issues**
- Develop **Policies** and **Action Programs** to address those Priority Issues

According to the Hawai'i County General Plan, the CDPs are intended to:

- Be the forum for **community input** into **managing growth** and coordinating the delivery of government services to the community
- Create a long-range framework and direction that guides future decision making and actions
- Translate the broad General Plan statements to **specific actions**
- Direct physical development and public improvements within a specific area
- **Focus on action**

The South Kohala CDP will be enacted as a County Ordinance. This means that the provisions of the CDP have the force of law.

The CDP contains both mandatory directives and guidelines. A "mandatory directive" is a required course of action and can be identified by the word "shall" or "required" or "prohibit". A "guideline" is a course of action that is considered advisable and should be followed unless a determination is made that under certain circumstances, or because of specified reasons, that general guideline is found to be inappropriate, ill-advised, or impossible.

1.3 PLANNING PROCESS

The South Kohala Community Development Plan has been organized into four focused area plans for the communities of Waimea, Waikoloa Village, Kawaihae, and Puakō. This CDP is built upon a foundation of ideas generated by the residents of South Kohala.

Opportunities to gain public input were integrated into the planning process. Through the first phase of community outreach, the "Community Readiness Process" (CRP), South Kohala communities were asked to identify priority issues that the CDP should address.

During the second phase of outreach, the communities were asked to identify policies and actions that they felt would be reasonable solutions to address the priority issues that they had identified. The South Kohala CDP is thus the result of an extensive public process summarized below. (A more detailed listing of specific meeting dates is included in **Appendix B**.)

- **CRP Process** – The Community Readiness Program (CRP) was intended to prepare the South Kohala communities for the CDP process. The CRP process included consisted of over 60 small group meetings that took place during 2006 and 2007.

- **Steering Committee** – An 11-member Steering Committee was formed to broadly represent the South Kohala communities and assist in the preparation of the CDP. The Steering Committee met once a month between June 2007 and September 2008 (15 meetings) to review CDP material and plan for upcoming events such as community-wide meetings. Many Steering Committee members also participated in Focus Groups.



South Kohala Steering Committee Meeting – June 25, 2008

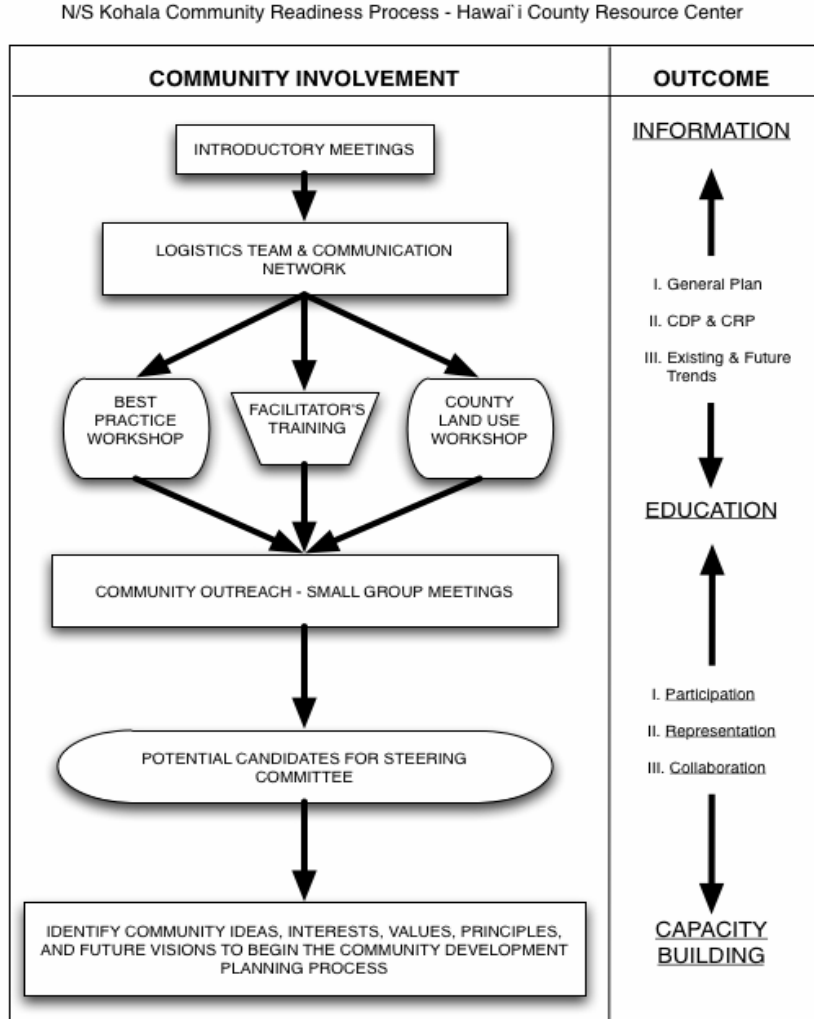
- **Focus Groups** – Focus Groups were formed for four communities in South Kohala: Waimea, Waikoloa Village, Kawaihae, and Puakō. Each Focus Group met several times to discuss and decide on the issues, strategies, and action plans for their individual community.
- **Community-wide Meetings** – Six Community Meetings were held throughout the CDP process to get community input on ideas that were developed by the Focus Groups, the Steering Committee, the Planning Consultant, and the County of Hawai'i.



Community-wide meeting, Waikoloa Village – August 30, 2007

The following diagram illustrates the overall community outreach process during the CRP process. The process started off with introductory meetings in South Kohala from which “Logistics Teams” were created. The logistics teams consisted of dedicated volunteers from the community. Logistics Team members received training in meeting facilitation as well as meeting organization. The Logistics Teams assisted Hawai'i County Resource Center staff with a series of small group meetings during the CRP process. As previously mentioned, there were over 60 small group meetings during the CRP. Towards the end of the CRP program, candidates for the South Kohala Steering Committee were selected.

FIGURE 1.2



Community ideas, issues, and concerns were collected and documented through the CRP process. The following tables summarize the variety and number of ideas that were collected.

CRP MEETINGS – SUMMARY OF COMMUNITY IDEAS

Table 1.2 KEY AREA I – INFRASTRUCTURE, ROADS, PUBLIC SERVICES, FACILITIES,

| Themes | # of Ideas |
|---|-------------------|
| FIX TRAFFIC! BUILD BYPASS, CONNECTOR & ALTERNATE ROADS | 188 |
| UPGRADE EXISTING ROADS TO MAKE IT SAFER/BETTER | 145 |
| IMPROVE EDUCATION SYSTEM – MIDDLE & HIGH SCHOOL | 127 |
| DESIGN & IMPROVE KAWAIHAE HARBOR AS MULTI USE FOR ALL | 80 |
| MORE CHOICES FOR PUBLIC TRANSPORTATION – YOUTH, ELDER, WORKER | 60 |
| BETTER WASTE & WATER MANAGEMENT; MORE RECYCLING PROGRAM | 54 |
| IMPROVE PUBLIC FACILITIES – POLICE & FIRE | 50 |
| ALTERNATIVE, RENEWABLE, NATURAL ENERGY | 40 |
| Total | 744 |

Table 1.3 KEY AREA II – COMMUNITY, CULTURE & HOUSING

| Themes | # of Ideas |
|--|-------------------|
| PRESERVE OUR CULTURAL HERITAGE & COMMUNITY CHARACTER | 168 |
| AFFORDABLE HOUSING & LAND FOR LOCAL PEOPLE | 134 |
| HEALTHY RECREATIONAL OPPORTUNITIES FOR ALL AGES | 109 |
| MORE LOCAL REPRESENTATION & GOVERNMENT ACCOUNTABILITY | 57 |
| SOCIAL ISSUES – SUPPORT FOR KUPUNA, HOMELESS & DRUG PREVENTION | 57 |
| Total | 525 |

Table 1.4 KEY AREA III – REGIONAL GROWTH

| Themes | # of Ideas |
|--|-------------------|
| WALKABLE TOWN CENTERS & COMMUNITY GATHERING SPACES | 110 |
| GROWTH MANAGEMENT – SLOW, RESTRICT, LIMIT, STOP GROWTH | 103 |
| BETTER PLANNING, HAZARD PREPARATION AND MITIGATION | 77 |
| DIVERSIFIED ECONOMY & MORE LOCAL BUSINESSES | 62 |
| INFRASTRUCTURE BEFORE ANY MORE DEVELOPMENT | 52 |
| Total | 404 |

Table 1.5 KEY AREA IV – OPEN SPACE, PARKS, HISTORIC SITES, AND WORKING LAND

| Themes | # of Ideas |
|---|-------------------|
| PRESERVE & MAINTAIN OUR AINA! KEEP IT GREEN! | 157 |
| LARGE AND SMALL PARKS – WALKING, BIKING & HORSE PATHS | 89 |
| PROTECT OUR AGRICULTURE LAND AND HERITAGE | 51 |
| SAVE THE PU’U’S | 45 |
| OCEAN AND MOUNTAIN ACCESS | 36 |
| RESPECT & HONOR OUR HISTORICSITES & TRAILS | 19 |
| Total | 397 |

1.4 DRAFTING OF THE FINAL CDP

The South Kohala Steering Committee in cooperation with the County Planning Department has sought to incorporate the needs and concerns of the South Kohala communities into the CDP, taking into account sometimes divergent positions and points of view. This process, as with all community planning, requires balancing the different interests involved:

- Balancing between the need for public facilities in the District versus the cost of providing those facilities;
- Balancing vested private property rights against the need to address the escalating problems associated with development and growth such as environmental degradation and the potential loss of scenic beauty, cultural heritage, and sense of place.
- Balancing developers’ natural profit motivation against the community’s insistence that it is time for developers to shoulder more of the cost of public facilities that will be needed as a result of future development;
- Balancing between the interest of the farm lot owner to develop their land so as to maximize his profits versus the community’s interest in preservation of farm land and open space;
- Balancing between providing a meaningful forum for public participation in the development approval process -- which has heretofore been completely lacking at the critical subdivision stage -- versus the need for efficient and timely consideration of subdivision and plan approval applications;
- Balancing between increased development on mauka slopes versus sedimentation of coastal waters and coral reefs;
- Balancing the needs and desires of the current population against the needs of future generations.

1.5 PRECAUTIONARY PRINCIPLE

Recently the Hawai'i Supreme Court provided some guidance for those engaged in this balancing process at the County level. The Court articulated a public trust framework for natural resource decisions both at the State and County level. The Court clarified the constitutionally mandated "Public Trust Doctrine" imposes upon the Counties the stewardship responsibility to "future generations" to conserve and protect Hawai'i's natural beauty and all natural resources. On this point, the Hawai'i Constitution Section XI subsection 1 provides:

"For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawai'i's natural beauty and all natural resources, including land, water, air, minerals and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. All public natural resources are held in trust by the State for the benefit of all people."

It is on the basis of this constitutional "Public Trust" provision that decisions involving land and water must be guided by the "Precautionary Principle" when we weigh our private wants against the ability of the environment to accommodate those wants. The precautionary principle requires long-term vision and mandates that government entities favor caution and conservation in any case in which information is uncertain. The burden of proving that the resource is adequate and that its proposed use is consistent with the sustainable health of the ecosystem falls on the party proposing to use the resource.



View from the *pu'u* above Waimea Town

We must also be mindful that if a privately owned resource is of significant value and is worthy of preservation for the benefit of the community at large, that it may well be appropriate for the community to compensate the property owner for the loss in value resulting from significant limitations imposed upon their use of the property.

In its efforts to draft this CDP, the Steering Committee has sought to balance these interests consistent with its stewardship role in preserving the beauty and natural resources of South Kohala for the welfare of both present and future generations.

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2 SOUTH KOHALA YESTERDAY AND TODAY

2.1 GENERAL PHYSICAL SETTING

South Kohala has two distinct physical environments, each with its own kind of natural beauty: the green and lush mountainous region in the north and the rugged, dry landscape in the south.

The mountainous region, which includes the town of Waimea, includes a plateau between the Kohala Mountains and Mauna Kea. The Kohala Mountains provide a backdrop of rolling hills and volcanic *pu'u* covered with pastures and forests kept green by fog, fine mist, and rain.



Green pastures near Waimea Town



Pu'u Hina'i and dry grasslands

The second distinct physical environment is distinguished by pale yellow vegetation, beige to red-brown rock formations along the coast, and barren black lava fields. Amid these rugged and desert like conditions, there are pockets of white sand beaches along the rocky coast. Waikoloa Village, along with the major resort areas, is located in the dry southern region of the district. The Kawaihae area located on the northwest coast of the district is also dry and arid. (County of Hawai'i General Plan, 2005)

Table 2.1 displays the average annual rainfall and temperatures for different regions within the district.

Table 2.1 Average Rainfall, High Temperatures, and Low Temperatures for South Kohala

| Location | Avg. Annual Rainfall | Avg. Daily High Temperature Range (Fahrenheit) | Avg. Low Temperature Range (Fahrenheit) |
|--------------------|----------------------|--|---|
| Waimea Area | 20-80 inches | 75 degrees | 60 degrees |
| Waikoloa Area | 10-15 inches | 77-85 degrees | 65-70 degrees |
| South Kohala Coast | 10 inches | 83-87 degrees | 70-75 degrees |

Source: Waikoloa Highlands EIS; Lālamilo EIS; County of Hawai'i

2.1.1 LANDFORMS

The major landforms of the South Kohala district and their distinguishing characteristics include:

Kohala Mountains: The Kohala Mountains were created from the eruptions of the Kohala Volcano. The Kohala Volcano last erupted approximately 60,000 years ago. The oldest lava has been dated at 460,000 years old. The volcano is extinct and in the erosional stage of its life cycle. Its eastern windward flank is characterized by great erosional valleys, spectacular waterfalls, and dramatic sea cliffs. The of rubble of a dramatic landslide extends fifty miles out on the ocean floor. The mountain's leeward southwesterly side is within the South Kohala district. This side of the mountain is more gently sloping and smooth. The town of Waimea, pasture lands, and farm lands exist on these gentle slopes. The summit elevation of the Kohala Mountains is 5,480 feet.



The Kohala Mountains

Pu'u: The Kohala Mountain rift zone extends southeastward from its summit into the district in the vicinity of Waimea. The last eruptions were moderately explosive and formed a series of large cinder cones (*pu'u*) that accent the Kohala Mountain and plateau in the surrounding area of Waimea. A number of *pu'u* are also scattered along the Saddle Road and are associated with Mauna Kea.

Coastal beaches dot the otherwise rocky, jagged coastline. Sandy beaches can be found near Anaeho'omalua, Waialea Bay, Puakō, Hapuna State Park, Kauna'oa, Mau'umae, and Ohai'ula (Spencer Beach Park). There are several man made beaches located at the resort nodes. Much of the coastline is defined by old lava flows that have entered into the ocean.



Mau'umae Beach

Marine seascape: The diverse coral reef communities that occupy the nearshore waters of South Kohala distinguish the district from other districts on the island. These unique marine environments support an extensive reef system populated by a variety of species. Tidal pools, rock formations, and ancient fishponds are also prominent features of South Kohala.

2.1.2 GENERAL DEVELOPMENT PATTERNS IN THE DISTRICT

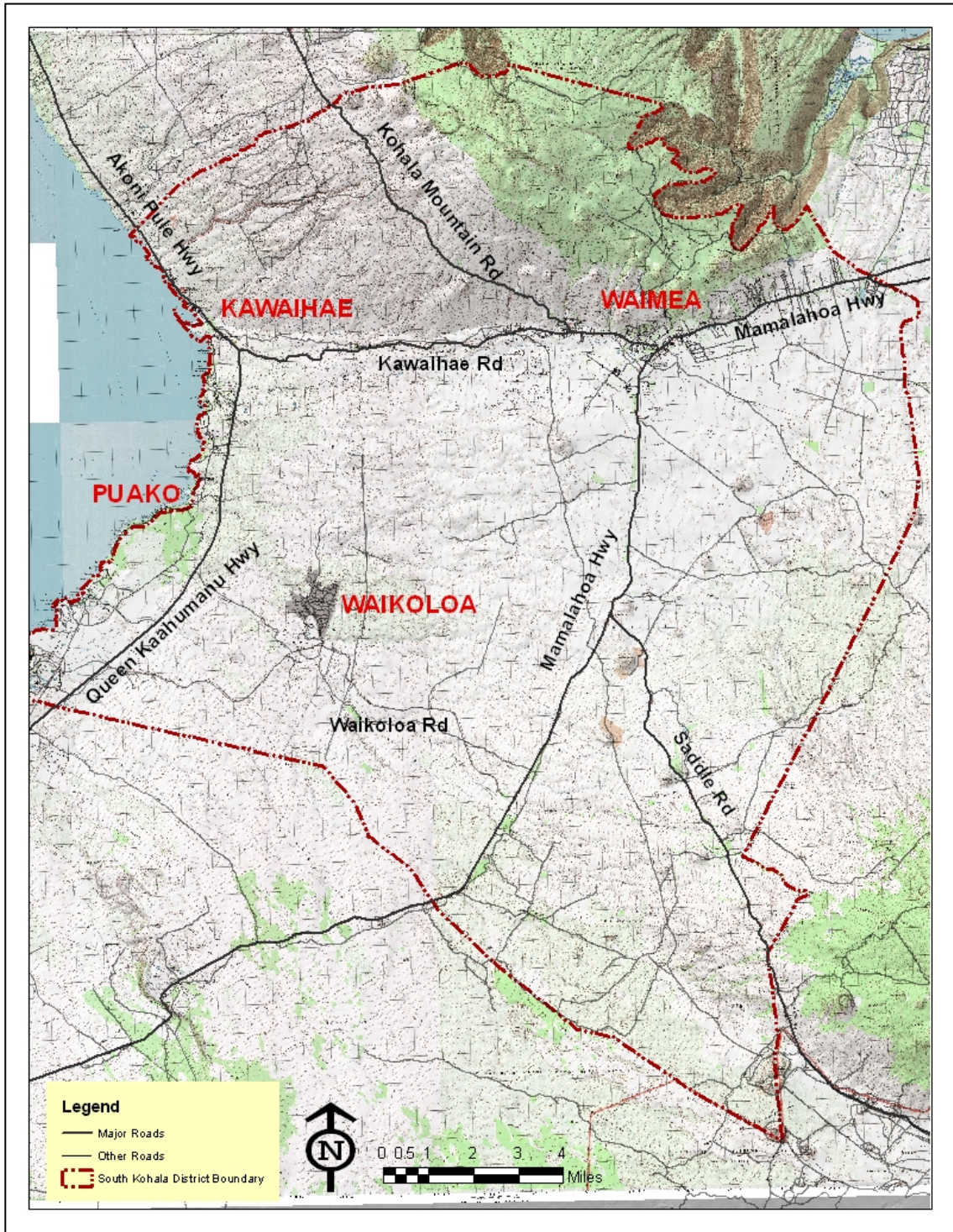
South Kohala's general land development pattern varies greatly between the district's two main population centers: Waimea Town and Waikoloa Village. Waimea Town is a rural community that has a long and proud history. It is situated on a plateau of the Kohala Mountains. Waikoloa Village is a relatively new, more urbanized residential community. Waikoloa Village was originally designed to be a retirement community when it was developed in 1971. However, due in part to the expansion of upscale hotels, restaurants, and shops along the South Kohala coast, and the corresponding housing needs of these employees, Waikoloa Village has evolved into a suburban community for residents of all ages. Community members from Waikoloa Village note that the Village is isolated from other surrounding areas due to its location away from a major highway. There is currently only one access road, Waikoloa Road that connects Waikoloa Village to other areas in the district.

A third key location in the district is the Kawaihae area. Although sparsely populated, the Kawaihae area is home to the only recreational small boat harbor in northwest Hawai'i and the only

commercial harbor in West Hawai'i. The harbor area is a major transportation and activity node, handling both traffic generated from harbor activities and traffic from North Kohala, Waimea, and the resort areas that must all pass through the Kawaihae area at the intersection of the Queen Ka'ahumanu Highway, Akoni Pule Highway, and the Kawaihae Road.

Three large destination resorts are located along the Queen Ka'ahumanu Hwy. The Mauna Kea Resort, Mauna Lani Resort, and the Waikoloa Resort are situated along South Kohala's coastline. Each resort node consists of large-scale, high-end hotels, shops, restaurants, and high-end residential units. Just north of the Mauna Lani Resort is the small residential coastal village of Puakō. Today Puakō mainly consists of single-family homes that have been built along either side of Puakō Beach Drive. A significant number of single family homes are operated as vacation rentals in Puakō. The village is also home to the historic Hokuloa Church, founded more than a century and a half ago by the Reverend Lorenzo Lyons. The Puakō Petroglyph Field is located between the Mauna Lani Resort and the Puakō Beach Lots.

FIGURE 2.1: DISTRICT OVERVIEW MAP



The key planning implications related to South Kohala’s physical setting include:

- **South Kohala is a large land area** – Providing adequate public services and infrastructure over such a large area will be challenging.
- **The physical settings and development patterns throughout the district are diverse and distinct**
There are several regions in the district that have unique features both physically and in the way that the regions have developed over time. The CDP recognizes the unique qualities in these regions and does not plan for the district in a “one-size fits all” approach.

2.2 SOUTH KOHALA YESTERDAY: AN HISTORICAL OVERVIEW

Anthropologists and archaeologists estimate that the first settlers arrived in the South Kohala region sometime between 750-1000 AD. The warm coast and beaches on the western boundaries of the South Kohala district were used seasonally by early Polynesians who eventually migrated to the cooler plateau. Descendents of these early Polynesian explorers established fishing villages on the leeward coast of the district and along the western extremities of the plains and began cultivating *lo`i kalo* terraces along a series of streams at the southern base of the Kohala Mountains. Construction of the Waimea field system may have involved clearing and burning of the native forest. South Kohala, in particular Kawaihae and Waimea, was an important political region on the Island of Hawai‘i. Many high ranking ali‘i regularly visited the area and held court here even up to the time of Kamehameha and his son Liholiho. (Clark, 1986) Towards the mid 19th century and on into the 20th century, the district was heavily influenced by the *paniolo* way of life. Toward the latter half of the 20th century, the development of three world class resorts in the district shifted the district’s economic base from agriculture to tourism which has influenced land use and development patterns over the last several decades.

2.2.1 BRIEF HISTORY OF WAIMEA

Because of its fertile soils and food productivity, Waimea is known by some as “Edena Nani” (beautiful Eden). The area was a coveted location and was the site of many interisland and intransland battles between Hawaiian Chiefs. Sometime between the 16th and 17th century, one such interisland battle took place, involving the army of Kamalalawalu, chief of Maui, and the army of Lonoikamakahiki, chief of Hawai‘i Island. Kamalalawalu first sent scouts to Kawaihae to spy on the region. The Maui army marched to the plains of Waimea. To their dismay, they were met with a great force of Hawai‘i Island warriors. Armies from Waimea, Kohala, Kona, Hāmākua, Hilo, and even as far away as Puna and Ka‘u, assembled in Waimea to repel the invading Maui troops. It was said that the host of Hawai‘i warriors was so great that they covered the grassy plains of Waimea like “locusts”. (Cordy, 2001)

As many areas of Hawai‘i were profoundly impacted socially and economically by the rise of large sugar plantations and the in-migration of immigrant labor, South Kohala had no such large scale plantations. During this time period, South Kohala, and in particular Waimea, was greatly influenced economically and socially by the ranching and cattle industries. The origins of the *paniolo* or ‘Hawaiian Cowboy’ can be traced all the way back to the gift of five cows and one bull that Kamehameha received from Captain George Vancouver of England in 1793. For ten years, a *kapu* on hunting was placed on the small herd. From these six cattle, large herds of cattle eventually developed. In 1838, Kamehameha III asked Spanish-Mexican vaqueros from California to teach Hawaiians how to manage the wild cattle. The vaqueros became known as “*paniolo*.”

In 1847, the legendary Parker Ranch was founded when John Palmer Parker purchased two acres of land in the Waimea area for \$10. Since then, Parker Ranch land holdings have increased

considerably. Today, Parker Ranch is one of the largest privately owned ranches in the world and is a major landowner in South Kohala.

Several legendary *paniolo* contributed to Parker Ranch's growth and expansion. These *paniolo* included the descendants of several notable families in the area including the Lindsey, Purdy, Bell, Stevens, and Spencer families. These families are commonly known as the "Foundation Families" of Parker Ranch. From their initial beginnings in the early 19th century, these families grew to become large in number and had great influence on the shaping of Parker Ranch and Waimea.

Alfred Wellington Carter assumed stewardship of Parker Ranch from the beginning of the 20th century to the 1950s. He is credited with the further building, maintaining, and preservation of Parker Ranch. Carter also devoted Ranch resources to the education of Ranch employees and their children. He also provided interest free home loans to Ranch employees and was instrumental in getting veterinary service for North and South Kohala and improved medical service for the Waimea community. During his tenure as head of the Thelma Parker Trust, Parker Ranch land holdings grew to 327,000 acres including the acquisition of the 95,000 acre *ahu 'ili* of Waikoloa which includes most of the lands in South Kohala. (Bergin, 2004)

During World War II Parker Ranch played an integral part in hosting 50,000 marines, as they prepared for the battles in Iwo Jima and Okinawa. Waimea had a huge tent city at one point which became known as Camp Tarawa. During their stay in Waimea, the military constructed an entertainment center which was renamed Kahilu Hall and an airstrip that was later converted to commercial use. (<http://www.kamuela.com/history.asp>)

During the early and middle parts of the 20th Century many Japanese farmers settled in Waimea. They were an important part of Waimea's agricultural history and remain an important part of the community today, as many of these families are a major presence at the Lālāmilo farm lots.

Richard Smart, son of Thelma Parker, and last remaining heir to the Parker Dynasty, took over Ranch operations from Hartwell Carter, son of A.W. Carter during the middle of the 20th century. (Bergin, 2004) Through the remaining years of his life, Smart faced significant challenges when running the Ranch, including the decline in Hawai'i's agriculture and cattle industries and the rise of the tourism industry in the State. Parker Ranch, under the direction of Smart, developed the "Parker Ranch 2020 Plan." Written in the 1980's, the plan described the primary issues of the 80's as "Traffic Congestion," "Inadequate Potable Water and Agricultural Water Sources," and "Inadequate Housing." Smart commented in a publication summarizing the Parker 2020 plan: "Let us work together to make Waimea the kind of community we all desire and deserve. May our land continue to be blessed with all the benefits which make it a better place in which to live."

Richard Smart died in 1992. In his will, Smart bequeathed most of Parker Ranch's assets to the Parker Ranch Trust Foundation. The Parker Ranch Trust Foundation's mission is to "Provide perpetual support for designated beneficiaries engaged in healthcare, education, and charitable support through the sound management of Trust assets while remaining mindful of the needs of the Kamuela community and its unique quality of life." Smart designated five beneficiaries: The North Hawai'i Community Hospital, Lucy Henriques Medical Center, Parker School Trust Corporation, Hawai'i Preparatory Academy, and the Richard Smart Fund of the Hawai'i Community Foundation.

Waimea has also been bolstered by the philanthropic energies of Dr. Earl Bakken, creator of the first battery powered pacemaker. Dr. Bakken moved to Hawai'i in 1989. In 1996 he helped to dedicate the North Hawai'i Community Hospital. Dr. Bakken also helped to establish Tutu's House, "a safe place for people of all ages to learn, share and explore health and healing of the mind, body, and spirit" (www.tutushouse.org); and a non-profit organization known as "Five Mountain," all of which have served to enrich and anchor a healthy, engaged community.

2.2.2 BRIEF HISTORY OF WAIKOLOA VILLAGE

Contrary to belief of many, Waikoloa does have a history of its own. Waikoloa is known as the "kula" lands and also the "plains". Waikoloa and its neighbors were identified as "*ili`aina*" (small land divisions" within a larger political land unit) -- the ahupua`a or kalana -- of Waimea, may indeed help explain why Waikoloa (containing c. 95,000 acres), apparently had no direct connection to the ocean.

Waikoloa, known for its uplands, has two ancient major trail systems: one trail extended between the coastal settlements and marine fisheries of Puakō to the Waikoloa-Waimea uplands. The second trail extended from the Puakō shore to Napu`u, meeting the upland trail between Waimea and Kona, near Ke`amuku-Kuainiho. Both trails remained in use through the nineteenth century. Use of the Puakō-Waimea Trail appears to have been discontinued primarily as a result of shifting population and the development of long-term leases between the Territorial Government and plantation-ranch business interests. The Puakō-Napu`u Trail remained in limited use through the 1960s, as a part of the operations of Pu`uwa`awa`a Ranch and Parker Ranch.

Waikoloa Village is only a few decades old. Established in 1971, the Waikoloa Village Association is an incorporated property owners' association whose purpose is "to provide for the management, maintenance, protection, preservation, architectural control and operation and maintenance of the common property within the development." Waikoloa Village was originally designed to be a retirement community, but today it has grown to be a more family-oriented community.

Boise Cascade, the original developer of Waikoloa Village, agreed to convey approximately 10,000 acres of land and improvements to the Waikoloa Village Association (WVA). The Clubhouse, swimming pool, tennis courts, and approximately 2,000 acres of land were conveyed to the Association in 1975 and an additional 8,000 acres were conveyed in 1987.

The predominant features of the community include single family homes, multi-family condominiums, a golf-course, a neighborhood shopping center, and a public school which opened in 1994. Several residents in the community consider the Waikoloa Elementary and Middle School to be the "heart" of the community.

2.2.3 BRIEF HISTORY OF KAWAIHAE

Literally translated, the name Kawaihae means "water of wrath". People are said to have fought over the water from a spring in this arid area. Historically, because of the region's dry, arid climate, Kawaihae has never sustained a very large population. However, despite its lack of water, Kawaihae was well known as a residence for ali'i and as a place with fertile off shore fisheries. Kawaihae was an important political region on the Island of Hawai'i. Many high ranking ali'i regularly visited the area and held court here. The fishing village of Kawaihae was the birthplace of several notable ali'i, including Queen Kamamalu, wife of Liholiho (Kamehameha II). Some believe that Queen Emma, wife of Alexander Liholiho Keawenui 'Iolani (Kamehameha IV), was also born in Kawaihae. (DHHL Kawaihae Master Plan, 1992)

Kawaihae was a very significant area during the lifetime of Kamehameha the Great. Kamehameha frequently held court in Kawaihae throughout his reign and some of his favorite surfing spots were off the coast of Kawaihae. The Pu`ukohola Heiau was constructed by Kamehameha. The heiau is near Kawaihae and is one of the few remaining heiau in all of Hawai'i that is of Po`okanaka class, a heiau where human sacrifice was performed. Two other heiau exist in the Kawaihae area. The Hale o Kapuni Heiau is a submerged shark heiau in Pelekane Bay. The Mailekini Heiau shares the same site as the Pu`ukohola Heiau. (Puakō Historical Society, 2000)

During Kamehameha's conquest of the other islands, two of his closest advisors were Western men, Isaac Davis and John Young. John Young married one of Kamehameha's nieces and Kamehameha granted him land at Kawaihae. In one of his capacities as the king's advisor, Young acted as a purchasing agent, obtaining supplies for the king's court and setting prices. His presence at Kawaihae helped to encourage more westerners to do business at Kawaihae. Young built the first European style house in the area near Pu'ukohola Heiau in 1798. His household complex was named Pahukanilua and it overlooked Kawaihae Bay. (Puakō Historical Society, 2000)

Throughout the 1800s and into the first half of the 20th century, Kawaihae continued to serve as a major port of commerce for the entire region. Large forests of sandalwood were harvested on the slopes of Mauna Kea and transported to ships anchored at Kawaihae during the early 1800s. During the peak years of cattle ranching in Waimea, from the mid 1800s to the early 1900s, thousands of cattle were brought down to Kawaihae Harbor to be shipped out to other places throughout Hawai'i.

In 1957, the Army Corps of Engineers began construction of a deep draft harbor at Kawaihae. The project lasted for about two years and was completed when the main breakwater was built in 1959. The completion of the deep draft harbor allowed larger barges to deliver and export materials directly to and from the region.

Laurance S. Rockefeller constructed the Mauna Kea Beach Hotel in the early 1960s, paving the way for future resorts and hotels to be developed in the region. Many of the current local businesses in the Kawaihae area receive a significant amount of business from tourists who stay at the Mauna Kea Beach Hotel. In 1975, the Queen Ka'ahumanu Highway was completed. The new highway ran from the Keāhole Airport to Kawaihae Harbor. The highway connected the major coastal towns in West Hawai'i and is one of the major infrastructure improvements in the region that helped to generate future development. (Puakō Historical Society, 2000) The Akoni Pule Highway was dedicated in 1973. This highway was named after Akoni Pule, the State Legislator representing North Kohala during the 1960s, who advocated strongly for a second access road into the district of North Kohala. Prior to the completion of the Akoni Pule Highway, the only roadway into North Kohala was the narrow and winding Kohala Mountain Road.

In 1972, the Kawaihae Canoe Club was formed. The club is a nonprofit organization dedicated to promoting and perpetuating Hawaiian outrigger canoe paddling. The club consists of residents from South Kohala as well as other districts on the island. The Kawaihae Canoe Club area lies north of the commercial harbor near the north small boat harbor. (<http://www.kamuela.com/kcc/>)

2.2.4 BRIEF HISTORY OF PUAKŌ

In legends and historical accounts, the white sandy beaches of South Kohala were used for canoe landings. Arriving from Kauai, Madame Pele beached her canoe at Puakō. The demi-god Maui also used Puakō as a canoe landing as he was visiting the island during his love affair with Pele. (Puakō Historical Society, 2000)

In 1832 at 24 years of age, Lorenzo Lyons and his 18 year-old wife Betsy Lyons arrived in Kawaihae. He is credited with translating many church hymns into Hawaiian and also for composing hymns in Hawaiian as well. He was lovingly known to local folks as Makua Laiana (Father Lyons), the lyric poet of the mountain country (*haku mele o ka'aina mauna*). Many of the historical accounts in the region come from the journal entries of Father Lyons. Father Lyons also established a church in Puakō in 1858. The church, named Hokulua, means "evening star." (Puakō Historical Society, 2000) The church is still in regular use to this day and it also serves as a meeting place for the Puakō Community Association.

In 1853, there was a major outbreak of small pox that spread from Waimea to Kawaihae and down towards Puakō. Famine and food shortages in the area also contributed to a decline in the population. Also, more promising economic opportunities on O‘ahu and in other larger towns across the islands led many of the native people in the region who did survive the outbreaks to migrate out of the region. (Clark, 1986) In 1859, Mauna Loa erupted and lava from the eruption flowed 25 miles into the ocean along the Kona coast. Although the lava did not flow through South Kohala, the Mauna Loa eruption had a negative effect on the coastal resources of all villages along the Kona coast because of the rise in ocean temperatures that the lava flow caused. From Puakō, Father Lyons commented on the effect the lava flow had on the tiny coastal village: “The heat of the volcanic stream that entered the sea near this place from [Mauna Loa] have killed or frightened away all their fish.” (Puakō Historical Society, 2000)

In 1895, the Puakō Sugar Plantation was established by Robert and John Hind. The plantation included 1,500-1,800 acres of land located east of the present Puakō Beach Drive where the present kiawe forest is located. Investment in the plantation included construction of a sugar mill, a wharf, and even a small one-mile railroad track running from the mill to the wharf. However, due to a combination of many factors, including a flood in 1901, and several instances of severe high coastal winds which blew down crops and scattered salt into the soils, the life of the sugar plantation was short-lived. The Puakō Sugar Plantation closed after being in operation for only about a decade and a half. Just seven families remained in the area after the plantation’s closure. (Puakō Historical Society, 2000)

During the early 1930s Francis Hyde I‘i Brown acquired land just south of Puakō from the Parker family. The area is known as Kalahuipua‘a “the family of pigs.” Brown was of Hawaiian ancestry and he cared deeply about the land. He made several notable improvements to the area including planting several hundred coconut palms and did some restoration work on the fishponds in the area. Brown was also remembered for his many “Hollywood” like parties that lasted for days and sometimes even weeks. Everyone was invited to his parties, local community members and even visiting Hollywood celebrities. Brown eventually sold the property to Mauna Lani Resort in 1972. (Puakō Historical Society, 2000)

In 1946, coastal communities in South Kohala were witness to a devastating tsunami. At Kawaihae, the tsunami was measured at 12 feet in height. In Puakō, coconut palms were reported to have watermarks on their trunks eight feet high. A long time Puakō resident, Ichiro Goto gave an account of the tsunami in his journal:

“Puakō Bay was empty for just a minute or two before another wave comes in like some unearthly monster. Roaring like a group of heavy bombers the wave comes in like some wild thing. Pushing rocks, fish, debris, everything and filling every space, and after the spaces are filled looks like some giant hand is pushing the wave up and above to a greater height.” (Puakō Historical Society, 2000)

In 1964, Shunichi Kimura, the County’s first elected mayor, oversaw the completion of a paved road that connected Kawaihae and Puakō. A decade later in 1975 the Queen Ka‘ahumanu Highway was completed. The new highway ran from the Keāhole Airport to Kawaihae Harbor. Prior to the highway’s completion, all vehicular traffic between Kailua and Kawaihae had to pass through Waimea.

In 1987, a large brush fire occurred in the district near Puakō. The fire was accidentally caused by campers at Waialea Bay. Strong winds had blown their camp fire onto dry fountaingrass nearby. The fire spread rapidly toward houses around the bay because of the strong winds. The main blaze lasted for two days, totally destroying seven houses and causing millions of dollars in property damages. (Puakō Historical Society, 2000) Exactly 20 years later in October of 2007, another large brushfire threatened the residents of Puakō. Unlike the previous fires, this fire was thought to have

been purposely set by arsonists. The fire consumed approximately 1,000 acres near Puakō and seriously threatened the Puakō forest. Residents of Puakō were evacuated, but luckily no lives were lost and there was no significant damage to properties.

2.3 LAND USE

State land use districts, County of Hawai'i Land Use Pattern Allocation Guide (LUPAG) and the **County of Hawai'i Zoning Code** set forth policies and standards to guide the location, type, and intensity of different land uses in particular areas and regions. The following tables and figures illustrate State and County Zoning land use policies in South Kohala. Please see **Appendix C** for descriptions of County Zoning and LUPAG Acronyms.

FIGURE 2.2: STATE LAND USE DISTRICT (SLUD) DESIGNATIONS IN SOUTH KOHALA

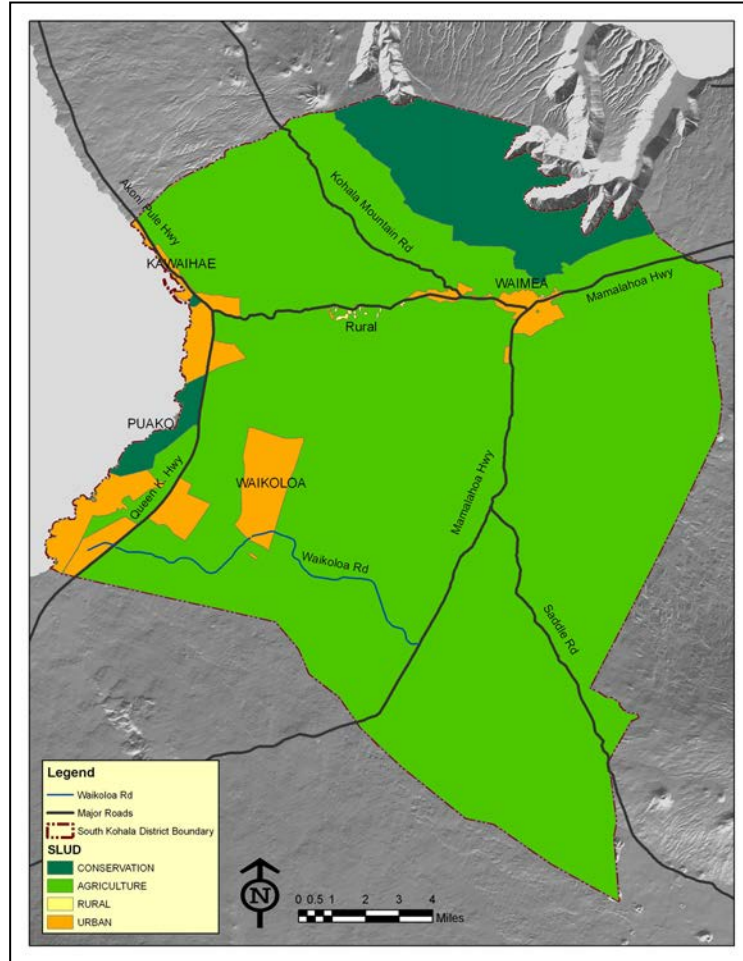


Table 2.2 State Land Use Districts Acreage by County Districts in 2000

| Districts | Agricultural | Conservation | Rural | Urban | Total |
|---------------------|----------------|---------------|-----------|---------------|----------------|
| Puna | 175,104 | 138,563 | 146 | 6,329 | 320,142 |
| South Hilo | 70,695 | 169,493 | 0 | 12,814 | 253,002 |
| North Hilo | 53,587 | 120,110 | 71 | 608 | 174,376 |
| Hāmākua | 162,729 | 235,805 | 13 | 1,041 | 399,588 |
| North Kohala | 64,713 | 13,187 | 16 | 2,434 | 80,350 |
| South Kohala | 150,426 | 15,356 | 53 | 10,608 | 176,443 |
| North Kona | 158,853 | 188,331 | 477 | 17,787 | 365,448 |
| South Kona | 110,749 | 35,051 | 31 | 845 | 146,676 |
| Ka'u | 237,743 | 422,239 | 0 | 1,801 | 661,783 |
| Total | 1,184,599 | 1,338,135 | 807 | 54,267 | 2,577,808 |

Source: DBEDT, Office of Planning GIS data

FIGURE 2.3: DISTRICT OVERVIEW OF GENERAL PLAN LUPAG DESIGNATIONS

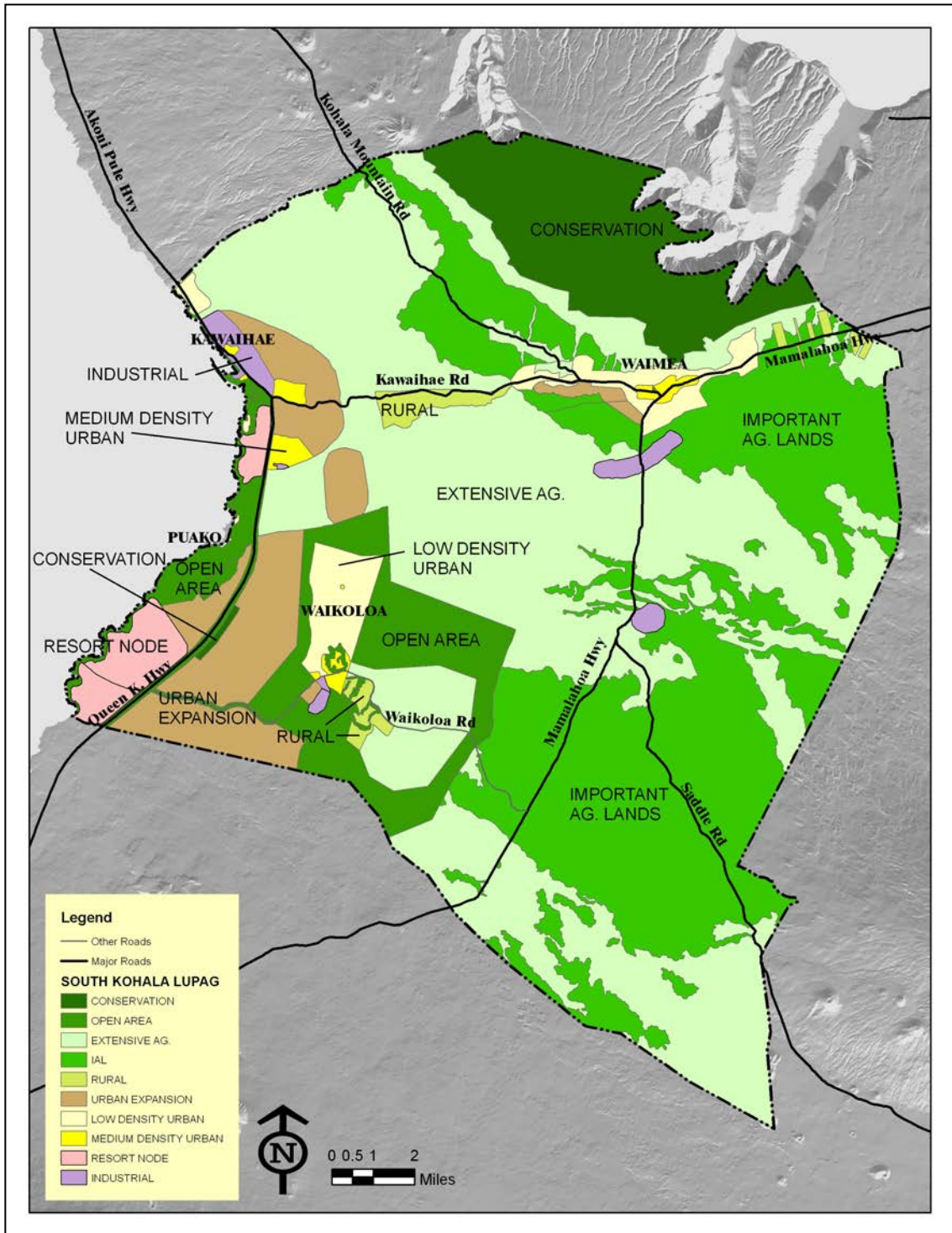


Table 2.3 LUPAG Designation by County Districts

| LUPAG Map Designation | Puna | South Hilo | North Hilo | Hamakua | North Kohala | South Kohala | North Kona | South Kona | Ka'u | Total |
|-----------------------------|---------|------------|------------|---------|--------------|---------------|------------|------------|---------|-----------|
| High Density Urban | 0 | 847 | 0 | 0 | 0 | 0 | 458 | 0 | 0 | 1,305 |
| Medium Density Urban | 478 | 1,481 | 69 | 292 | 176 | 1,282 | 1,456 | 292 | 421 | 5,947 |
| Low Density Urban | 8,013 | 10,073 | 617 | 2,293 | 2,668 | 5,084 | 6,287 | 1,070 | 1,148 | 37,253 |
| Industrial | 669 | 4,264 | 29 | 132 | 51 | 1,869 | 3,889 | 0 | 74 | 10,977 |
| Important Agricultural Land | 49,770 | 37,237 | 21,632 | 78,023 | 41,314 | 51,500 | 26,703 | 32,804 | 47,300 | 386,283 |
| Extensive Agriculture | 88,573 | 26,078 | 31,755 | 82,924 | 21,885 | 71,299 | 105,074 | 66,368 | 167,426 | 661,382 |
| Rural | 29,251 | 2,542 | 71 | 0 | 102 | 1,908 | 1,001 | 31 | 13,090 | 47,996 |
| Resort / Resort Node | 0 | 84 | 0 | 0 | 47 | 3,212 | 2,289 | 15 | 29 | 5,676 |
| Open Area | 2,335 | 1,798 | 434 | 1,266 | 2,119 | 14,074 | 6,233 | 2,699 | 4,738 | 35,696 |
| Conservation | 137,210 | 167,779 | 119,710 | 235,212 | 11,217 | 13,957 | 199,585 | 43,395 | 426,956 | 1,355,021 |
| Urban Expansion Area | 3,844 | 122 | 62 | 0 | 258 | 12,264 | 11,995 | 0 | 597 | 29,142 |
| University Use | 0 | 664 | 0 | 0 | 0 | 0 | 461 | 0 | 0 | 1,125 |

Source: County of Hawai'i General Plan 2005

The **Land Use Pattern Allocation Guide (LUPAG)** of the County is a graphic expression of the General Plan, particularly those elements of the General Plan relating to land use. However, the LUPAG is not the entire General Plan. It is not a zoning map; rather the LUPAG estimates the future acreage allocation for a particular land use and is meant to serve as a land use guide for the County. Generally, future developments must be consistent with the LUPAG map.

Approximately two-thirds of the land in the district is designated as Important Agricultural Land (IAL) or Extensive Agricultural land by the LUPAG. The General Plan defines Important Agricultural Lands as those lands with better potential for sustained high agricultural yields because of soil type, climate, topography, or other factors. IAL was determined by including lands identified as "Intensive Agriculture" on the 1989 General Plan LUPAG map, lands identified by the Agricultural Lands of Importance to the State of Hawai'i Study as "Prime" or "Unique," lands identified by the Land Study Bureau's Soil Survey Report as Class B "Good" soils and lands classified as "fair" for two or more crops, on an irrigated basis by the USDA NRCS study of suitability for various crops. The General Plan defines Extensive Agriculture lands as lands that are not capable of producing sustained, high agricultural yields without the intensive application of modern farming methods and technologies due to certain physical constraints such as soil composition, slope, machine tillability and climate. Other agricultural uses such as grazing and pasture may be included in the Extensive Agricultural category.

South Kohala also has the highest acreage allocation for open area lands with 14,074, the highest acreage for Urban Expansion with 12,264, and the second highest allocation of IAL with 51,000 acres. The Hāmākua District has the highest allocation of IAL with 78,023 acres.

The LUPAG has 12,264 acres for urban expansion in South Kohala. The majority of the lands slated for future urban expansion is located near the resort areas, Waikoloa Village, and the Kawaihae area. A smaller acreage of land is designated for urban expansion in the Waimea area. Of the total 29,142 acres designated by the County for urban expansion across the Big Island, 42% of those acres are in South Kohala.

FIGURE 2.4: DISTRICT OVERVIEW OF COUNTY ZONING

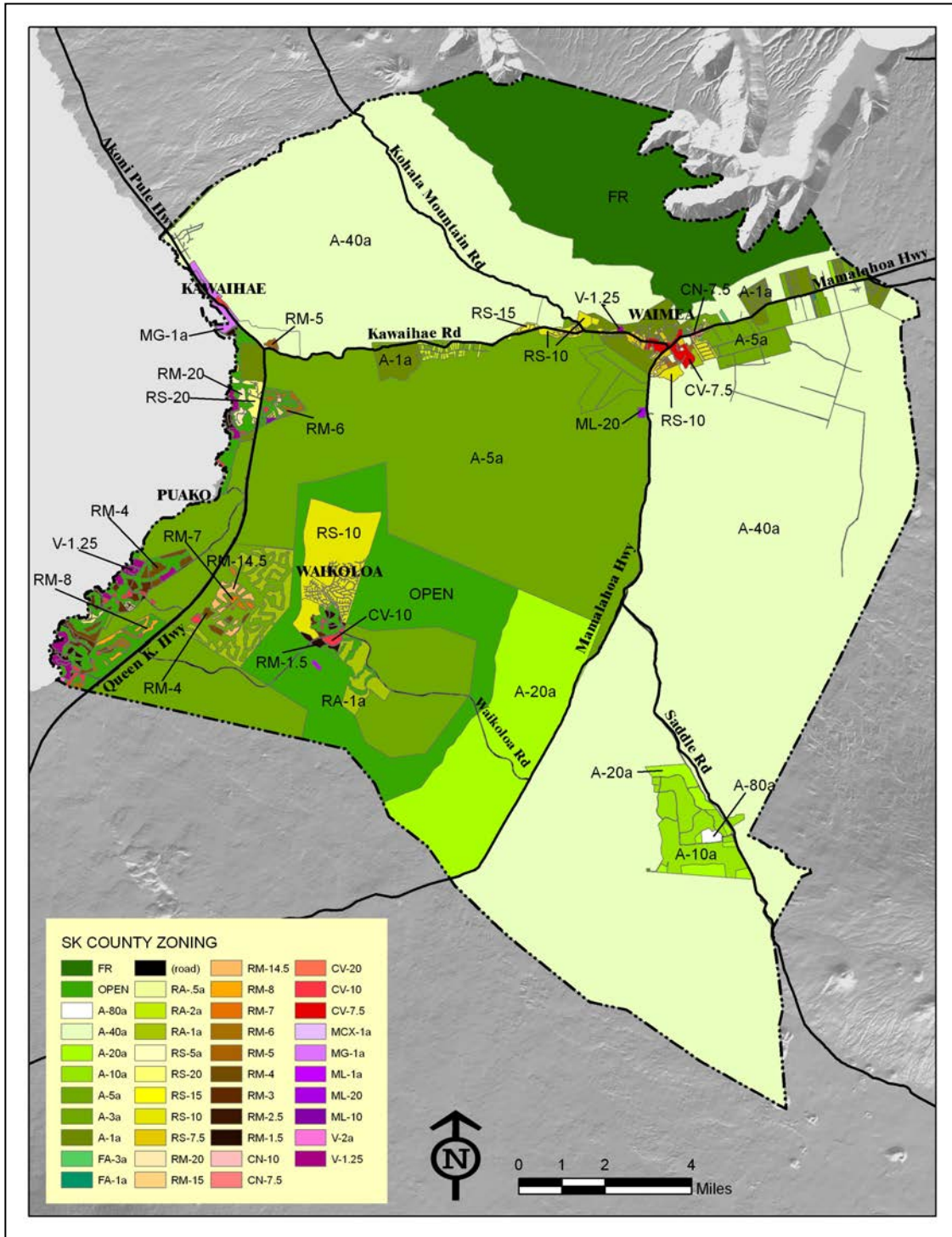


Table 2.4 County Zoning Acreage by County Districts in 2000

| Zoning | Puna | South Hilo | North Hilo | Hama-kua | North Kohala | South Kohala | North Kona | South Kona | Ka'u | Total |
|-------------------------------|---------|------------|------------|----------|--------------|---------------------|------------|------------|---------|-----------|
| Single Family | 2,677 | 8,374 | 391 | 631 | 652 | 3,382 | 2,887 | 414 | 781 | 20,189 |
| Multi-Family | 4 | 380 | 0 | 4 | 43 | 1,507 | 1,026 | 0 | 101 | 3,065 |
| Resort | 1 | 136 | 0 | 42 | 14 | 360 | 740 | 15 | 45 | 1,353 |
| Commercial | 74 | 1,088 | 10 | 38 | 39 | 426 | 1,015 | 108 | 61 | 2,859 |
| Industrial | 490 | 2,185 | 38 | 15 | 59 | 291 | 2,909 | 0 | 52 | 6,039 |
| Industrial-Commercial Mixed | 23 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| Family Agriculture | 22 | 26 | 0 | 0 | 0 | 6 | 39 | 7 | 0 | 100 |
| Residential Agriculture | 625 | 185 | 55 | 0 | 22 | 585 | 489 | 144 | 0 | 2,105 |
| Agriculture | 198,747 | 73,750 | 61,954 | 165,223 | 67,977 | 119,813 | 167,415 | 112,051 | 252,843 | 1,219,773 |
| Open | 5,029 | 2,065 | 38 | 963 | 27 | 11,951 | 173,821 | 7,628 | 115,740 | 317,262 |
| Project District | 0 | 0 | 0 | 0 | 0 | 0 | 1,748 | 0 | 0 | 1,748 |
| Agricultural Project District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 23 |

Source: County of Hawai'i Planning Department

As can be seen by the tables, the great majority of lands in South Kohala are designated as agriculture by both the State and County.

Important planning implications related to South Kohala's land use include:

- **The majority of the district is designated as agriculture by State and County**

The majority of the land in the district is designated as agriculture. However, the majority of these agricultural lands are designated as "extensive agriculture" by the County rather than IAL. Future development pressures will inevitably impact these "extensive agricultural" lands to be developed for other uses besides agriculture. These "extensive agriculture" lands, although not important for agricultural production, may still be important for other reasons such as open space preservation, environmental and scenic values, and therefore preservation of these lands should be considered.

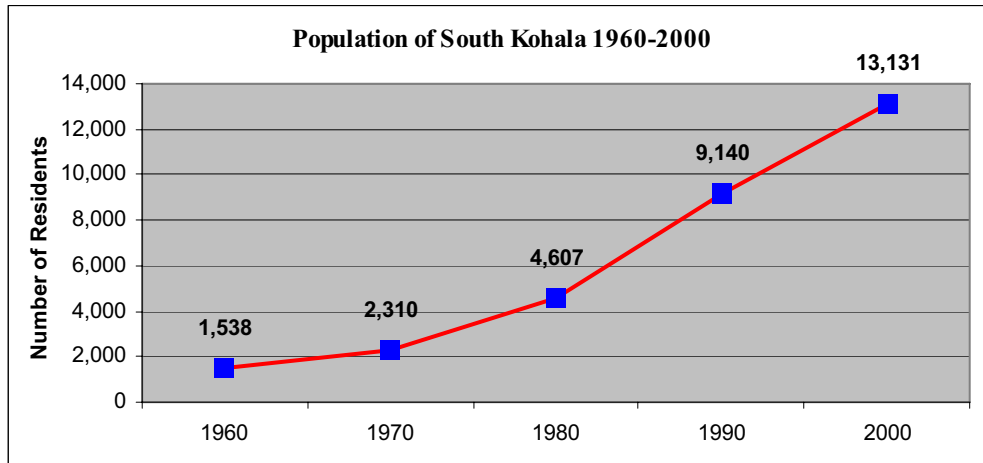
- **South Kohala has the highest amount of lands designated as "Urban Expansion" by the County LUPAG when compared with other County districts.**

It appears that the County is anticipating that significant urban growth and development will occur in South Kohala in the future. The urban expansion areas in South Kohala are primarily located around the Waikoloa area and Kawaihae area. This large Urban Expansion acreage should be re-evaluated during the next County General Plan update.

2.4 DEMOGRAPHICS, LOCAL ECONOMY, AND POPULATION CHARACTERISTICS

According to the 2000 Census, South Kohala was the fourth most populated district in the County. However, it was the fastest growing district from 1980 to 1990 and the second fastest growing district from 1990 to 2000. Figure 2.1 below shows the population trends for South Kohala over the past four decades and Table 2.5 shows the rate of population growth for both South Kohala and the County since 1980.

Figure 2.5 Population



Source: Census 2000, 1990, 1980, 1970, 1960

Table 2.5 shows how South Kohala’s population compares to the other districts in the County of Hawai’i.

Table 2.5 Hawai’i County Population

| District | 1-Apr-80 | 1-Apr-90 | 1-Apr-00 | % of Total Population (Rounded to the nearest %) | | |
|-----------------------|---------------|----------------|----------------|---|-------------|------------|
| | | | | 1980 | 2000 | Change |
| Hawai’i County | 92,053 | 120,317 | 148,677 | 100% | 100% | --- |
| Puna | 11,751 | 20,781 | 31,335 | 13% | 21% | 8% |
| South Hilo | 42,278 | 44,639 | 47,386 | 46% | 32% | -14% |
| North Hilo | 1,679 | 1,541 | 1,720 | 2% | 1% | -1% |
| Hāmākua | 5,128 | 5,545 | 6,108 | 6% | 4% | -2% |
| North Kohala | 3,249 | 4,291 | 6,038 | 4% | 4% | 0% |
| South Kohala | 4,607 | 9,140 | 13,131 | 5% | 9% | 4% |
| North Kona | 13,748 | 22,284 | 28,543 | 15% | 19% | 4% |
| South Kona | 5,914 | 7,658 | 8,589 | 6% | 6% | 0% |
| Ka’u | 3,699 | 4,438 | 5,827 | 4% | 4% | 0% |

Source: County of Hawai’i Data Book

Table 2.6 shows future population projections for the entire district of South Kohala with Projection A being the most conservative estimate and projection C being the least conservative estimate.

Table 2.6 Population Projections

| Area | 2000 Population | 2020 Projection A | 2020 Projection B | 2020 Projection C |
|----------------|--------------------|----------------------|----------------------|----------------------|
| South Kohala | 13,131 | 23,947 | 24,426 | 26,625 |
| Co. of Hawai'i | 148,677 | 213,452 | 217,718 | 237,323 |

Source: County of Hawai'i Planning Department

2.4.1 ECONOMIC CHARACTERISTICS

Mauna Kea Resort, Mauna Lani Resort, and the Waikoloa Beach Resort, the three resort complexes in the district, account for 40 percent of all hotel rooms within the County. Between 1980 and 1998, ten properties within these resorts were developed totaling 3,400 visitor units. South Kohala hotels are some of the County's largest employers, employing residents from all over the County. There are several new projects being planned these resorts. The Mauna Kea Resort is tentatively planning to develop recreational amenities such as a golf course and 135 large acreage residential lots with associated infrastructure and commercial use on its "Ouli 2" property. Stanford Carr is planning to develop 516 hotel units, three golf holes and related support facilities within the Mauna Lani Resort.

Eco-tourism, nature-tourism, and ag-tourism are growing sectors in the tourism market. Encouragement of these tourism markets would be consistent with the community vision and values. Establishing hiking, biking, and equestrian trails will promote economic activities consistent with these values.

Table 2.7 Hawai'i County's 10 Largest Employers in 2004

| Rank | Employer | Employees |
|------|---|--------------|
| 1 | State of Hawai'i | 7,608 |
| 2 | County of Hawai'i | 2,291 |
| 3 | United States Government | 1,221 |
| 4 | Hilton Waikoloa Village | 1,100 |
| 5 | KTA Superstores | 785 |
| 6 | Fairmont Orchid Hawai'i | 600 |
| 7 | Mauna Lani Bay Hotel & Bungalows | 580 |
| 8 | Four Seasons Resort Hualalai | 557 |
| 9 | Mauna Kea Beach Hotel | 556 |
| 10 | Hapuna Beach Prince Hotel | 542 |

Source: County of Hawai'i Data Book

Although tourism is currently the leading economic industry in the district, the area is also well known for cattle ranching, vegetable production, and other forms of agriculture. Waimea is one of the most productive areas for vegetable crops on the Big Island. Cabbages, tomatoes celery, lettuce, daikon (radish), peppers, broccoli and carrots are just some of the vegetables grown. Experiments are being conducted on different crops as well as on the improvement of those presently grown. The highly varied climatic conditions on the wet east side of Waimea and the dry west side of the town allow for a variety of crops to be grown.

Further expansion of the agricultural industry, including more truck farms, faces many challenges. This industry, faced with competition for resources from tourism and other urban forces, needs governmental assistance. (County of Hawai'i General Plan, 2005) There has been a continuing trend of small farmers going out of business because of two primary factors: 1) the market price of land has risen dramatically in the last decade encouraging farmers to sell their land; and 2) a lack of younger generations wanting to take over their family's farm.

The cattle ranching industry utilizes most of the land area within the district with pastures situated on the higher slopes of the mountains and extending down to the sea. Parker Ranch, one of the largest privately owned ranches in the world, has its headquarters in Waimea. The Ranch has approximately 230,000 acres of grazing land that supports 45,000 to 50,000 head of cattle. (Waikoloa Highlands EIS, 2006) Feedlots once allowed ranchers to raise cattle from birth to full maturity. The closing of all feedlots within the County has resulted in the export of 90 per cent of all cattle to mainland feedlots.

The Canada-France Hawai'i Telescope on Mauna Kea has its base facility in Waimea. The base has a staff of 51 and an annual operating budget of \$6,200,000. As several planned telescopes are built on Mauna Kea, additional base facilities may choose to locate in Waimea. Waimea is also home to the headquarters of the W.M. Keck Observatory on Mauna Kea, the largest optical and infrared telescope in the world. The headquarters employs about 80 people and has an annual operating budget of \$10,000,000. (County of Hawai'i General Plan, 2005)

The educational sector includes Hawai'i Preparatory Academy (HPA) with a current total enrollment of 600 students in grades K through 12, which includes 175 boarders from grades 6 through 12. In addition, Parker School is a day school with an enrollment of 300 students. Waimea Elementary School had an enrollment of 650 and Waimea Middle Public Conversion Charter School had an enrollment of 400 students in 2008. Kanu O Ka 'Āina Public Charter School in Waimea has an enrollment of approximately 150 students. Waimea has three performing arts venues: Kahilu Theatre, Gates Performing Arts Center at HPA, and Parker School Auditorium. In Waikoloa Village, Waikoloa Elementary and Middle School is the largest employer with an enrollment of 625 students in 2008 and 75 employees.

The North Hawai'i Community Hospital is the 14th largest single employer in the County with 269 employees. (County of Hawai'i Data Book) The hospital opened in May 1996 and serves approximately 30,000 residents and visitors of the northern region of the Big Island which includes the districts of South Kohala, North Kohala and parts of Hāmākua and North Kona. The hospital is a non-profit entity that is community owned. (www.northHawai'icommunityhospital.org) In addition to the North Hawai'i Community Hospital's efforts to become a "total body wellness center", there are numerous holistic and alternative health practitioners in this District. Likewise, the resort hotels market wellness and therapeutic vacation packages.

Housing

During the period 2002-2005, Hawai'i's housing market was red hot. However, from 2007, the housing market began to slow across the State, due in part to the nation-wide "sub-prime loans" problems. While more recent data was not available during the writing of the CDP that is South Kohala specific, it is important to note that the housing market nationally has slowed considerably. Hawai'i's housing market has also shown signs of slowing down. By mid 2007, home prices in most areas of the State were flat or slightly lower than their 2006 highs. While home prices have not risen as rapidly as earlier in the decade, many residents still consider the price of homes to be high.

Table 2.8 West Hawai'i Median Value Home Sale Price* 2001 – 2006 by District

| District | 2001 | 2005 | 2006 | Percent Change 2001-2006 |
|--------------|-----------|-----------|-----------|-----------------------------|
| South Kohala | \$225,000 | \$480,000 | \$549,950 | 144% |
| North Kohala | --- | \$675,000 | \$695,000 | --- |
| North Kona | \$267,000 | \$579,030 | \$654,900 | 145% |
| South Kona | --- | \$395,000 | \$735,000 | --- |

*Prices for single-family homes only
 Source: (West Hawai'i Today, 2006)

The key planning implications related to South Kohala’s demographics and economy include:

- **The population of the district has increased significantly over the last two decades. The County General Plan projects that the current population of the district will almost double by 2020 if current trends continue**

Given past and future population trends in the district, the underlying planning question that these trends raise is “where will all these new people live and how will the district support this housing expansion with sufficient infrastructure and public services?” If the population of South Kohala increases per the County’s General Plan, more public services and facilities will be needed to accommodate this future growth. Services such as schools, fire, police, medical, and various social services as well as more infrastructure, including roads, sewer, water, and electricity will need to be provided.

There may need to be an overarching policy in regards to moderating future population growth for South Kohala.

- **The resort areas in South Kohala are not only major employers in the district, but these resorts are some of the biggest employers in the entire County.**

Both residents of South Kohala and residents who live outside of the district work at the resorts. These large employment and visitor centers need adequate infrastructure to accommodate the large number of guests and employees. Workforce housing near these resorts would reduce daily commute time for hotel employees and also reduce traffic along the major highways.

- **Agricultural related industries are still a major part of the district’s economy**

While tourism is South Kohala’s largest economic engine, the district still has a viable agriculture industry in the Waimea area. However, for agricultural businesses to remain viable in the future, steps need to be taken to help these businesses deal with the pressures of urbanization, rising land prices, and a labor pool that is in decline.

- **Cost of housing has risen significantly**

There is a great need to provide affordable housing throughout the district.

2.5 CULTURAL AND NATURAL RESOURCES

2.5.1 CULTURAL AND HISTORIC RESOURCES

WAIMEA CULTURAL RESOURCES

Waimea has many historic and cultural resources. Table 2.9 below lists some of the historical sites of Waimea. Note: this list was derived from available source material, and is not intended to be comprehensive or definitive.

Table 2.9 Historical and Cultural Sites in Waimea

| NATIVE HAWAIIAN CULTURAL SITES | | | |
|--------------------------------|---|-----------|--|
| No. | Site | Structure | Description |
| 1 | Haleino "Women's Heiau" | Heiau | Historical accounts attribute the founding of the heiau to high chiefess Hoapilihae. It is said that young virgins performed ceremonies at the heiau and earned about the science and practices of healing |
| 2 | Heiau built by Makuakua | Heiau | The akua Makuakua observed a rainbow and found the goddess Wao. The two lived at Hoku'ula. Wao returned to the Waimea hillsides to bear children. Thus the hillsides were sacred. A kapu was proclaimed in her honor on the hillsides. The boundary of the kapu area was delineated by rolling stones down the hill. The place where the stones stopped delineated the boundary of the area. |
| 3 | Lālāmilo Field System | --- | Identified in 1976 as a veritable treasure of 400+ acres of pastoral lands, house sites, hearths and stone enclosures. The field system was developed by Native Hawaiians prior to contact with western civilization. |
| 4 | Various Agricultural, Habitation, Religious, and Burial sites | --- | Several of these sites are known to exist in the vicinity of various streams, pasture lands, and hillsides of Waimea. Although most have not been surveyed, they have been identified especially in areas that have not been altered by farming or urban development. |

Table 2.9 Historical and Cultural Sites in Waimea

| PANILOLO SITES | | | |
|----------------|---------------------------------------|---|--|
| No. | Site | Structures | Description |
| 5 | Parker Ranch Race Track | Track built in (1901) Horse Barn (1915); Attendant House and Stallion Barn (1930). | --- |
| 6 | Additional Parker Ranch Structures | Mana Complex (1847); Spencer Home (1875); Manager's House (1885); Kahilu Hall (1918). | --- |
| 7 | Parker Ranch Slaughter House | --- | Stone wall enclosure that formed Minuke Ole pen. Built in the early 1940's. |

| No. | Site | Structure | Description |
|----------|-----------------------------|---|--|
| 8 | Pukalani Complex | This complex of buildings consists of: <i>Pu'u Hihale Complex, Breaking Pen Stables, Carriage Barn (Surgery Barn), Black Smith Stable, Pukalani Stables</i> | These buildings were essential to Parker Ranch's ranching operations. Possibility of incorporating this complex into a heritage community with a heritage center / museum. Built in the late 1800's. |
| 9 | Breaking Pen | --- | Coffee shack and stone wall enclosure. Built in 1905. |
| 10 | Pu'u Hihale Complex | Viewing lanai (1900); Cowboy Gang Stables (1930, remodeled 1985); Bucking and Grooming Chute (1944). | Stone wall corral with walls 8' high by 6' wide. Cattle branding viewing lanai. Chute built for the Marine Rodeo. Referred to as the "Paniolo Heiau" and is considered the most significant Paniolo historic site in Waimea. Built in the late 1800's. |
| 11 | Waimea Stables | Stone wall that preexisted the stables by 50-100 years. | Converted to a working corral in 1985. Originally constructed in 1960. |
| 12 | Kemole Corral | --- | Rebuilt often. Originally built in 1930. |
| 13 | Pu'u Kikoni Corral | --- | Rebuilt often. Originally built in 1930 |
| 14 | Pu'u Kikoni Dairy Site | --- | Called New Dairy. Built in 1920. |
| 15 | Anna Ranch | --- | Anna Lindsey Perry-Fiske, the last of five generations of Lindseys to run the ranch, died at age 95 in 1995 and left the ranch as her legacy to the people of Waimea |
| 16 | Pali Ho'oukapapa Dairy Site | Creamery (late 1800's); Corn Silo (1914); Corral (1920+). | Later became a working corral. Originally built in the late 1800's. |
| 17 | Mana House Complex | --- | Covered in Naughton's work. |
| 18 | Makahalau Complex | Corn Crib and Silo (1914); Cowboy Camp House (1920); Makahalau Stables and Corral (1920); Purebred Bull Barns (1935). | Was once a village like Mana. |
| 19 | Hanaipoe Line Cabin | --- | Became the home for section chief Seichi Morifuji and was kept as a recreational cabin for ranch employees. Built in the 1930's. |
| 20 | Waiki'i Complex | Corn Silos (1914); Cooking ovens (1915); Large Barn, Corn Crib and Cowboy Stable Barn (1920); Attendant Corral, Homes and Quonset Huts (various dates). | Ovens of both Russian and Portuguese origin. |
| CHURCHES | | | |
| No. | Site | Structures | Significance |
| 21 | Imiola Church | --- | Listed on National Register of Historic Places. Use of Koa wood both structurally and for decoration. Built by Reverend Lorenzo Lyons in 1857. |
| 22 | Ke Ola Mau Loa | --- | Built in 1931. |

| HOMES | | | |
|---------------|--------------------------|-------------------|---|
| No. | Site | Structures | Significance |
| 23 | Frank Spencer House | --- | Combined styles and the use of Koa wood. Home of Judge Bickerton and served as an early court house and hotel. Associated with several of Waimea's prominent families. Built in 1850. |
| 24 | Antony Smart House | --- | Original location in Waiemi. Built during the 1830's. |
| 25 | Purdy House | --- | Built by Harry W.W. Purdy who was one of Waimea's earliest foreign adventurers and a contemporary of John Palmer Parker. Built in 1840. |
| 26 | Old Lindsey House | --- | |
| 27 | Hale Kea (Jacaranda Inn) | | Home of A.W. Carter. The oldest part of Hale Kea was built around 1885 and was first used as an Episcopal Church. |
| STORES | | | |
| No. | Site | Structures | Significance |
| 28 | Kamuella Liquor | | Formerly this location was the Wakayama Theater, a gathering place for early Japanese settlers in Waimea. |
| 29 | Chock In | --- | One of the last surviving stores that was built near the turn of the century. Built in 1908. |

Table 2.10 Historic and Cultural Sites in Kawaihae

| No. | Site | Structures | Significance |
|------------|-------------------------------|-------------------|---|
| 1 | Pu'ukohola Heiau | --- | The heiau was dedicated by Kamehameha the Great to his war god Kukailimoku. Thousands of laborers participated in the construction of the heiau; even chiefs participated. It is at the heiau that Kamehameha became the ruler of the entire Island of Hawai'i when Kamehameha's soldiers slew his cousin Keoua. Built around 1791. |
| 2 | Mailekini Heiau | --- | Located immediately makai of Pu'ukohola heiau, Mailekini Heiau was converted into a fort by Kamehameha. |
| 3 | Hale o Kapuni Heiau | --- | Hale-o-kupuni is an off-shore underwater heiau located somewhere in Pelekane Bay. It is believed to be a shark heiau where sacrifices were offered to sharks. |
| 4 | Remains of John Young's House | --- | John Young was one of Kamehameha's closest advisors. Remains of his house are believed to be near the Makahuna Gulch. The house was originally constructed in the early 1800's |
| 5 | Kawaihae Lighthouse | --- | |
| 6 | Salt making areas | --- | Kawaihae was known for salt-making during pre-contact times. The area also provided salt for the cattle and beef industry during the 19 th century and early 20 th century. |
| 7 | The "original" Kawaihae Well | --- | The location of the original Kawaihae well where people supposedly fought over the water is located under the anchor at the intersection of Kawaihae Road and Akoni Pule Highway. |
| 8 | King's Residence | --- | Located mauka of Pelekane Bay, this area was where many ali'i held court including Kamehameha I and Kamehameha II. It is also believed by some that Queen Emma was born here. |
| 9 | Keolahou | Church | The church was rededicated in 1859 at a cost of \$800. A hundred years later in 1959, the church was razed. Only ruins of the church remain. |

Table 2.11 Historic and Cultural Resources in Puakō

| No. | Site | Structures | Significance |
|-----|------------------------|------------|---|
| 1 | Hokuloa | Church | The church was established by Father Lorenzo Lyons in 1858. The church, named Hokuloa, means “evening star.” Weekly services are still held at the church. The church also serves as a meeting place for the community. |
| 2 | Puakō Petroglyph Field | --- | The petroglyph field is the largest petroglyph field in the State. Approximately 3,000 symbols were carved in the lava fields here. Access to the petroglyph field is through the Mauna Lani Resort. |

2.5.2 COASTAL RESOURCES

Land-based sources of pollutants, such as sediment and nutrients, are among multiple factors threatening the quality of coastal waters and coral reef ecosystems in Hawai’i. These pollutants make their way into the ocean via surface water runoff and seepage from ground water.

The Pelekane Bay Watershed has been classified by the State DOH as a “Category I watershed,” a watershed in need of restoration. The marine environment and coral reefs of Pelekane Bay have been severely stressed because of worsening water quality. The Pelekane Bay watershed has been significantly altered with the construction of the Kawaihae Harbor in the 1950’s and 1960’s. In 2004, Pelekane Bay was listed as an impaired body of water under the federal Clean Water Act because of high turbidity and excess sediment. The State DOH listed the Pelekane Bay Watershed as a priority watershed, in most urgent need of restoration in 2004. In 2003, DOH recorded turbidity in the bay to be close to 18 times the allowable water quality standard. (Pelekane Bay Watershed Sediment Runoff Analysis, 2007)

Waters off of Hapuna Beach Park and Spencer Beach Park are also on the list of DOH impaired water bodies. However, these two sites are not nearly as heavily polluted as Pelekane Bay.

The health and condition of South Kohala’s coral reefs has been affected by both natural and man made events. Natural disasters such as tsunamis, storms, and lava flows have all had a significant negative impact on coastal reefs over time. Man made events have also impacted the health of coral reefs in a negative way such as the dredging of reefs to clear waterways for boats or development and through the introduction of feral ungulates such as goats. The feral ungulates over graze and remove the vegetative cover on land. During rain events, the lack of vegetative cover causes soil to run off into the ocean and smother the reefs.

2.5.3 NATURAL DISASTERS AND HAZARDS

Wildfires

Dry invasive grasses, especially fountain grass, cover much of the inland and coastal areas in the southern portion of the district. The dry, dense, biomass of grass is an easily combustible fuel that carries fire quickly over large areas. Also located in these areas are small groves of kiawe trees, which are scattered throughout the landscape. Wildfire is a major threat to the health and safety of most South Kohala residents and is the most frequently occurring natural hazard in the region. Wildfires can be defined as any non-structural fire in a



October 2007 wildfire near a Mauna Lani Resort Golf Course

wild area. The district's gusty winds, naturally dry and hot climate in the southern and coastal regions, and the large amounts of fountain grass that grow in these areas not only increases the likelihood of wildfire occurrence, but also contributes to the rapid spread of fire. In July 2007, a brush fire burned over 9,300 acres near the Waikoloa Rd. and Māmalahoa Hwy. junction. Also, in October 2007, nine fires were started by arsonists, including a wildfire that spread over 1,000 acres near the Puakō community.

The dryland forests that once thrived in the region are lost, primarily due to wildfire. Hawai'i Island's dryland forests are one of the most endangered habitats in the world. These native habitats support many Hawaiian cultural activities. As wildfires wipe out more native habitat, invasive grasses invade these areas and the wildfire cycle continues. Remnants of the old dryland forests exist near Waikoloa Village. An intact, but seriously threatened, dryland forest containing rare native Wiliwili trees and native and endangered Uhiuhi trees exists just south of the village. The trees range in age from 5 to 600 years. A significant portion of the forest is cared for by the Waikoloa Village Outdoor Circle's Waikoloa Dry Forest Recovery Project. The project area is about 250 acres.

South Kohala has all the required elements for a wildfire disaster. It is possible that during extreme fire conditions with dry fuels and high winds, fire fighters, equipment, and water supplies can become depleted as numerous homes ignite and burn. Fire crews cannot simultaneously evacuate residents and effectively take suppression action in a subdivision of homes that are igniting within a few minutes of each other. A map of wildfire hazard areas can be found in **Appendix F**.

Suppressing wildfires in unoccupied range or open lands or forests is expensive. These costs increase significantly when firefighters must concentrate resources to save property and lives in developed areas. For instance, the expenses for suppressing the 2005 Waikoloa fire were more than \$250,000. These costs are ultimately born by taxpayers.

The County Department of Public Works (DPW) has maintained a list of heavy equipment needed for fighting wildfires and updates this list on a weekly basis so that the equipment can be mobilized when needed. DPW strategically pre-positions the fire fighting equipment to prepare for wildfires according to the time of year or around special occasions such as long weekends. The Hawai'i Wildfire Management Organization (WHWMO), a 501(c)(3) nonprofit, has been working cooperatively with the Big Island Wildfire Coordinating Group and other agencies to increase community awareness about wildfire mitigation hazards. Several communities have begun to implement wildfire management strategies including Waikoloa, Puakō, and Waialea Bay. The HWMO has received wild land urban interface and other grants to build an island wide inventory of wild fire resources, create fire history maps, install dip tanks, conduct hazard assessments and research on mitigation, and to develop community fuelbreaks. Primary government agencies involved in these efforts with HWMO include the County of Hawai'i Fire Department and the State Department of Land and Natural Resources Division of Forestry and Wildlife. (County of Hawai'i Drought Mitigation Strategies, 2004)



A helicopter helps to contain a wildfire near Puakō
October, 2007

There are no County regulations that require residential subdivisions to participate in wildfire mitigation programs. County regulations for new subdivisions to reduce wildfire hazards, such as requiring adequate fire truck access, hydrant placement, and water system sizing are in place.

While building codes have been recently revised, the design of subdivisions and new developments can be improved to prevent wildfire disasters and costs to the public, e.g strategic use of green spaces and landscaping, placement of dip tanks, etc. Also, the management of fuels, primarily grasses, on the landscape needs to be addressed to reduce risks to neighboring communities and costs to the taxpayers.

Earthquakes

Hawai'i Island experiences thousands of earthquakes each year; the majority of the earthquakes are so small that they can only be detected by sensitive instruments. The most recent major earthquake on the Big Island occurred on October 15, 2006 when a 6.7 magnitude earthquake and magnitude 6.0 aftershock struck the Big Island. The earthquake caused significant damage to infrastructure in South Kohala. The earthquake damaged Piers 1 and 2a at Kawaihae Harbor, severely limiting the amount of cargo and marine traffic that the harbor can accommodate.

The earthquake also caused significant damage to the Mauna Kea Beach Hotel. The hotel has been closed due to earthquake related damage and does not plan to reopen until November of 2008. Many of the hotel guests patronized the small shops and businesses in the Kawaihae area. The hotel's closure has caused the loss of jobs and has significantly reduced the number of people who have patronized local businesses in the last year.



One of the reservoirs that services the Waimea Water Delivery System

In Waimea Town, there is a concern that future earthquakes may catastrophically damage the County reservoirs that are located above the town. With the recent Kaloko Dam tragedy on the island of Kauai, which resulted in the loss of lives, and the recent earthquake that occurred on the Big Island, it would be prudent for the County to consider establishing an early warning system for the reservoirs above Waimea Town. Currently there is an emergency *action plan* that is in place in case of flooding caused by reservoir water overflow from heavy rains, but there is no early warning signal or siren in place, should there be significant damage caused to the reservoir by earthquake or other events. Damage to the County reservoirs above Waimea Town is discussed in more detail in section 2.5.5.

General Community Readiness

To date, a small number of South Kohala residents have undergone CERT training. The Community Emergency Response Team (CERT) Program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.

During times of emergency, children who are attending school could be cut off from access to either their parents/legal guardians or their homes. This was the case during recent fires near Waikoloa Village and Puakō. Students and parents in these areas were cut off from each other. There is a need to provide for safe transport and / or housing for students should natural disasters occur when schools are in session.

Unexploded Military Ordnance (UXO)

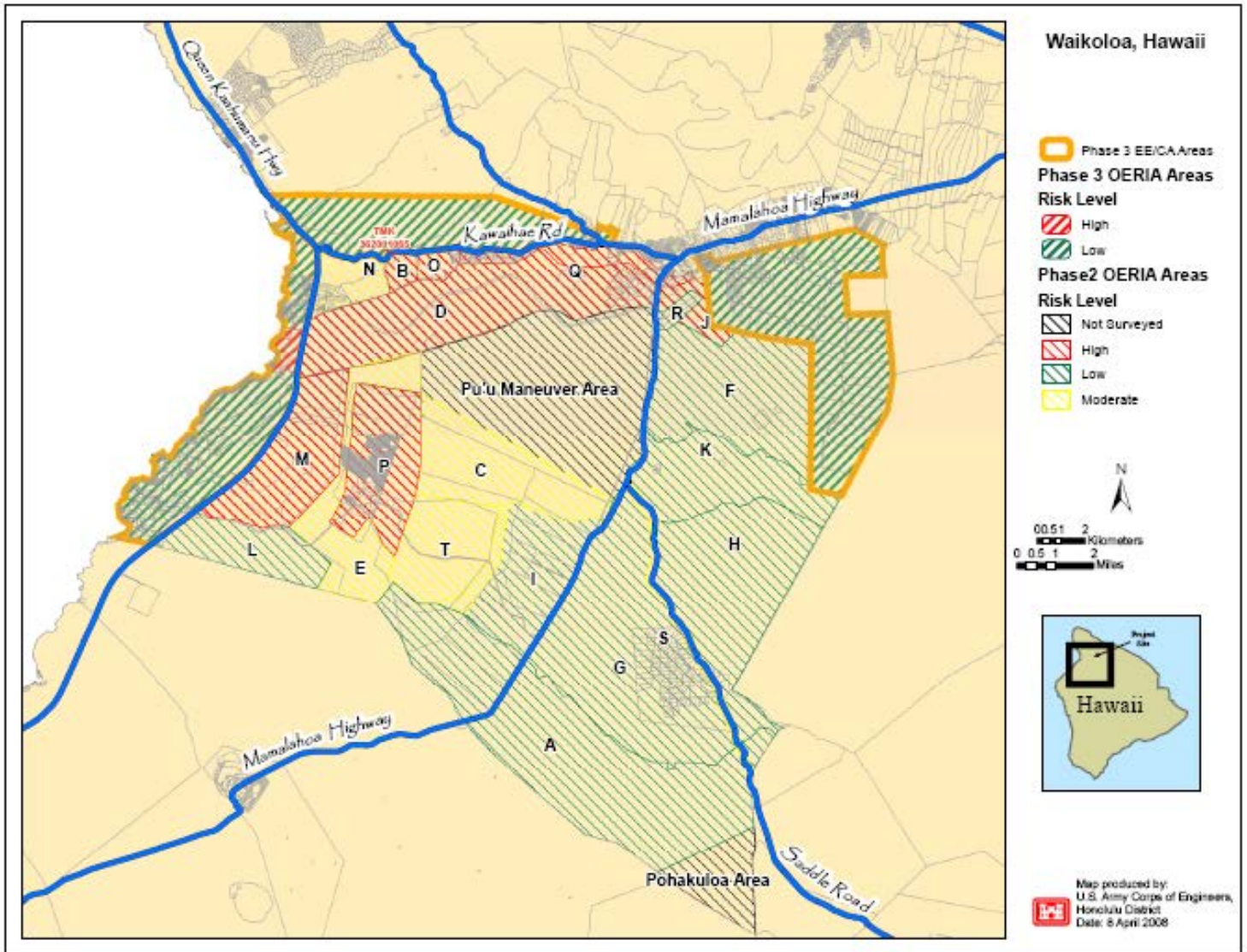
From 1943 to 1953, the U.S. military utilized 130,000 acres of land with at least 40 percent of the area being used for training with live military munitions. Following the deactivation of Camp Tarawa and Waikoloa Maneuver Area, the Department of Defense performed cleanup activities in

accordance with the “Explosive Ordnance Details for Disposal”, a series of safety and health standards from the 1940s to 1950s, the time in which this cleanup was done. In 1954, two Parker Ranch employees were traversing the former training area and were fatally injured as they encountered UXO. Within the last decade, UXO has been found at Waimea Middle School and near homes in Waikoloa Village.

“FUDS,” the Formerly Used Defense Sites program, addresses potential risks on lands formerly owned or controlled by the Department of Defense prior to 1986. The FUDS program is administered and implemented nationally by the U.S. Army Corps of Engineers and within the Pacific Islands by the Honolulu District. The Waikoloa FUDS area covers 137,000 acres with approximately 50,000 acres considered “high risk.” Most of the “high risk” land is near Waimea, in the vicinity of the old Camp Tarawa. To date the Army Corps has cleared about 8,000 acres of land and removed approximately 1,800 pieces of live munitions. It’s estimated that to clean up the entire 137,000-acre Waikoloa FUDS area will cost \$680 million over the span of 50 years or more. Teaming with experts from the Army Corps’ Huntsville Military Munitions Center of Expertise and its contractors, innovative “packages” of sensing technologies have been developed in order to efficiently scan beneath the surface throughout the Waikoloa Maneuver Area FUDS.

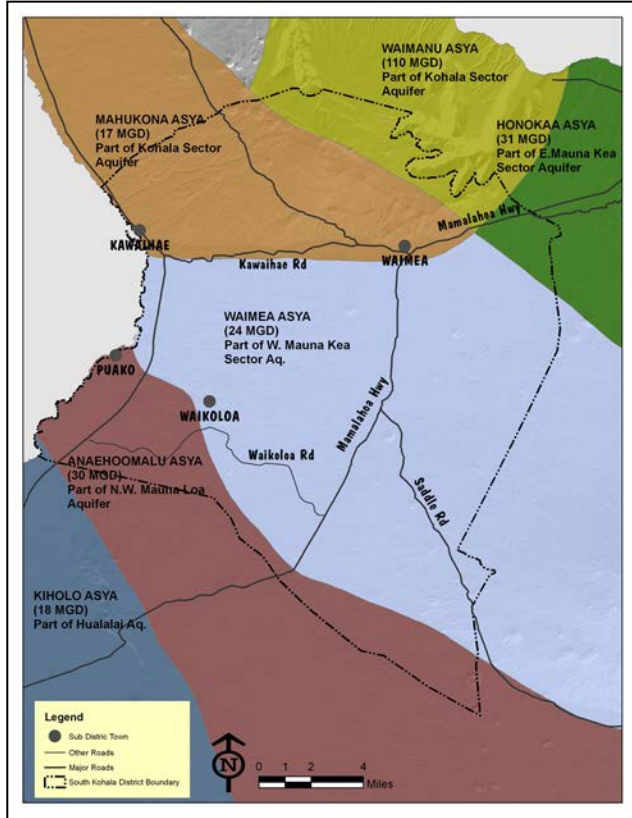
Figure 2.5 illustrates the FUDS areas that are at “High,” “Moderate,” or “Low” risk of having UXO. The area on the map indicated as the “Pu’u Maneuver Area” has not yet been surveyed for UXO. With the continuing development of the Waimea and Waikoloa areas, the Corps’ FUDS team has taken on an aggressive approach to reaching current and future homeowners and developers. Private land owners who have property in “High” or “Moderate” risk areas (which have not yet been cleared by the Army Corps) and who intend to develop their lands are advised to contact the Army Corps of Engineers prior to the start of construction. The Army Corps can provide private land owners with UXO support which may include survey of lands for UXO and removal of UXO if UXO are found.

FIGURE 2.5: FORMERLY USED DEFENSE SITES (FUDS) IN SOUTH KOHALA



2.5.4 WATER RESOURCES

Figure 2.6: SOUTH KOHALA AQUIFER SYSTEM AREAS (ASYA)



The primary source of data for the following section on water resources is from the *DRAFT Hawai'i County Water Use and Development Plan Update: Hawai'i Water Plan* completed in December 2006. Another information source was a report prepared by Waimea Water Services Inc. for the County Department of Water Supply entitled "Hydrogeologic study of the Waimea High Level Ground Water," dated February 2001.

The Kohala Aquifer Sector Area (ASEA) has two Aquifer System Areas that cover portions of South Kohala, the Waimanu ASYA and the Mahukona Aquifer System Area (ASYA). The West Mauna Kea ASEA only has one ASYA, the Waimea ASYA and the North West Mauna Loa ASEA only has one ASYA, the Anaeho'omalua ASYA. Table 2.12 below lists the **sustainable yield, current water usage, and potential future water use projections**.

based upon full build out of the **General Plan LUPAG, County Zoning, and 2025 Population Projections**.

An aquifer's '**Sustainable Yield**' refers to the *estimated* maximum amount of water that the aquifer can safely produce. Extracting amounts of water greater than the sustainable yield may irreparably damage the aquifer. It should be emphasized that sustainable yield numbers are only *estimates*. These estimates should not be considered as the exact amount of groundwater that can be safely utilized. In many regions with high sustainable yield numbers, groundwater cannot be utilized because it would not be economically feasible to install water systems to deliver water to users.

Current water usage in Table 2.12 includes water use from County Department of Water Supply (DWS) systems, private water systems, agricultural use, and irrigation use, including use of reclaimed waste water and water use from domestic rain catchments. Table 2.12 distinguishes between current water use that includes agricultural water use and current water use that does not include agricultural water use. As can be seen in the table, agricultural water use accounts for a significant percentage of current water use in most ASYA. It is also important to note that current use for the ASYA's of Waimanu, Mahukona, and Anaeho'omalua, includes users from outside the district of South Kohala as well. The Waimea ASYA is the only ASYA that exclusively serves South Kohala.

Table 2.12 South Kohala Aquifer System Areas (all numbers in MGD)

| ASYA | Developmental Stage | Sustainable Yield (SY) | DWS Water System Use | Private System Water Use | Total Water Use w/Agriculture | Total Water Use w/o Agriculture |
|---------------------|---------------------|------------------------|----------------------|--------------------------|-------------------------------|---------------------------------|
| Waimanu | Potential Use | 110 | 0.08 | 0.00 | 0.34 | 0.10 |
| Mahukona | Currently Used | 17 | 0.95 | 0.68 | 3.94 | 1.69 |
| Waimea | Currently Used | 24 | 2.17 | 4.56 | 11.05 | 7.71 |
| Anaeho'omalu | Currently Used | 30 | 2.14 | 0.00 | 8.15 | 7.97 |

Source: Hawai'i County Water Use and Development Plan Update, 2006; Note this plan is on the web at: <http://www.hawaiidws.org/wudp.html>

As can be seen in Table 2.12, current water use in each of the ASYA areas is less than the sustainable yield of the ASYA's.

Table 2.13 South Kohala Future Projected Water Demand

| ASYA | Sustainable Yield (SY) | County Zoning Full Build Out w/Agriculture | County Zoning Full Build Out w/o Agriculture | 2025 Population Projection C w/Agriculture | 2025 Population Projection C w/o Agriculture |
|---------------------|------------------------|--|--|--|--|
| Waimanu | 110 | 9.3 | 0.1 | 0.6 | 0.2 |
| Mahukona | 17 | 97.4 | 7.7 | 7.6 | 3.3 |
| Waimea | 24 | 150.6 | 13.8 | 14.7 | 12.9 |
| Anaeho'omalu | 30 | 18.1 | 11 | 15.6 | 15.2 |

Source: Hawai'i County Water Use and Development Plan Update, 2006

There are four future water demand estimates in **Table 2.13 South Kohala Future Projected Future Water Demand**. Water demand estimates are based upon current **County Zoning** and **County Population Projection C for the year 2025** (please reference section 2.4.1 of the CDP in regards to population projection C). Estimates for the County Zoning and population projections take into account future water demand that includes and does not include agricultural water use.

There is a tremendous difference in water projections if agricultural lands are not taken into account when looking at the County Zoning designations. The future estimates of water use that include agricultural use in the County zoning assume irrigation of all lands zoned as agriculture by the County. This includes lands that are currently zoned as agriculture by the County but are not in active agricultural production, including the areas in the district that are very dry, rocky, and have topography that would make viable agriculture extremely difficult without substantial investments in improving the land such as extending irrigation systems, removing rocks, and massive grading.

The estimates that include agricultural use assume that all of these lands will be watered at a rate of 3,400 gallons of water per acre per day, hence the significantly higher estimates. The estimate that takes into account no agricultural use makes the assumption that those lands that are currently designated as agriculture by County zoning and are not being currently used will remain OPEN, unused, and un-watered. Future realistic estimates for water use in the district is somewhere between the high number that includes agricultural use and the low number that does not include agricultural use. Neither of the estimates that include or do not include agriculture use, when taken by themselves, paints a complete picture of projected future water demand in the district, hence, both numbers are given. A more complete and detailed explanation of future water use projections can be found in the 2006 Hawai'i County Water Use and Development Plan Update. <<http://www.Hawai'idws.org/wudp.html>>

Future projected water demand based upon current County zoning designations exceeds ASYA sustainable yields in the Mahukona ASYA and Waimea ASYA if agricultural demand is taken into account. If future agricultural water demand is not taken into account, future projections for water demand do not exceed the sustainable yields of any of the four ASYA.

Future projected water demand based upon population projections for the year 2025 does not exceed the sustainable yields of the ASYA's.

The Waimanu ASYA can safely accommodate water demand in all of the future water demand projection scenarios. However, the Waimanu ASYA is not being currently used. Furthermore, considering the Waimanu ASYA as a viable and economically feasible source to meet future demand may not be practical. Waimanu ASYA incorporates lands that are not readily accessible by vehicles and thus it would be a difficult area to develop groundwater sources. Also, there is the environmental and cultural concern of diverting water from this conservation watershed area to another watershed area. Lastly, consideration must also be given to the current and future water demands of North Kohala as much of the Waimanu ASYA encompasses lands in the district of North Kohala.

Also in 2001, the County DWS conducted hydrogeological studies of high-level ground water in Waimea. The purpose of the studies was to evaluate the potential of the high-level aquifer system to supply Waimea Town and South Kohala's coastal communities. The study involved an area of 122,023 acres from the summit of the Kohala Mountain to the 5,000 foot elevation of the northern slope of Mauna Kea. The study concluded that there are ample ground water resources of good quality within the study area that could be used to supply water to Waimea and the other coastal communities in the district. However, utilizing these high-level ground water resources will require the DWS to construct more water delivery infrastructure such as new wells, storage facilities, and transmission lines. (Hydrogeologic Study of the Waimea High-Level Ground Water, 2001)

2.5.5 WATER DELIVERY SYSTEMS

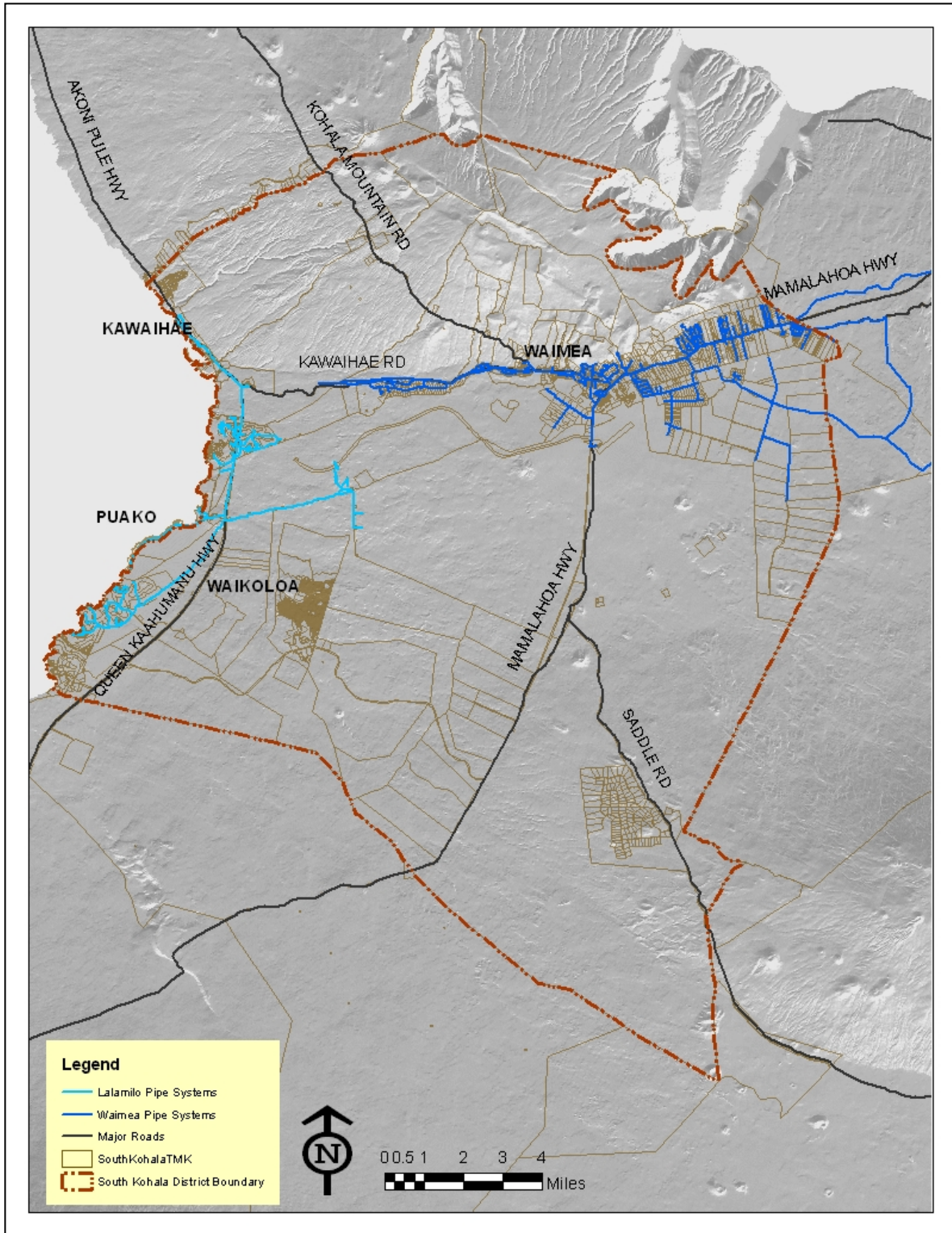
The Waimea Water System primarily services the Waimea and Pu'ukapu area. From Waimea Town, the system extends along Māmalahoa Highway westward and runs down Kawaihae Road for about eight miles. From Waimea Town, the system extends eastward to the two connections at the Haina Water System at the South Kohala district boundary near Mud Lane. The water system spans three aquifer sector areas; but the majority of the service area is within the Kohala ASEA, including the majority of Waimea Town, and the areas north of Māmalahoa Highway from Kawaihae to the Kamuela Highlands subdivision. Improvements to the system have increased reservoir capacity and enlarged the distribution pipelines. The primary water sources for the Waimea Water System are from the Waikoloa Stream and Kohakohau Stream diversions. (Hawai'i County Water Use and Development Plan Update, 2006)

Because of the variations in stream flow, the Waimea Water System has four large reservoirs (Waikoloa Reservoirs) that can store a total of 158.5 million gallons of untreated water, (Hawai'i County Water Use and Development Plan Update, 2006) However, during the October 2006 earthquake two of the four reservoirs were damaged. One reservoir had to be completely drained and the other damaged reservoir can only be filled to half of its normal capacity. The County is awaiting FEMA funding to help with reservoir repairs. Until then, the reservoirs can only store about 79.25 million gallons of water, or about half of their full capacity. During dry climatic periods, water use restrictions have been put in place for longer periods of time because of the reduced reservoir storage capacity. The Waimea Treatment Plant currently provides 2MGD to Waimea residents via the Waimea Water System.

Originally, the Lālāmilo Water System was designed to service Kawaihae, but has since expanded to service other coastal areas including Puakō and the Mauna Kea and Mauna Lani Resorts. The system includes two booster pump stations and nine storage tanks. Water is transported via a six inch pipeline from the Waimea Water System down to Kawaihae and more or less follows Kawaihae Road. As the Lālāmilo Water System expanded to accommodate the new coastal developments south of Kawaihae, high level exploratory deep wells were drilled along Kawaihae Road in order to supplement the limited supply of water from Waimea. The water was of marginal quality and had high chloride content. Water from these wells was blended with fresh mountain water to supply the coastal developments. In 1977, the State drilled exploratory wells on its Lālāmilo lands. These wells and subsequent additional wells were drilled with financing from the developer of Mauna Lani Resort. The water in these wells was of good quality and was also included as part of the system. Two Parker Ranch wells replaced the two Kawaihae wells that serviced the Lālāmilo Water System during the latter 1990s. (Hawai'i County Water Use and Development Plan Update, 2006)

The Waikoloa Water System is a private system. The system services Waikoloa Resort as well as Waikoloa Village. The average daily use for the water system is 4.5 MGD. Five wells located within the West Mauna Kea ASEA provide potable water for all of the developments in the resort area and in Waikoloa Village. (Hawai'i County Water Use and Development Plan Update, 2006) Currently, there are two wells in Waikoloa that are being repaired due to the current drought situation. If dry weather conditions continue to persist, there may be a need to transfer water from the County DWS Lālāmilo Water System.

FIGURE 2.7: COUNTY WATER DELIVERY SYSTEMS IN SOUTH KOHALA



WAIMEA IRRIGATION SYSTEM

The Waimea Irrigation System is managed by the State Department of Agriculture and has been operational since the early 1970s. The system's water sources are the summit watersheds of Kohala Mountain starting with Kawainui and followed by Kawaiki, Alakahi, and Koiawe Streams. Currently the irrigation system has 117 users who draw 0.906 MGD of water to irrigate 587 acres of land.

(Agricultural Water Use and Development Plan, 2003) The irrigation system consists of a diversion from these streams via the Upper Hāmākua Ditch directing the flow of water into the 60 MG Waimea Reservoir. An additional reservoir, the 100 MG Pu'u Pulehu Reservoir, provides overflow storage for the Waimea Reservoir and also for diverted upstream flow. Water is transmitted in the system over two miles via 24-inch and 18-inch diameter pipelines. (Hawai'i County Water Use and Development Plan Update, 2006)

There is sufficient storage in these reservoirs to maintain an average service flow in the system for approximately 100 irrigation days. However, the major problem of the Waimea Irrigation System is an insufficient agricultural water supply during excessive periods of drought caused by inadequate collection, storage and distribution facilities. Excessive seepage losses occurring along the existing transmission ditches cause deterioration of the linings, tunnels and flumes. The system's existing storage capacity is inadequate for meeting irrigation water demand during frequent dry periods and for effective application of water to diversified crops. Furthermore, the region served by the Waimea Irrigation System is the heart of the cattle industry, but the system lacks a supplemental livestock water system for low or drought periods. (Agricultural Water Use and Development Plan, 2003)

Additional water sources for the Waimea Irrigation System include the high level aquifer which has been tapped for agricultural emergencies at the State Department of Agriculture's Pu'ukapu well, and there is a private well at the Waimea Country Club. (County of Hawai'i General Plan, 2005)

The key planning implications related to South Kohala's cultural and natural resources include:

- **The numerous cultural and historic resources within the district should be identified with appropriate signage if signage for these resources does not currently exist.**

Examples of possible signage include: signage identifying cultural sites, signage identifying different types of winds and rain and the corresponding Hawaiian names of each or signs that identify the wide variety of flora and fauna within the district. More importantly, signs should educate readers about the respectful protocol and appropriate stewardship of these cultural and natural resources.

- **Watershed management programs for the watersheds of South Kohala should be developed for those watersheds in which a stewardship program does not currently exist**

Watershed management programs could establish pollutant load limits on each *land use* in the watershed in order to safeguard the marine water quality of the South Kohala coast. The watershed management program could also establish pollutant load limits for each watershed. The program could also outline specific actions for consistent monitoring of marine water quality.

- **Future coastal developments should take into consideration global sea level rise and plan accordingly**

While the issue of sea level rise is not at the forefront of many people's minds, it is still a factor that should be taken into consideration when planning for future coastal developments in the long term.

- **Brush fires are a huge potential natural hazard in the district.**

The district's predominantly dry climate combined with the large amounts of fountain grass increases the risks that brush fires may occur.

- **There are specific areas in which South Kohala has the potential to improve community readiness in the event of natural disaster,**

Specific areas for increasing community preparedness include: providing more CERT training opportunities for residents, installing a reservoir warning system above the Waimea Town, or establishing a program to ensure safe transport and shelter of students during and after natural disaster events.

- **Currently there are enough water resources to accommodate existing water demands in the district. However, the Waimea water delivery system infrastructure is presently stressed due to the 2006 earthquake damages and during drought conditions. Accommodating future water demands will likely require major capital improvements to expand the capacity of existing water systems.** There will be enough water resources to accommodate the General Plan's projected population growth to the year 2025 and beyond. However, future projected water demand based upon full build out of current County zoning designations exceeds for the Mahukona and Waimea ASYAs in the South Kohala District for the projections that include and agricultural water use.

Future growth may require the Waimanu ASYA to be developed. It is the largest ASYA in the district in terms of sustainable yield. But currently, the Waimanu ASYA is only being used minimally. A feasibility analysis should be undertaken first to determine whether it is economically feasible to pump water from the Waimanu aquifer. Depending upon the capital improvement expenses and environmental impacts it may not be economically feasible to access water from the Waimanu ASYA.

2.6 INFRASTRUCTURE AND PUBLIC FACILITIES

Within most areas of South Kohala, the level of infrastructure and public facilities has not kept pace with population growth over the years. Congested roadways occur in several areas of the district. Also, several areas in the district such as in Waikoloa Village and Puakō need new roads for emergency access. There are no truck runaway lanes on Kawaihae Road and Waikoloa Road. This is a serious safety issue as many semi-trucks travel along these roadways. In the case of Kawaihae road, a seven mile road at a grade exceeding 10% without truck runaway lanes is dangerous. Conditions along Waikoloa Road can be just as dangerous, with sharp turns, steep grades in some areas, and little or no paved shoulders.

Wastewater disposal, particularly in coastal communities such as Puakō has also become a concern. The need for more parks and community recreation areas is a district wide concern. South Kohala is home to some of the best white sand beaches on the island. On weekends and even during some week days, beach parks are highly frequented. Provision of adequate infrastructure and facilities is needed to accommodate the large numbers of beach park goers. Also, in the Kawaihae area, the expansion of a reliable potable water delivery system is needed in order to provide for more commercial, residential, and recreational uses around the harbor area. There is also a concern that utility lines block scenic view planes. Lastly, as the population of the district continues to grow, South Kohala will need a new middle school and a new high school.

Implications for Planning:

- **In general, given the current level of population, already approved developments, and future population estimates, significant upgrades of infrastructure and public facilities will need to be provided, including:**
 - New wastewater treatment and disposal facilities
 - Increasing roadway connectivity in Waikoloa and Puakō
 - Reducing traffic congestion in Waimea
 - Truck Runaway lanes along Kawaihae Road and Waikoloa Road
 - Assessing the adequacy of water available, especially in light of the CDP's emphasis on promoting agriculture, in addition to providing adequate water transmission and storage facilities
 - Increasing the amount of potable water for Kawaihae
 - Consider under grounding future utility lines to preserve scenic view planes
 - Providing adequate recreational facilities and parks;
 - Providing adequate infrastructure and facilities for beach parks and other coastal recreational facilities
 - A new South Kohala High School and one or more elementary and middle schools will be needed to accommodate a growing population

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3 DISTRICT-WIDE POLICIES

OVERVIEW

In their initial meetings, the South Kohala Steering Committee was asked to prioritize land use issues for the entire district based upon the results of the Community Readiness Process. While the district faces many more issues than those that are listed below, it was necessary to focus on top priority issues in order to develop actionable plans, for the CDP.

The priority issues that the Steering Committee selected were, not in any order of priority, the following:

- Preserve Culture/Sense of Place
- Traffic and Transportation
- Affordable Housing
- Emergency Preparedness
- Environmental Stewardship and Sustainability

At a subsequent Steering Committee meeting, priority issues for four South Kohala communities were discussed: Waimea, Waikoloa Village, Kawaihae, and Puakō. It was then agreed that the CDP would focus on planning for these four communities, rather than attempting to develop Action Programs on a “district-wide” basis. In effect, then, the “South Kohala Community Development Plan” became a collection of four distinct community plans.

Although the CDP planning process focused on specific issues for the four communities, there were a number of ideas and concerns that were raised that have applicability to the entire district of South Kohala. These policies are still subject to further discussion with the Planning Department and with other County agencies and departments. The policies presented below are intended to guide future developments in the district rather than address specific short-term actions. These ideas are organized by the priority issues that were initially chosen by the South Kohala Steering Committee. The Steering Committee acknowledged other important General Plan topics that because of time constraints were not specifically identified in this CDP. Until such time as these topics can be addressed in more detail for South Kohala, the more general policies, standards, and courses of action listed in the General Plan provide some framework for possible action strategies. (See **Appendix D**)

GENERAL POLICY NO.1: PRESERVE THE CULTURE AND SENSE OF PLACE OF SOUTH KOHALA COMMUNITIES

Related sub-policies are:

- 1.1 Preserve Cultural and Historic sites and structures.** The newly created Hawai'i County Cultural Resources Commission shall include in its programs appropriate actions to protect and preserve important cultural and historic sites and structures in South Kohala.

- 1.2 The County Planning Director is requested to submit a draft of a bill to the County Council that sets out a concurrency management system for South Kohala.** The purpose of the bill is to create a system that will impose reasonable and fair infrastructure concurrency requirements on developments within the district that already possess zoning entitlements, and are therefore not currently subject to the concurrency requirements of HCC 25-2-46. The public facilities for which concurrency is to be managed shall be the same as those set out in HCC 25-2-46 as amended. The approach to concurrency management shall be modeled on the approach set out in HCC-25-2-46 as amended, provided that concurrency requirements shall be established at the time of any tentative approval of a preliminary subdivision plat (HCC 23-62 and 25-6-22), tentative approval of a preliminary condominium property regime map (HCC 23-131), plan approval (HCC 25-2-75), planned unit development permit approval (HCC 25-6-6) and project district site plan approval (25-6-46 and 25-6-56) or substantial revision thereof. Concurrency requirements shall be updated when an extension of time to perform a condition of such an approval is granted. The South Kohala concurrency management system shall (1) provide a process by which a developer or land owner can request full or partial relief from the requirement under appropriate conditions, based on the type of development proposed and its overall impact on the adequacy of public facilities, (2) take into consideration voluntary actions that a developer has taken or proposes to take to improve the adequacy of district public facilities in the context of the proposed development (3) exempt subdivisions for the purpose of familial transfers of property, (4) provide for situations in which a developer has vested property rights based on specifically proposed and approved plan elements that were granted at an earlier stage in the development approval process, (5) provide a fair way to address developments that are underway and being relied upon to build infrastructure for the community at large, to ensure that they remain viable, and (6) provide a forum to allow those that would be affected an opportunity to air their concerns.

(See **Appendix E** for list and description of Hawai'i County Codes (HCC) that are referenced.)

- 1.3 Provide for more developed park space and recreational facilities in South Kohala.** The County Planning Director, in consultation with the Director of the Department of Parks and Recreation, shall submit a draft of a bill to the County Council to amend HCC Chapter 8. The intent of the amendment shall be to standardize the requirements for new developments to provide park space in South Kohala and other Hawai'i County Districts. In developing the amendment, the following concepts shall be considered: (1) the definition of "parks and playgrounds" in HCC 8-2(8) shall include only improved areas and facilities used for recreational activities, such as athletic fields, and shall not include golf courses, marinas, or other similar uses for which a fee is charged, (2) the exemption provided in HCC 8-4(a)(1) shall not count existing County beach parks, parks and playgrounds that are State-owned or federally-owned and shall only count parks and playgrounds within the community in which the development is to be located, (3) the park space or off-site improvements shall be located or in-lieu fees shall be used within the community in which the development is to be located, and (4) when the rezoning ordinance for the development has specific requirements that it develop park space within the project, and / or dedicate park land to the County, or provide other public recreational amenities, those requirements shall remain in effect as long as the rezoning ordinance is not amended.

(See **Appendix E** for list and description of Hawai'i County Codes (HCC) that are referenced.)

- 1.4 "Time Share" developments shall only be allowed within the boundaries of the District's three major destination resorts: Waikoloa Resort, Mauna Lani Resort, and Mauna Kea Resort.** Time Share projects are not compatible with residential areas that are located outside of the destination resorts of the district.

- 1.5 The County shall coordinate with the State Department of Education to develop plans for a public high school within the South Kohala District.** As the population of South Kohala continues to grow, the presence of a public high school will be important for promoting the district's sense of place.
- 1.6 It is recommended that the Planning Department provide opportunities and forums for public review and comment for all subdivisions, PUD's, plan developments, and cluster developments, proposed in the District of South Kohala.** Residents of South Kohala have called for like more transparency in the subdivision/plan development approval process, by way of a public presentation of the proposed development and the opportunity for members of the community to raise issues and voice their opinions of the proposed project. Subdivision approval is a key point in the development process in which community input is most important.

GENERAL POLICY 2: PROVIDE FOR THE TRANSPORTATION AND CIRCULATION NEEDS OF THE SOUTH KOHALA COMMUNITY AND FOR COMMUTERS TO/FROM SOUTH KOHALA.

Related sub-policies are:

- 2.1 New major roads in the District shall incorporate "complete street" standards, including provisions for vehicular traffic, pedestrians, bicycles, and public transportation, except in the case of extreme mitigating factors.** "Complete Streets" are streets that are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and bus riders of all ages and abilities are able to safely move along and across a complete street. (<http://www.completestreets.org/>) Improving the safety and viability of alternate modes of transportation in South Kohala will encourage more people to leave their cars at home and walk, bike, or bus to their destinations more often.
- 2.2 Establish bicycle, pedestrian, and equestrian travel ways to link up the communities within the District (Waikoloa Village, Waimea, Puakō, Kawaihae, and the resort nodes) while also establishing alternative travel ways within the individual communities.** Also, establish public trails to various cultural locations and other sites of interest, where a significant level of visitation is appropriate and does not pose a threat to the resource, as identified by the community.
- See **Appendix H** for list of suggested alternative travel ways and trails.
- 2.3 Build safe roads.** Currently there are existing roads in the district such as the Kawaihae Road and Waikoloa Road that can be considered dangerous without truck runaway ramps.
- 2.4 Identify and establish transit corridors for future mass transit service within the district.** While the provision of mass transit service such as rail may be decades away for South Kohala, the County should plan ahead for future mass transit service in the district by establishing transit corridors. Setting aside land now for transit corridors may help to reduce future costs of implementing mass transit services.

GENERAL POLICY NO. 3: PROVIDE AFFORDABLE AND WORKFORCE HOUSING RESOURCES FOR LOW AND MODERATE INCOME INDIVIDUALS, FAMILIES, AND FOR THOSE RESIDENTS OF SOUTH KOHALA WITH SPECIAL NEEDS

Related sub-policies are:

- 3.1 **The County shall establish policies and programs for the implementation of affordable and workforce housing projects in those areas of the island where such projects are most needed, including Waimea and Waikoloa Village.**
- 3.2 **The South Kohala Community shall organize one or more community-based, non-profit entities that can partner with the County Office of Housing and Community Development and with other non-profit organizations and for-profit contractors and developers to provide affordable housing units.**
- 3.3 **The County shall work toward the development of housing for senior citizens and assisted living facilities in South Kohala.**
- 3.4 **The County shall provide more opportunities for low income housing and transitional shelters.**

GENERAL POLICY NO. 4: DEVELOP PROGRAMS AND STANDARDS THAT WILL PROTECT THE SOUTH KOHALA COMMUNITY FROM NATURAL HAZARDS, INCLUDING MAJOR STORMS, FLOODING, TSUNAMI, LAVA FLOWS, AND WILDFIRES

Related sub-policies are:

- 4.1 **The County shall develop plans and programs for emergency routes so that people can safely move away from life-threatening natural hazards.** Of special concern is the threat of tsunami in coastal areas, and the threat of wild fires in dry upland areas like Waikoloa Village.
- 4.2 **Adopt development standards and community plans that mitigate wildfire risk and maximize responder safety, where wildfire danger is present:**
 - The County Planning Department should consider requiring all new subdivisions to incorporate through their covenants, codes, and restrictions “firewise landscaping principles” for common areas and for individual homes, including defensible space emphasizing fire and drought resistant plants, as well as native plants when appropriate. This requirement could be a condition for any final subdivision approvals.
 - The Building Department of the County’s Department of Public Works should consider giving every individual or entity applying for a building permit(s) firewise checklists for building and landscaping. These checklists could also be made available on the County’s website for downloading.
 - The County’s Real Property Tax Department should consider implementing an additional tax incentive for landowners of agriculturally zoned land that, 1) would have a grazing management plan reviewed and approved by a qualified County or State agricultural specialist (e.g. the Natural Resources Conservation Services, the University of Hawai’i Cooperative Extension) with an objective for managing wildfire fuels and which may include grazing reserve areas for drought periods, and 2) graze 100% of the usable grazing area identified in the certified grazing plan. Other programs that encourage the use of extensive cattle grazing as a

practical means of controlling fire fuel while maintaining the landscape, could also be considered.

- The County Planning Department should consider requiring all applicants for subdivision approvals to complete a wildfire hazard mitigation plan. This plan should be completed before final subdivision approval is granted. These plans should recommend specific measures for reducing wildfire hazard in the interface areas between the subdivision and any range/open lands or forests and in any open areas within the subdivision. When developing these elements, the following standards should be considered: 1) National Fire Protection Association (NFPA) document 1141, *Standard for Fire Protection Infrastructure for Land Development in Suburban and Rural Areas*, 2) National Fire Protection Association (NFPA) document 1144: *Standard for Reducing Structure Ignition Hazards from Wildland Fire*, and 3) Criteria which delineate when and how new subdivisions will be required to install diptank(s).

- 4.3 Government agencies should consider providing more emergency shelter facilities in South Kohala.** Future civic buildings in South Kohala such as new schools or community centers should be designed to serve as emergency shelters as well. These civic buildings should be built so that they are disaster resistant.

GENERAL POLICY NO. 5: DEVELOP GUIDELINES AND PROGRAMS THAT PROMOTE ENVIRONMENTAL STEWARDSHIP AND THE CONCEPT OF SUSTAINABILITY

- 5.1 Proposed uses of natural resources shall be duly evaluated by the responsible public entities to ensure that each such use is consistent with the sustainable long-term health of the eco-system, including the direct and indirect impact on coastal waters.** Public entities shall base their decision-making on the best possible data in order to ensure sound short and long-term management of public resources. In the event of uncertainty of data, consistent with the Public Trust Doctrine of the Hawai'i State Constitution, the public entity shall apply the *Precautionary Principle* to conserve the resource. The Precautionary Principle requires long-term vision and mandates that government entities favor caution and conservation in any case in which information is uncertain. In evaluating any proposed use, consideration must be given to the cumulative impact of existing and previously approved developments.
- 5.2 The County shall require water conservation measures and plans for new large scale development projects (i.e. residential and agricultural subdivisions, resorts, commercial and industrial centers, etc.) in South Kohala**
- 5.3 Ensure the quality of South Kohala's ground water resources and marine resources.** The County should consider adding the following requirement to HCC 23-85(b) for residential projects: No cesspools or seepage pits shall be installed in South Kohala after the effective date of this plan. The effluent from any septic tank installed in South Kohala after the effective date of this plan shall be discharged into an absorption system that meets the design standards of the State Department of Health.
- 5.4 Prohibit the installation of future injection wells in Special Management Areas if wastewater is NOT treated to an R-1 level of water quality.** Injection wells can be a major source of pollution for coastal waters if wastewater is not treated to a high level. Controlling the installation of future injection wells will help to improve the quality of near shore waters. Furthermore, the reuse of treated R-1 quality effluent can be encouraged for irrigation and other purposes.

- 5.5 **Preserve visually and environmentally important open space grasslands, ocean views, views of the pu‘u, and South Kohala’s unique “Five Mountain Views” of the Kohala Mountains, Mauna Kea, Mauna Loa, Hualalai, and Haleakala.**
- 5.6 **The County should encourage and promote LEED standards for buildings and neighborhood design by providing incentives for projects that achieve a LEED certification level of “Silver” or higher.** LEED stands for “Leadership in Energy and Environmental Design.” The United States Green Building Council (USGBC) created LEED as a rating system for green building. Green building refers to the design, construction, and operation of buildings in an environmentally friendly way. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environment. The LEED rating system (used to determine LEED certification) awards points to projects based on how the project incorporates green building principles into its design and construction.
- While achieving LEED certification may drive a project’s development cost up in the short term, developers should keep in mind the long-term benefits of green building such as savings in energy costs and general benefits of green building to the surrounding community and environment. The County should consider providing incentives to developers who seek LEED certification to offset additional short-term development costs incurred by LEED certification.
- 5.7 **Increase Enforcement of the County Lighting Code and modify the existing code as necessary.** Outdoor lighting fixtures that are not in compliance with the County Lighting Code are a significant source of light pollution in the night skies. This is of special concern for astronomers atop Mauna Kea. The County needs to improve its enforcement of illegal light fixtures in order to reduce light pollution. The County is also currently working with astronomers and is in the process of updating its lighting code to add requirements that would help to reduce light pollution. However, with no enforcement, a newly revised lighting code may have minimal effects in reducing lighting glare in South Kohala’s night time skies.
- 5.8 **The County should develop or collaborate with other agencies and organizations to develop watershed management programs for the district of South Kohala.** These programs should address flood mitigation, strategies for reducing water run off such as restoring vegetative cover in mauka areas or construction of detention basins and the effects of impermeable surfaces on groundwater infiltration.
- 5.9 **Water quality monitoring should be considered on a district-wide basis.** Four types of monitoring are needed: ocean water, ground water, leach fields (natural or constructed) and anchialine ponds. Consistent testing and monitoring protocols should be developed. Currently, the resorts in the district perform monitoring and that data is reported to the County. However, this monitoring has not been systematic or consistent. The State Department of Health currently has a weekly beach monitoring program designed to find indicator bacteria at selected beaches in West Hawai‘i. The County Planning Department is currently evaluating DOH rules and may adopt additional testing requirements. The Planning Department is also currently evaluating monitoring guidelines for groundwater and anchialine ponds. Monitoring of water quality in the district should be coordinated by the County in order to ensure that there is no duplicate monitoring and to ensure the quality of water throughout the district.
- 5.10 **Encourage the County to review and revise as appropriate rules and guidelines that will reduce flooding and erosion that may occur from developing on steep slopes.**

5.11 Promote Alternative Energy. South Kohala is blessed with strong winds and ample sunlight throughout the year. The County should support the development of more natural energy generating facilities.

5.12 Incorporate the concept of “Sustainability” as defined in the State of Hawai’i “2050 Sustainability Plan” in all future planning and projects in South Kohala. The State of Hawai’i “2050 Sustainability Plan” defines sustainability as a Hawai’i that achieves the following:

- Respects the culture, character, beauty and history of our State’s island communities
- Strikes a balance between economic, social and community, and environmental priorities
- Meets the needs of the present without compromising the ability of future generations to meet their own needs.

To view the Hawai’i 2050 Sustainability Plan, please see: <http://www.Hawai’i2050.org/>

5.13 Support policies and programs that promote the concept of food sustainability. Policies and programs that make food production a priority such as preservation South Kohala’s Important Agriculture Lands, allocating sufficient water resources for productive farming, or encouraging developers to landscape their projects with fruit trees or other types of plants that provide food, should all be emphasized and supported.

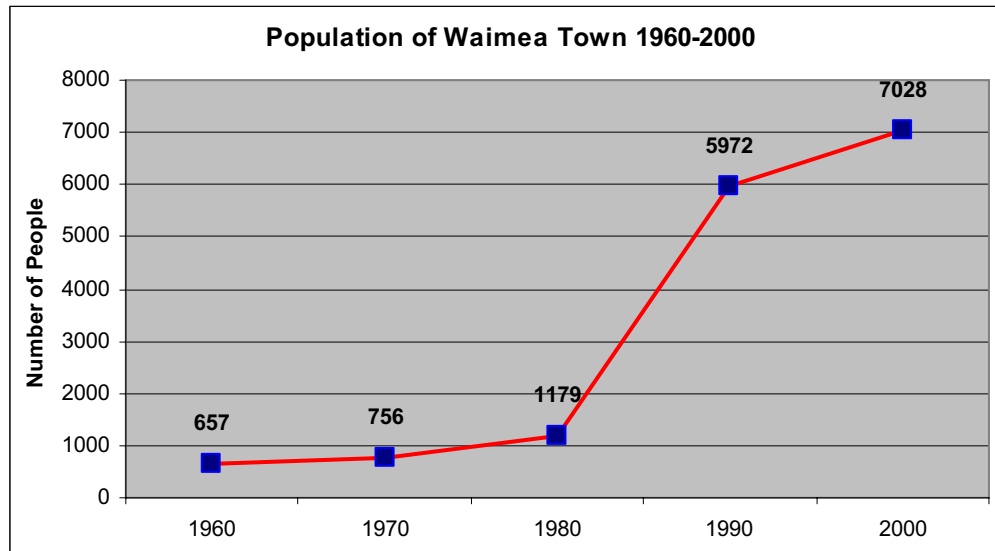
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4 WAIMEA TOWN PLAN

4.1 CURRENT AND FUTURE PLANS AND DEVELOPMENTS

4.1.1 POPULATION

FIGURE 4.1: WAIMEA POPULATION 1960-2000



U.S. Census 1960, 1970, 1980, 1990, 2000

As can be seen in the figure above, it appears that the town of Waimea saw a dramatic increase in population between 1980 and 1990. However, part of the reason for the apparent dramatic increase in population is that the Census expanded the boundary area of the Waimea Census Designated Place between 1980 and 1990. In 1980 the Waimea Census Designated Place consisted of areas mainly surrounding the town center, while the 1990 Waimea Census Designated Place incorporated areas extending beyond the town center from Mahua St. on the west end to a little past Mud Lane on the east end and also extending south towards the Waimea Airport. Thus, with a larger area, the 1990 Census counted significantly more people in Waimea when compared with the 1980 Census. That said, the 1990 population count is much more reflective of the actual Waimea community, as compared with the 1980 Census count that was only limited to the town center area.

Of more relevance to the current CDP process is the increase in population from 1990 to 2000: a net increase of a little over 1,000 people. There are no accurate numbers available for the current (May 2008) Waimea population, but based on County building permit records (see "Housing" section, below), permits were issued in Waimea for a total of 415 units for the years 2003 through 2006, or an average of about 104 units per year. This level of building activity was probably slower for 2001-02 and for 2007. If about 500 units were built for the years 2001 through 2007, additional

population for that period would have been about 1,500 people – a significant increase for a relatively small community.

4.1.2 LAND USE

The development pattern in Waimea Town is linear from east to west, and concentrated along Māmalahoa Highway and Kawaihae Road. Development along these two roadways is spread out over six miles with the town center approximately at the mid point of the six mile stretch. Important developments along the highway include the North Hawai'i Community Hospital and the W.M. Keck Observatory. In part, because of the town's spread out development pattern along the major highway corridor, traffic congestion is a problem as residents who need to commute to the town center for daily necessities such as shopping or banking, compete with commuters who are traveling between Hilo and Kona.

Most of the commercial development is concentrated in and around the Waimea Town Center, at the intersections of Māmalahoa Highway and Kawaihae Road. The two main shopping centers include supermarkets, banks, and other smaller shops which cater to both local residents and tourists. Also located near Waimea Center are several of the town's 12 schools, including the Parker School on Lindsey Road and Waimea Elementary and Middle School on Māmalahoa Hwy. Hawai'i Preparatory Academy, one of the largest private schools in the state, has its main campus located on the west end of town along Kawaihae Rd.

Most of the Parker Ranch lands in South Kohala are located to the south of Waimea along Māmalahoa Highway. The Parker Ranch corporate headquarters, along with the historic race track, is located off of Māmalahoa Highway. Located just south of the Waimea Town Center is the historic Pukalani Stables Complex. To the south of town is the Waimea-Kohala Airport and the Lālāmilo farm lots. To the north of the Town Center are views of the Kohala Mountains and various culturally important *pu'u* that dot the mountain's slopes.

Table 4.1 summarizes planned development projects in the Waimea area. Figures 4.2 and 4.3 illustrate the General Plan LUPAG for Waimea and County Zoning for Waimea.

Table 4.1 Current and Future Development – Waimea Area

| No. | Name of Development | Land Owner/ Developer | Description | Development Status |
|-----|---|---|--|---|
| 1 | DHHL Lālāmilo Homesteads | DHHL | 442 house lots on 160 acres. Development will also include a community center, parks, general agriculture, preservation area (19.1 acres), open space areas (44.5 acres) Phase 1 includes 34 in-fill house lots. The remaining planned house lots will be built in Phases 2 & 3. | Preliminary construction began in 2005 |
| 2 | DHHL Pu'ukapu Homesteads | DHHL | Unspecified numbers of: house lots on 88 acres, farm lots on 598 acres, pasture lots on 4,797 acres; Community Pasture (529 acres), Pasture & Farm Lease (5,573 acres), Public Service Facilities (40 acres), Water / Forest Reserve / Conservation (165 acres) | Master Plan completed 2006 |
| 3 | DHHL Honoka'ia Homelots | DHHL | The project is actually located in the neighboring Hāmākua district, but is within close proximity to Waimea. The minimum lot sizes are designed to be 10 acres. The entire project area is about 2,500 acres | Preliminary planning and research completed |
| 4 | HPA campus consolidation | Hawai'i Preparatory Academy | The school is considering relocating the lower and middle schools from their current sites to a site on the Kohala side of the existing solid waste transfer station. Access to the proposed campus relocation would be from Kawaihae Road. | TBD |
| 5 | Okada Farm Subdivision | Okada Farms | The farm is planned to be subdivided into one acre agriculture parcels. Currently, the farm is the largest contiguous farm in Waimea. | TBD |
| 6 | Waimea Parkside | Kaloko Development Inc. | 40-lot subdivision on a 9.18 parcel near Lindsey Road | Under construction |
| 7 | Parker Ranch 2020 (Waimea Town Center Plan) | Parker Ranch | Overall Plan calls for 750 homes and 250,000 (?) square feet of commercial space. | 80 homes have been constructed |
| 9 | Luala'i at Parker Ranch | Kaomalo LLC, Schuler Homes Inc., Parker Ranch | 322 residential units, parks, and open space on 75 acres of land. This project is part of the "Parker Ranch 2020" plan. | Phase I completed in 2002 |
| 10 | Magoon Property | Magoon Estate Ltd. | Property across from Waimea school is under consideration for a possible mixed-use commercial and residential development | In planning stage |

Table 4.1 Current and Future Development (Continued)

| No. | Name of Development | Land Owner/ Developer | Description | Development Status |
|-----|----------------------------------|---|---|--------------------------------|
| 11 | Waimea District Park | Hawai'i County | As part of the Parker Ranch 2020 Plan, Parker Ranch is required to allocate 21.5 acres of its land for a County regional park facility. Currently the land adjacent to and south of the Lālāmilo Farmlots is the leading candidate for the site of the future regional park. | TBD |
| 12 | Lālāmilo State Land | State DLNR | DLNR entered a 35-year lease agreement with FR Cattle Company for 9,000 acres of ranch land. The area has several archeological sites and unexploded ordnance from previous military training exercises. | TBD |
| 13 | Parker School Expansion | Parker School Trust Corporation | The school is looking at plans for expansion. A site north of the KTA shopping center is being considered. | TBD |
| 14 | North Hawai'i Community Hospital | North Hawai'i Community Hospital | A 2008 master plan calls for the development of multi-story office buildings behind the hospital, a large auditorium, classrooms, and kitchen. Parker Ranch has donated lands for the hospital's expansion plans. | TBD |
| 15 | Waimea Trails and Greenways | Hawai'i County | The greenway system will provide alternative modes of circulation. The greenway system is intended for pedestrian and bicycle uses. Currently, the project is managed by the County of Hawai'i Department of Parks and Recreation and a citizen advisory group known as the Waimea Trails and Greenway Committee. | Phase I construction completed |
| 16 | Anna Ranch | Anna Ranch Trust | Trustees of the ranch are engaged in strategic planning to preserve the ranches historic sites and possibly establish a historic museum. | In Progress |
| 17 | Waiulaula Watershed | MKSWCD | The Mauna Kea Soil and Water Conservation District (MKSWCD) in collaboration with NRCS are planning to preserve and increase water quality in the Waiuluulu Watershed. This watershed area includes flood prone areas in Waimea Town and Lālāmilo. | TBD |
| 18 | Kauhale 'Ōiwi Pu'ukapu | Kanu o ka 'Āina New Century Public Charter School | The project is a series of small scale building complexes meant to house the programs and services of Kanu o ka 'Āina. The project is located on 15 acres on DHHL Pu'ukapu Homestead land. | Phase I construction has begun |

FIGURE 4.2: GENERAL PLAN LUPAG FOR WAIMEA

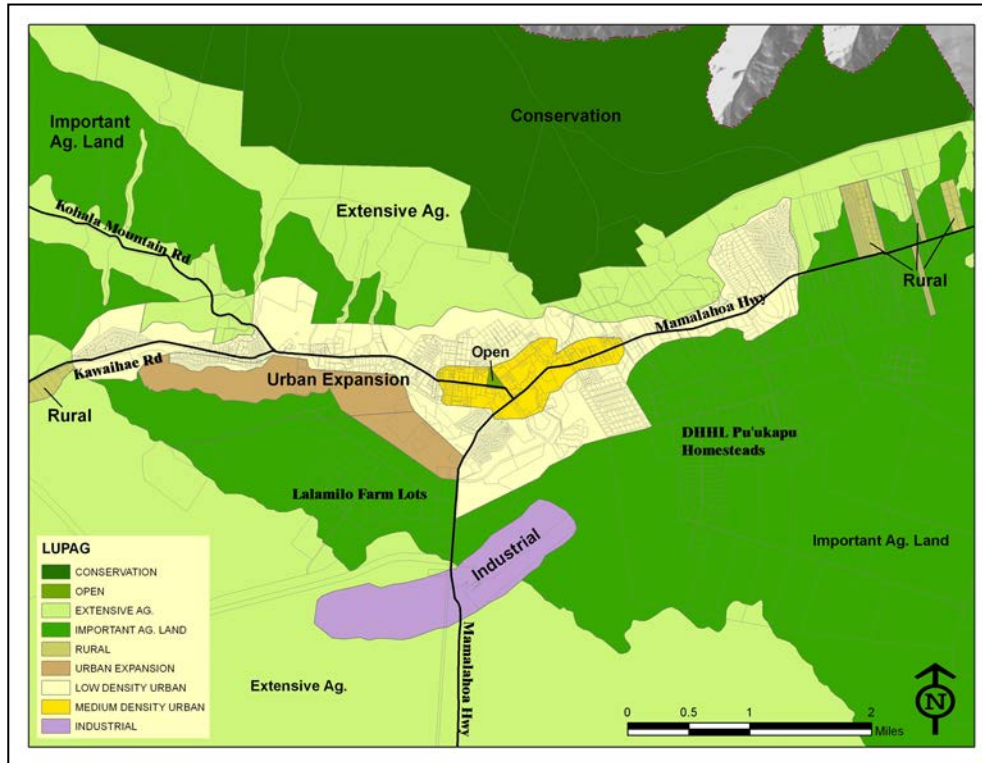


FIGURE 4.3: COUNTY ZONING FOR WAIMEA

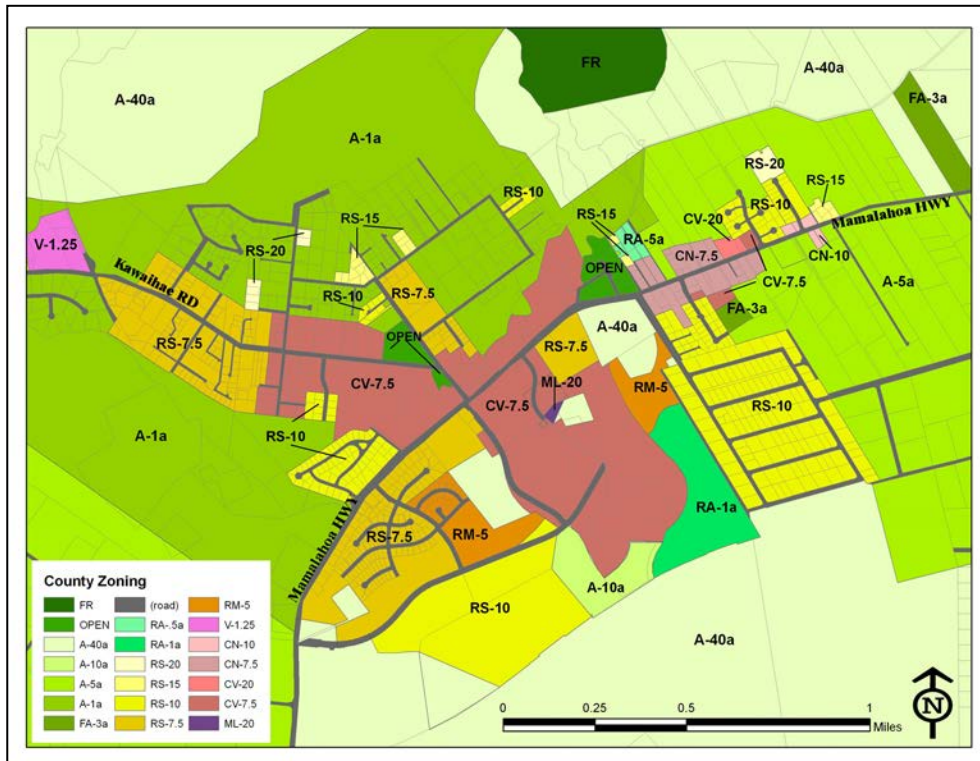
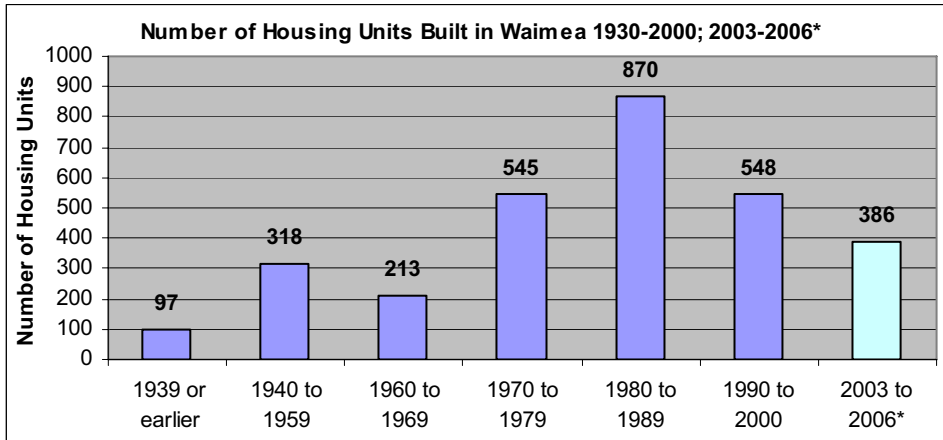


Figure 4.2 Housing



From 1970-2000 almost 1,400 housing units were built in Waimea. Currently, there are approximately 2,900 housing units in Waimea. * 2003-2006 Housing units are an estimate based upon the number of Building permits that were issued during those years.

Table 4.2 New Residential Building Permits in Waimea (2003-2006)

| Year | Waimea “Dry Side” | | Waimea “Wet Side” | | Waimea South of Māmalahoa Hwy. | |
|--------------|-------------------|-----------------|-------------------|-----------------|--------------------------------|-----------------|
| | Number of Permits | Number of Units | Number of Permits | Number of Units | Number of Permits | Number of Units |
| 2003 | 4 | 4 | 57 | 81 | 58 | 58 |
| 2004 | 7 | 6 | 66 | 65 | 12 | 12 |
| 2005 | 11 | 11 | 65 | 63 | 46 | 45 |
| 2006 | 3 | 3 | 29 | 29 | 38 | 38 |
| Total | 25 | 24 | 217 | 238 | 144 | 153 |

Source: The HI Co. Planning Department

There were a total of **396** residential building permits issued by the County for the Waimea area for **415** residential units from 2003-2006. The large majority of permits were issued for the “Wet Side” or east side of Waimea Town, while relatively few building permits were issued for the “Dry Side” or west side of Waimea Town.

Current and Future Road Projects

Parker Ranch Connector Road is designed to start from Māmalahoa Highway near the Parker Ranch rodeo grounds, then run just south of Parker Ranch’s Luala’i subdivision and shopping center, and reconnect Māmalahoa Highway at or near Kamamalu Street, near the Waimea Civic Center. The connector road project will include a linear park and bikeway and a pedestrian pathway. The project is estimated to cost approximately \$13.1 million, and construction for part of the project is to begin in the near future. The timetable for completion of this connector road is as follows:

1. From Māmalahoa Highway near the rodeo grounds to the Luala'i subdivision, Kaomaloa Street, including the intersection with Māmalahoa: by May of 2009.
2. From Luala'i subdivision, Kaomaloa Street to Pukalani Road including the Pukalani Extension with connection to the completed portion of Pukalani Road: by May of 2010.
3. Completion of the final section of the Parker Ranch connector road, from Pukalani Road to Māmalahoa Highway in the vicinity of Kamamalu Street. Parker Ranch is responsible for construction of this final section of road in conjunction with development of the immediately surrounding area, with the proviso that this section must be completed no later than the issuance of the building permit for the 450th residential unit within the rezoned parcel. There continues to be debate as to whether this section of the connector road should intersect with Kamamalu Street, or should connect directly onto Māmalahoa Highway in the vicinity of the civic center and North Hawai'i Hospital. Other options are to indefinitely postpone construction of this section of the road or to connect the road in both locations with only one-way traffic traveling west adjacent to the North Hawai'i hospital so as to mitigate the noise impact to the hospital and to decrease the extent to which Kamamalu Street is affected.

Lindsey Road Extension. This project extends Lindsey Road from its intersection with Māmalahoa Highway to the proposed Waimea Bypass Road. Extension of Lindsey Road from its current terminus near the Post Office and Kahilu Theater to the Parker Ranch Connector Road corridor is the responsibility of Parker Ranch. Parker Ranch is required to construct this section of the Lindsey Road Extension concurrently with any commercial development of the immediately surrounding commercial zoned areas and must complete this section prior to issuance of a certificate of occupancy for that commercial development. Parker Ranch is also responsible for construction of that portion of the Lindsey Road extension located between the Connector Road and the future State Waimea Bypass Road located east of the rezoned property.

Richard Smart in the Parker Ranch 2020 Plan envisioned this Lindsey Road Extension as a "community street" and central to his vision of creating a "village center" in Waimea.

Road "A" is an internal connector road that will bisect the Luala'i subdivision and the Waimea public school property and connect on to the Lindsey Road Extension. The Department of Education is expected to pay for this road.

Lālāmilo Connector Road also known as the **Māmalahoa Highway – Kawaihae Road Connector Project** would connect the Kawaihae Road to Māmalahoa Highway near the Lālāmilo Farm Lots. The proposed road would start at the Māmalahoa Highway near the Parker Ranch Race Track and near the terminus of the planned Parker Ranch Connector Road. The road would travel in a northwesterly direction, intersecting Kawaihae Road near the Waimea Solid Waste Transfer Station Road. The cost for this project is estimated to be over \$9 million. Currently an Environmental Assessment for the project is being prepared by the County Department of Public Works. A number of objections to the alignment of the road have been raised. There is concern about the adverse impact the road may have on the farm lots and other abutting properties, in particular an organic farm.

Waiaka Bridge and Intersection Replacement Project would widen and realign the bridge over the Waiaka Stream. The scope of the project also includes reconstruction of the adjacent intersection of

the Kohala Mountain Road and Kawaihae Road and installation of various safety improvements. To date the public prefers a new alignment mauka of the existing bridge location, with provisions for pedestrian, bicycle, and equestrian use. One possibility that received general community support is to retain the current bridge and use it solely for non-vehicular traffic. Construction is scheduled to begin in 2011 and will be funded by State and possibly Federal funds.

Lindsey Road Bridge Replacement Project is located near the Māmalahoa Highway intersection. The project is slated for the 2009-2010 fiscal year. There is great concern that this construction project will cause more traffic congestion in the center of town.

Waimea Bypass Road was initially proposed by the State DOT in the 1960s. The purpose of the proposed Waimea Bypass Road is to reduce cross-island traffic traveling between east and west Hawai'i through Waimea Town. The road's most recent design is to start from the Māmalahoa Highway near Mud Lane and connect with the Kawaihae Bypass Road at Māmalahoa Highway. The project is expected to be funded by State and Federal highway programs. However, the only funding to date has been for an Environmental Impact Statement, which is still underway. Major controversial questions surrounding this project include how, where, and whether to traverse the DHHL Pu'ukapu farm lots on the east side of Waimea. Waimea residents are also concerned about the road's alignment immediately south of the town center. There is considerable sentiment in the Waimea community that this State highway should be aligned to the south of the Waimea Airport.

Kawaihae Road Bypass is planned to start at Māmalahoa Highway near the Waimea Airport at the terminus of the Waimea Bypass Road. As with the Waimea Bypass Road, there is considerable sentiment in the Waimea community for this road to be aligned south of the Pu'u Pa – Pu'u Huluhulu cindercone complex. This highway will link up with the Queen Ka'ahumanu Highway in the vicinity of Kawaihae Harbor. The road is designed to relieve traffic anticipated from the further development of the resort areas, vehicles traveling between East Hawai'i and West Hawai'i, and increased vehicle, cargo, and Superferry traffic from Kawaihae Harbor. The Draft EIS was begun in 2006 and planning for the project is still in process. This road is proposed to be constructed in up to three sections. There is considerable district-wide community support for construction of the segment in the area of Kawaihae, given the potentially significant impact of the Superferry and military traffic into and out of the Harbor. According to the County Department of Public Works, construction of the road is scheduled to begin in 2014.

Waimea Trails and Greenways creates a corridor through Waimea town along the Waikoloa Stream consisting of trails and greenways. This project is intended to encourage alternative forms of circulation other than by car for trips within Waimea Town by providing accessible pathways to connect residential areas with schools and commercial areas. The trail will extend along Waikoloa Stream from the South Kohala View Estates on the west and travel northeast, through the Waimea Nature Park to the State land north of Church Row. The project will also consist of a 17-acre trail head, picnic area, and parking area located on the State land near the Waimea Solid Waste Transfer Station. The first phase of the project, in the vicinity of the Waimea Nature Park, has been completed and is open to the public. The project will be federally funded.

4.2 WAIMEA TOMORROW: WAIMEA CONCEPTUAL PLAN & POLICIES

PURPOSE: This **Waimea Town Conceptual Plan** presents in graphic and narrative form general guidelines for the long-range – 20+ year look-ahead – future of Waimea Town.

During the course of the Community Readiness Process and Waimea Focus Group meetings, five main concerns were consistently voiced:

- **Preserving Waimea’s “sense of place”**
- **Moderating the pace of growth and change in Waimea**
- **Wise management of natural resources and important agricultural lands**
- **Development of affordable housing**
- **Timely construction of transportation and circulation improvements**

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This Conceptual Plan is presented as an important **linking step** between the Focus Group discussions and the resulting “Planning Notes” (November 2007) and the more detailed **Action Programs** that the CDP Team has developed on specific plan elements, including:

1. Strategies to “save the pu`u”
2. Strategies for preserving small farms, small ranches, and open spaces in East Waimea, and expanding farming activities
3. Plans for implementing walkways and bikeways along major roads

A note on the Conceptual Plan graphics and text: the graphic includes a variety of land use elements and ideas, including:

- Existing Land Uses (black text on the graphic)
- Projects and developments planned by various agencies and land owners (blue text)
- Concepts and land uses recommended by the CDP (red text)

The Conceptual Plan text provided here addresses most of but not all of the elements shown on the graphic. The text also includes some policies and details that are not shown on the graphic. Thus, text and graphics are presented as mutually supporting planning tools, but are not “identical” in content.

Note: the term “Waimea Community” is used in many places in this CDP text. Our working definition of the “Waimea Community” is **all of the people who live in and work in and are associated with the town of Waimea**, including but of course not limited to recognized community leaders and the members of various Waimea-based social, educational, cultural, and business organizations.

Based on input from the Community Meetings and Focus Group Meetings, the South Kohala Steering Committee meetings, and planning studies undertaken to date, suggested Overall Policies for Land Use in Waimea Town are:

Waimea Policy 1. PRESERVATION OF WAIMEA’S SENSE OF PLACE shall be the principal, overarching land use policy for Waimea. This policy shall be implemented through measures for responsible growth, and through the preservation and protection of important lands and resources, including important cultural and historic sites and structures, important agricultural lands, and visually and environmentally important open space areas in Waimea Town.

Waimea Policy 2. “RESPONSIBLE GROWTH” shall be an overarching land use policy for Waimea. Adequate infrastructure, including roads, water supply, electrical power, drainage structures, schools, and parks, shall be provided by public and/or private entities before any large-scale new residential or commercial projects can be considered for approval by the County.

Waimea Policy 3. ENVIRONMENTAL STEWARDSHIP shall be an overarching land use policy for Waimea. Land use decisions shall be based on wise management practices for forests, watersheds, natural drainage ways and streams, native ecosystems, and important agricultural lands.

Waimea Policy 4. DEVELOP AFFORDABLE HOUSING FOR WAIMEA. County Government and the Waimea community shall work with major area land owners, including the State of Hawai‘i, Parker Ranch and the Department of Hawaiian Home Lands, to plan and implement affordable housing projects for low and moderate income people of Waimea.

Waimea Policy 5. TIMELY IMPLEMENTATION OF NEEDED CIRCULATION AND TRANSPORTATION IMPROVEMENTS. The County Government shall coordinate and work with the community and with state and federal agencies toward the timely construction of priority circulation and transportation improvements, including pedestrian, bicycling, and public transportation, improvements in order to alleviate severe traffic congestion that is impacting Waimea Town.

Important related land use strategies for Waimea Town are summarized below.

POLICY NO. 1 PRESERVATION OF WAIMEA'S SENSE OF PLACE

Strategy 1.1 Protect the *Pu'u* of Waimea – The green *pu'u* above Waimea Town have great cultural, historical, and visual importance for the community. Together with the grand views of Mauna Kea to the southeast of the town, the *pu'u* define the special landscape “sense of place” of Waimea.

Efforts to protect the *pu'u* should be centered on keeping the *pu'u* and surrounding areas in agricultural use (grazing) and conservation use. Many of the *pu'u* have deep cultural importance for Native Hawaiians, and they are important areas for Native Hawaiians to pursue traditional cultural practices. Allowing access to the *pu'u* is important for these traditional cultural practices. The *pu'u* also play an important role in the natural systems of the watershed.

A State-owned parcel that contains three of the most important *pu'u* of Waimea was recently “downzoned” by the County Council from Ag-1a and Ag-5a to “Ag-400” – a zoning designation that will prevent the land from being divided up into small agricultural lots. An overall protection plan is now needed for the other important *pu'u*: not only the steeply sloping cinder cone features, but also their associated slopes within the “*Pu'u Protection Zone*” as illustrated in the accompanying “*Concept Plan for Waimea*.” The tree line referenced in the 1986 Waimea Design Plan should serve as the lower boundary line for the “*Pu'u Protection Zone*.” The Waimea Design Plan states: “*Preserve the Kohala Mountains and pu'u's above the present tree line.*”

The *Pu'u Protection Plan* for Waimea could include one or more of the following tools:

- Prohibit any new structures above the tree line referenced in the 1986 Waimea Design Plan
- Voluntary downzonings
- Purchase of conservation easements by the County or by a Land Trust
- Development of educational materials on the history and cultural importance of the *pu'u*
- Partnership agreements with DLNR and DHHL
- Partnership agreements with private land owners

If restrictions on the use of these lands are found to significantly diminish the value of a particular parcel, consideration should be given to providing fair compensation to the land owner.

The ***Pu'u Protection Plan for Waimea*** presented in the “*Action Program*” section consists of the acquisition of conservation easements and the requirement of a use permit for grading and construction on steep slopes. It has also been suggested that the Waimea Community and the County request the State Legislature to pass a Concurrent Resolution stating that the *pu'u* lands of Waimea shall be preserved as undeveloped pasture and forests. Public access to *pu'u* located on State land should be provided. Private land owners may also be able to provide public access easements. A regional scale *pu'u* protection program could preserve all of the important *pu'u* in the District of South Kohala – and perhaps in neighboring districts as well. See the ***Pu'u Protection Action Program*** for details.

Strategy 1.2 Acquire Critical Open Space Areas – Some of the *pu'u* lands may need to be acquired – either by the County through the recently formed Open Space Commission or by a non-profit entity like the Hawai'i Island Land Trust. Some of the visually important small farm and small ranch lots in East Waimea may also be priorities for acquisition in order to ensure their continued use for farming or ranching – either fee purchase or acquisition of conservation easements. Depending on the disposition of the land owner, “downzoning” or special overlay districts may not be the best strategy to use for preserving critical open space areas, as these measures can lead to legal challenges and litigation. Acquisition of the fee interest or of conservation easements for critical open space parcels can therefore be, in some cases, the best approach. Of course, the constraint for this strategy is the availability of acquisition funds. See the **Action Program – Acquire Critical Open Space Areas in East Waimea** for details.

Strategy 1.3 Protect important cultural and historic sites, structures, and landscapes – Waimea Town has a wealth of cultural and historic resources, from pre-contact Hawaiian culture, from the heyday of the *paniolo* era, and from more recent times. A list of some of these sites and resources is located in section 2.5.1 of this CDP. Many of these sites, structures, and landscapes should be protected and preserved as important elements of Waimea's heritage and sense of place. The “Waimea Concept Plan” graphic identifies only a few of these important resources: the Waimea Field System to the west of the Lālāmilo Farm Lots, the Pukalani Complex, including the Breaking Pen, Carriage Barn, Pukalani Stables, Blacksmith Shop, and Pu'u Hihale Corral near Waimea Town Center, the *pu'u mauka* of the Town, and the Racetrack Complex near the Parker Ranch Headquarters. These identified sites are not meant to be “officially protected” sites, but are identified as important examples of Waimea's history. There are many other important historical properties, including the Anna Ranch, the churches of “Church Row,” the old Lindsey house, and the Parker Ranch houses at Puopelu, to name a few. Overall, Waimea needs to establish an official “historic district,” at the state and/or federal level, to preserve and protect its cultural and historic heritage. A Waimea historic district could honor Hawaiian culture, *paniolo* traditions, agriculture, and natural resources. Access to grants and other funding sources is possible by establishing such a special historic district designation.

Strategy 1.4 Encourage small-scale farming through expanded tax credits – There has been much talk of late about the need for “food security” for Hawai'i, and the need to expand diversified agriculture. However, recent statistics from the state Department of Agriculture indicate that the number of farms, farm acreage, and farm workers is declining in Hawai'i. This trend appears to be especially acute for animal products, including dairies, chicken and egg farms, and pig farms. If farming, including small family farms and part-time farms, is to continue to be an important part of the region's food production and economy, incentives for farming are needed. These incentives could include County real property tax incentives and state farm income tax credits. The State Legislature is currently considering a number of incentives for farming, including tax credits, loan guarantees, and a provision allowing on-site housing for farm workers.

Strategy 1.5 Expand the Lālāmilo Farm Lots – The Lālāmilo Farm Lots were originally subdivided and made available to farmers in the early 1960's and were intentionally isolated by locating them sufficiently distant from town. At that time, there were 27 lots, ranging in size from 15 to 57 acres, and totaling approximately 550 acres. This development was created with the intention that no individual lot would have less than 15 arable acres to produce truck-crops for local and export markets. Today, there are approximately 35 farm operations active here, employing about 150 full-time and some part-time workers. Of the 35 farm lots, 32 are now owned in fee, and 3 are still leased from the State. These farmlots are an important asset not just for Waimea, but for the entire State due to the unique climatic conditions of the area and the irreplaceable irrigation system.

There are a hundred acres or more of state-owned land located between the existing farm lots and the historic “Waimea Field System” that could be developed for expansion of farming activities. Assuming a minimum farm lot size of 15 acres, this expansion area could provide about 7 new farm

lots, and something in the range of an additional 30 to 40 full-time farm jobs, and additional food-producing farms. There have been conflicting opinions from the community regarding the need or demand for additional farm acreage. A market demand analysis and agriculture water use analysis should be developed to address the need for expanding the Farm Lots. Expansion of the farm lots should also be conditional on the ability to adequately increase the supply of water for irrigation.

A caution: any expansion of the Lālāmilo Farm Lots should be carefully designed to avoid infringing on the culturally and historically significant Waimea Field System. As well, buffer areas consistent with the State Department of Agriculture’s recommendation of “800 feet and preferably 1,000 feet distant from the Farm Lots” should be maintained around the existing (and any future) farm lots so that farming activities will not be adversely impacted by nearby residential or other development.

Strategy 1.6 Recognize and protect significant trees and other plants in Waimea – A high priority for Waimea should be the identification and protection of significant mature trees or tree clusters within Waimea Town, especially those along the road sides and stream beds, as well those that serve as significant windbreaks.

Throughout its history and still today, Waimea has been recognized as a place of great natural beauty. Waimea is where the mountains and forests and the streams and lush varied tree canopy meet the fertile plains. Preserving Waimea’s close relationship with nature is critical to preserving its “sense of place”. Most people in the Waimea community recognize the need to protect and preserve the quantity and diversity of mature trees in and near the town center, as a way to maintain:

- its village character,
- its diversity of bird life,
- its pedestrian friendly character;
- its visual beauty, and
- the environmental benefits, such as creating windbreaks and erosion control buffers, and the contribution to an agriculture-friendly climate.

Thought needs to be given to the establishment of a “Waimea Trees Advisory Committee” that would work in partnership with interested private groups such as the Outdoor Circle, and with concerned government entities such as the County’s exceptional tree Council and the Parks and Recreation Department toward the recognition and preservation of exceptional trees in Waimea. The importance of encouraging protection of trees and vegetation in Waimea goes beyond the significance of individual trees. Other reasons such as global warming, rainfall distribution, and windbreak preservation, make protecting the trees of Waimea a vital undertaking.

Strategy 1.7 Encourage design and architectural guidelines that promote Waimea’s *paniolo* heritage - The 1986 Waimea Design Plan should be used as a reference and starting point for formulating additional design and architectural guidelines for new developments in Waimea.

POLICY NO. 2 “RESPONSIBLE GROWTH”: MODERATE THE PACE OF GROWTH AND CHANGE IN WAIMEA

Strategy 2.1 The County should carefully evaluate and condition, as appropriate, any rezoning that would negatively impact important agricultural lands or culturally, visually and environmentally important open spaces or resources in Waimea -- Time will be needed to implement a number of important open space preservation tools and programs, including acquisition of fee interest or conservation easements for important *pu`u* and some of the East Waimea farm and ranch lots. While these tools and programs are being put into place, private lands that are currently zoned A-5a, A-10a, A-20a, or A-40a should retain their current zoning. Exceptions can be made for affordable housing, agricultural cluster subdivisions, and small-scale

rezonings of 4 lots or less that may assist families in allowing their children to obtain individual properties.

Strategy 2.2 Work with Parker Ranch to phase the “Parker 2020” Development -- The original Parker 2020 Master Plan envisioned a total of about 750 homes and 250,000 square feet of retail and office commercial development on Parker Ranch lands located at the center of Waimea Town. To date, about 240 lots have been subdivided and 80 homes have been built and sold. Pursuant to a major re-organization, there is an understanding that the newly appointed Parker Ranch Trustees will be taking a fresh look at the goals and objectives of this major development. If the additional 670 homes per the original Master Plan were to be built by 2020, **this one project alone** would add some 1800 people to Waimea’s population over the next 12 years – a population increase comparable to the increase of 1,056 people in Waimea’s population during the decade 1990-2000. Development projects of this size typically have a fairly aggressive “build-out” schedule. However, this may be a good time to reassess the size and development pace of this project. In the event that Parker Ranch does proceed to develop any of the remaining portions of this Parker 2020 development, community input should be encouraged and carefully considered during the development approval process.

Strategy 2.3 Revise the County Subdivision Regulations and Planning Department policies and enforcement procedures to ensure that agricultural subdivisions are created for agricultural purposes and are not used for rural residential purposes without rezoning -- State Land Use statutes restrict residential structures on lots created after June 3, 1976 in the State “Agriculture” District to “farm dwellings.” In practice however, the Hawai’i County Planning Department has approved many “agricultural subdivisions” that are actually rural residential developments.

There is certainly a demand and a place for rural residential projects. However, rural residential projects should be required to apply for and receive State Land Use “Rural” classification, and County “Rural Residential” Zoning designation. As a corollary, any and all agricultural subdivisions should be required to submit a farming plan for either commercial farming, including grazing of animals, or subsistence farming together with their preliminary subdivision documents, and the Planning Department should design and implement a monitoring program that will ensure implementation of these farming plans. In the interim, until such farm plan requirements are put in place, the Planning Department should encourage land owners of Ag-zoned parcels who are proposing “Ag Subdivisions” to cluster smaller lots in areas of the site where structures would have low visual impact, and then delineate most of the remaining acreage as permanent open space areas.

Strategy 2.4 Amend the County of Hawai’i General Plan “LUPAG” map by reducing the acreage of “Low Density Urban” land in Waimea Town -- The current County General Plan LUPAG map for the Waimea area includes over 1,000 acres of “Low Density Urban” land in the Waimea area. This designation is defined in the General Plan (page 14-7) as: *“Residential, with ancillary community and public uses, and neighborhood and convenience-type commercial uses; overall residential density may be up to six units per acre.”*

Note that *“six units per acre”* translates to 5,000 square foot minimum lot size. The “Low Density Urban” areas on the LUPAG map include some existing development, but also include important cultural, historic, agricultural, and open space lands both *mauka* and *makai* of Māmalahoa Highway. Also of concern are the several hundred acres of “Urban Expansion” land shown on the south side of Kawaihae Road just west of Waimea Center, and the several hundred acres of “Rural” land shown along the south side of Kawaihae Road, roughly between Waimea and Kawaihae. Further development of these areas would continue the “suburban sprawl” development pattern that is not compatible with the goal of preserving Waimea’s “sense of place.”

The details of any changes to the Waimea section of the County General Plan LUPAG map will need to be worked out at a future date.

Strategy 2.5 Develop a secondary commercial center on the east end of town -- By providing a secondary center that services people’s basic daily necessities, a small-scale commercial center located on the east end of town would help to alleviate traffic congestion that develops around the existing commercial center in the town center. Residents who live on the east end of town could instead patronize the secondary commercial center for daily necessities instead of driving to the town center.

POLICY NO. 3 ENVIRONMENTAL STEWARDSHIP

Strategy 3.1 Protect Important Agricultural Lands – The Hawai’i County General Plan (February 2005) defines “Important Agricultural Lands” (IAL) as *“those (lands) with better potential for sustained high agricultural yields because of soil type, climate, topography, or other factors.”* (See General Plan p. 14-8 for the full definition.) The LUPAG maps for South Kohala show Important Agricultural Lands in a broad band about 1.2 miles wide north and south of the first 1+ mile of Kohala Mountain Road, in a broad area that includes most of the DHHL Pu’ukapu lands, and in the southeastern sector of the South Kohala District in the vicinity of the Saddle Road/Māmalahoa Highway junction. (See LUPAG map for details.) These lands should be used for extensive and intensive farming and ranching, and should not be rezoned for urban or suburban-type land uses.

POLICY NO. 4 DEVELOP AFFORDABLE HOUSING FOR WAIMEA

Strategy 4.1 Develop a Waimea Affordable Housing Program – In 2006, State and County housing agencies sponsored an update of a state-wide “Housing Policy Study.” This study included a special analysis of the “homeless” issue. For Hawai’i County, the study found that approximately 1/3 of the County’s 150,000 residents were either: (1) homeless, or (2) only a paycheck or two away from becoming homeless, or (3) doubled up or tripled up with other families because they were unable to find affordable for sale or rental housing. Clearly, affordable housing is a state-wide – and national – issue and problem, and one that is very difficult to solve.

During the CDP process, Waimea residents have said: “Please find a way to provide affordable housing so that our children can live in the town where they grew up.” There is also a need for affordable housing for many of the key employees that work in Waimea, including teachers and hospital workers. An effective affordable housing program that would build affordable for sale homes and provide affordable rentals could be developed using a non-profit, locally-based housing corporation and the “land trust” model. See the **Affordable Housing Action Program** for further details.

Strategy 4.2 Encourage policies that would provide more affordable rental units in Waimea -- The County should work with the Waimea community to develop programs that would increase the number of affordable rental units. Ideas such as revising the Ohana Dwelling section of the Zoning Code should be further studied.

POLICY NO. 5 TIMELY IMPLEMENTATION OF NEEDED TRANSPORTATION AND CIRCULATION IMPROVEMENTS

Note: with the exception of, Policy 5.1 “Walkways and Bikeways along the main roads,” the projects described below are all at some level of planning by various community, county and state entities. We have included a brief description of these projects because they are very important for the future of Waimea. However, the CDP cannot devote a significant amount of time and resources to evaluating these transportation plans or develop any detailed alternatives to proposed new roadways or traffic improvements. The CDP can, however, reflect community priorities and

concerns regarding these projects – concerns that are not always reflected in the official project plans and reports.

Strategy 5.1 Plan, design, and construct walkways and bikeways within the existing rights of way of the main Waimea Roads: Kawaihae Road and Māmalahoa Highway -- Except for sidewalks for a few blocks within the center of Waimea Town, there are no walkways or bikeways along the major roads that could be used by pedestrians and bicyclists, including children walking to and from school. Constructing safe bikeways and walkways along Māmalahoa Highway and Kawaihae Road would provide people with alternatives to travel by car, and would thus potentially alleviate to some degree the peak hour traffic jams that now characterize Waimea.

There is a need for both “higher speed” bike lanes for the “expert” recreational or commuter bicyclist, as well as walkway/bikeway shared paths that are separated from the roadway, and that are safe for children and elders. The Waimea Town Plan section of the South Kohala CDP provides a detailed **Action Program** for the planning, design, and construction of these walkways and bikeways.

Strategy 5.2 Support the implementation of the Waimea Trails and Greenways Project – Plans for the Waimea Trails and Greenways project have been developed over a period of some 13 years. The first phase of the project, about ½miles in length, from Lindsey Road to the beginning of the Sandalwood subdivision, has recently been completed. This multi-purpose path is planned to eventually extend to the vicinity of “Church Row.” This stream-side trail will be an important complement to the planned walkway/bikeway system that the CDP proposes along the main roadways. It is recommended that the Waimea Trails and Greenways Project also be considered for equestrian use. The County should continue to support this important community project through funding and technical assistance.

Strategy 5.3 Plan, design, and construct a system of equestrian trails for Waimea – There has been considerable discussion in recent years about the need and desirability of equestrian trails in the Waimea area. Of course, a generation or two ago, horses and riders were a natural part of the Waimea scene, and as recently as the 1980’s, it was not uncommon to see people riding their horses along the main roads. Now, however, traffic volumes effectively preclude horses and riders in town. Community leaders need to work with Parker Ranch and other land owners to develop a system of equestrian trails that will be compatible with existing and future residential, commercial, and institutional land uses.

The “Waimea Conceptual Plan” graphic shows two schematic alignments for possible equestrian trails: one from the vicinity of the Parker Ranch Headquarters to the vicinity of the Pu’ukapuouselots, and another trail along the State DOT easement that parallels Māmalahoa Highway, from the vicinity of the Waimea Airport southward for a distance of about 7 miles. The establishment of safe equestrian trails in and around Waimea Town is an important program that can connect Waimea present and future to its special *paniolo* past.

Strategy 5.4 Plan, design, and construct a system of multi-purpose paths and trails for Waimea – There are many other opportunities for the establishment of paths and trails in the Waimea area. The CDP Action Committee should organize a sub-committee to help gather community input to decide on priority trail routes. After community input has been gathered, the sub-committee should help with the implementation of priority trail projects. Several suggested multi-purpose paths and trails for Waimea include but are not limited to the following ideas below.

Parker Ranch Equestrian Plan - The Parker Ranch 2020 Equestrian Plan calls for a non-profit to take over the operation and maintenance of this trail. According to the zoning ordinance, the trail is to be completed before the occupation of any residential or commercial development in the Waimea Town Center.

A temporary trail located in the Parker Ranch Connector Road Phase Two corridor may serve the community well. While the connector road cannot be built in the immediate future, a trail in this location would provide the community a needed alternative travel route.

A perimeter trail around the State owned Buster Brown parcel that could possibly extend to Anna Ranch or to HPA has been advocated by several community members.

Ala Kahakai National Historic Trail Comprehensive Management Plan/EIS – Map of Alternative C: Ahupua'a Trail Systems shows the proposed corridor and possible connector and lateral trails in South Kohala. Waimea Trails & Greenways could be extended down an alignment that would follow Waikoloa Stream and Waiulaula Stream to connect with the Ala Kahakai NHT. When Paniolo Road is extended from Waikoloa to Kawaihae Road, a parallel shared use path could connect to Waimea Trails & Greenways and the Ala Kahakai NHT.

Kohala Watershed Management Plan – Trails and Public Recreational Use Areas map shows a number of existing unimproved and dirt roads and trails in South Kohala. The plan encourages use of these roads and trails by the public.

PB Americas Waimea Traffic Circulation Study – Map shows Waimea Trails & Greenways extending eastward along the Old Homestead Road, a path along Māmalahoa Highway, Parker Ranch Connector Road and Lālāmilo Connector Road and the Lindsey Road Extension. During the Parker Ranch Connector charrette, it was suggested that a path on one side of the connector road(s) could accommodate pedestrians and slow bike riders and one on the other side of the connector road(s) could accommodate equestrians. Note that this suggestion plus the opening of the Parker Ranch equestrian trail would create an equestrian loop. Also, it would connect the Waimea Trails & Greenways parking lot (which is planned to accommodate horse trailers to allow equestrian use of portions of the trail) to the equestrian trail loop, and if a north-south shared use trail in the vicinity of Waimea Civic Center connected these trails to the Old Government Road, a longer loop would be possible.

It is also recommended that the Old Government Road (that extends behind Imiola Church and runs along until it reaches behind Pu'u Kakanihia and follows down Lanimaomao Stream, exiting out near the Kamehameha Schools Preschool) be cleared of vegetation and considered as a multi-purpose trail.

Nino Walker's Paths in the Country Map – This map shows one way to create an alternative access to the Waipio Rim Trail that was lost when the White Road Trail was closed. The trail could follow the perimeter of Anna Ranch or the State parcel north of town. A number of possible trail alignments are suggested within Waimea town.

Existing utility pole easements are potential trail systems that already exist and with minimal improvement could become long linear recreational facilities, for hiking, horseback riding and bicycling. The conceptual Kapuni O Hawai'i trail paralleling Queen Ka'ahumanu Highway along the utility pole line, as well as the one makai of Māmalahoa Highway are examples. Steps should be taken in the initial phasing of the bike/pedestrian network to include these rights of way where ever possible.

A pedestrian/bike/horse bridge across Waikoloa Stream would be provided on State property to connect the Kapiolani/Spencer/Hokuula/Lindsey loop (which is already used by pedestrians, bike riders and equestrians) to the rest of the shared use network via Church Row. Portions of one or both of State lots 6-5-004-015 and 6-5-004-079 could serve as trail head parking lots and/or community gardens. Parker Ranch lot 6-5-004-099 would have to be crossed, but crossing might be possible within a drainage easement.

The widening of the shoulder area along the Kohala Mountain Road to allow for bicyclists should also be considered as a future project. Currently, the road is already used by many bicyclists.

Implementation of many of the ideas presented above would require the cooperation of South Kohala land owners.

Strategy 5.5 Implement short-term traffic mitigation improvements in and around Waimea Town Center – The “*Draft Waimea Traffic Circulation Study*” by the engineering company PB Americas provides recommendations on relatively near-term improvements that could be implemented to lessen the severity of peak hour traffic congestion in Waimea Town Center. These improvements include widening a section of Māmalahoa Highway from 2 lanes to 4 lanes, and improvements to the main intersection of Māmalahoa Highway/Lindsey Road/Kawaihae Road.

Some community members have gone on record criticizing the study for lack of understanding of Waimea’s unique history and “country town” character. Specifically, some people have strongly opposed any widening of Māmalahoa Highway near the town center from 2 lanes to 4 lanes. The suggested alternate action is “changes in travel habits” rather than road widening. For example, starting time for (some) schools and/or some places of employment both in Waimea and in the Resorts might significantly alleviate traffic congestion during peak hours – although changing starting times for schools to a later time may result in schools ending at the same time as the afternoon peak traffic conditions.

There were community concerns about other plan details. However, the plan was recently submitted to the County as a “final” plan with no changes. Safe routes to school programs that encourage bicycling and walking to school will alleviate a percentage of morning traffic and should be part of a comprehensive traffic mitigation plan for Waimea Town Center. This includes sidewalk, cross walk improvements, crossing guards, pedestrian and bicycle education in schools, “Walking Bus” programs, and “Bicycle Train” (adult supervised bicycling to school programs.) The County needs to work closely with the Waimea community as elements of this plan are designed and implemented.

Strategy 5.6 Design and construct the Parker Ranch Connector Road – Parker Ranch and the County of Hawai’i recently reached an agreement regarding design and construction of the “Parker Ranch Connector Road.” This much needed road would extend from Kamamalu Street in east Waimea to Māmalahoa Highway just north of the Parker Ranch racetrack and rodeo grounds. Regarding the intersection of this Connector Road with Māmalahoa Highway to the east of Waimea Center: the North Hawai’i Hospital has gone on record opposing any intersection that would require the Connector Road to be constructed in close proximity to the Hospital’s eastern boundary. The North Hawai’i Hospital has also stated that the bypass **should not be** constructed on hospital property. Construction of this road would allow traffic between East Hawai’i and Māmalahoa Highway south to avoid the congestion of Waimea Town Center. The estimated cost of the road is \$15 million, and the estimated completion date is 2010. Engineering design work for the project is to proceed in early 2008. Details of the multi-purpose path that will parallel the new road have yet to be finalized.

Strategy 5.7 Design and construct the Lālāmilo Connector Road – This proposed road would extend from the Parker Ranch Connector/Māmalahoa intersection to Kawaihae Road in the vicinity of the existing County solid waste transfer station. Construction of this road, together with completion of all three Phases of the Parker Ranch Connector Road, could potentially allow traffic between Waiaka and Pu’ukapu to circumvent the Waimea Center. The estimated cost is over \$9 million, and the road would be financed and maintained by the County. As of January 2008, the Environmental Assessment and detailed design work for this project was “on hold” pending finalization of the “*Waimea Traffic Circulation Study*.” Of special concern is the State Department of Agriculture’s recommendation of “800 feet and preferably greater than 1,000 feet distance from

the Farm Lots” between this proposed road and the existing Lālāmilo Farm Lots, and in particular an organic farm that would be adversely affected by the new road. Bicycle facilities and pedestrian paths should be included in the design of this road.

Strategy 5.8 Work with the State Department of Transportation to resolve the best alignment for the proposed Waimea/Kawaihae Road Bypass Highway – This major state highway project has been studied and debated for some thirty years. This Bypass Highway would be a major regional arterial 2-lane highway that would provide a new route for traffic between East Hawai’i and Kawaihae Harbor. The most recent proposed alignment for this road in the vicinity of Waimea extends from near the Mud Lane/Māmalahoa Highway intersection, through the upper sections of the DHHL Pu’ukapu Homesteads, through Parker Ranch lands just north of the Waimea Airport, across Māmalahoa Highway south, and then south of the Lālāmilo Farm Lots and the Waimea Field System.

There appears to be a strong community consensus that this highway must be built and that it is absolutely critical not only to the preservation of the culture and character of Waimea Town, but to the safety and convenience for all the residents and businesses of East, North, and West Hawai’i and would clearly solve the current as well as the future ills facing the traffic through Waimea Town. Much community input has indicated that the alignment should be south of, rather than north of, the Airport (see page 62). Some community members have commented that the entire alignment of this road in the vicinity of Waimea as proposed by the State is not acceptable, and that the alignment should be farther south of Waimea Town (see Figure 4.4). Also, some members of the local Hawaiian community are opposed to any highway construction within Pu’ukapu Homesteads. An “Environmental Impact Statement” for this project has been “in the works” for approximately 10 years. Actual design and construction of this bypass highway may take another 10 years or more. Any plans for this Bypass Highway should include designation of this road as a “Scenic Highway” with appropriate controls on future development of lands with highway frontage. Adequate right-of-way width to include future widening and bike lanes should also be included in the design of the road.

4.3 ACTION PROGRAMS FOR WAIMEA

4.3.1 ACTION PROGRAM – “PROTECT THE PU’U OF WAIMEA”

The Need for Action

The green *pu’u* above Waimea Town and their associated sloping acreage have great cultural, historical, ecological, and visual importance for the community. Together with the grand views of Mauna Kea to the southeast of the town, the *pu’u* define the special landscape “sense of place” of Waimea. The *pu’u* are also important spiritual and resource areas for Waimea’s Native Hawaiian people.



Many of these *pu’u* have been used as grazing lands for generations, while some are forested. These *pu’u* and their associated lands are of vital importance to the health of the Waimea watershed. Generally, by “protection of the *pu’u*” the CDP means continuing pasture and forest use of the *pu’u* and not allowing residential or commercial development.

The *pu’u* that most strongly define the *mauka* landscape of Waimea are the large, green pastureland *pu’u* that are located outside of the State’s Forest Preserve area. Moving from west to east, these *pu’u* are:

Table 4.3 Pu'u in Pastureland

| PU'U NAME | ELEVATION | TMK NO. | TMK ACREAGE | OWNER |
|------------------|------------------|----------------|--------------------|------------------|
| KAMOA | 3,439 | 362001005 | 247 | State of Hawai'i |
| LANIKEPU | 3,442 | 362001008 | 895 | Parker Ranch |
| LAELAE | 3,665 | 5 TMK's * | (see note below) | (see note below) |
| HOKU'ULA | 3,377 | 365001020 | 420 | State of Hawai'i |
| OWAOWAKA | 3,449 | 365001020 | 420 | State of Hawai'i |
| KI | 3,201 | 365001020/03 | 420+37 | State of Hawai'i |

*Note: Pu'u Laelae is located at the junction of five (5) TMK's: 06 (State of Hawai'i), 08 (Parker Ranch), 10 (DHHL), 11 (DHHL) and 19 (DHHL). Open pasture lands downslope from this *pu'u* summit, TMK 14, are owned by the Anna Ranch Trust. Sloping lands associated with the *pu'u* above Hawai'i Preparatory Academy are owned by the Academy.

Other important *pu'u* in the area include a number of forested *pu'u* located within the State Forest Reserve:

- Pu'u Pelu Elevation 3,750 (feet above MSL)
- Pu'u Ohu Elevation 3,934
- Pu'u Iki Elevation 3,768
- Pu'u Haloa Elevation 4,084
- Pu'u Ka'ala Elevation 3,985
- Pu'u Lala Elevation 3,200

Given their location in the State Forest Reserve area, these *pu'u* are not at risk of being subdivided or developed.

There are also several small *pu'u* that are located within the small ag/ranch lots area of East Waimea:

- Pu'u Kakaniha Elevation 3,157
- Pu'u Maile Elevation 3,625
- Pu'u Manu Elevation 3,635

And some isolated *pu'u* located south of Waimea, including:

- Pu'u Pa / Huluhulu Elevation 2,687
- Pu'u Holoholo Ku Elevation 3,263

The state-owned parcel that contains three of the most important *pu'u* of Waimea (parcel 20) was recently "downzoned" by the County Council, with the concurrence of the State DLNR, from Ag-1a and Ag-5a to "Ag-400" – a zoning designation that will prevent the land from being divided up into small ag lots.

An overall protection plan is now needed for the other important *pu'u*. and their associated pasture lands and forests. Of most concern are the *pu'u* that are the first three pastureland *pu'u* identified in the Table above – Pu'u Kamoia, Pu'u Lanikepu, and Pu'u Laelae. In a "worst case" scenario, these *pu'u* and their associated lands would some day be subdivided and developed as houselots. The visual and environmental impact of developing these steep, scenic, and historic lands would be huge.

The overall **Pu'u Protection Plan for Waimea** can include a number of strategies, including the following:

- Strategy 1.1. Acquire conservation easements**
- Strategy 1.2. Require a Use Permit for Grading on Steep Land**

Details and proposed “Action Programs” for these strategies are provided on the following pages.

Strategy 1.1 Acquire Conservation Easements for Critical *Pu’u* Parcels

Overview

Acquisition of the fee interest of a property – by the County or by a non-profit land trust – would provide the higher level of control, but would also be the more expensive type of action. Purchase of a Conservation Easement would give the purchasing entity a limited level of control over future uses of the parcel, but would be less costly. Purchase of a conservation easement would also be more appropriate if the parcel’s owner intends to continue using the parcel for ranching.

Generally, the purchase of a conservation easement for a given property would mean that the property cannot be developed for residential, commercial, industrial, or institutional uses, and that the use of the property shall remain agricultural and/or open space.

The conservation easement strategy would be feasible for privately owned *pu’u* lands, but would not be applicable to DHHL lands, which are held in trust by DHHL for the benefit of native Hawaiian people.

The **Action Program** for the acquisition of conservation easements on critical *pu’u* parcels can be summarized as follows:

- **Who should take the lead?** Waimea-based open space subcommittee of the South Kohala “CDP Action Committee,” which is the community-based entity that will be the successor to the Steering Committee; with assistance from the County Planning Department; the County Public Access, Open Space, Natural Resources Preservation Commission; and the Hawai’i Island Land Trust (HILT)
- **What needs to be done?** Meet with owners of critical privately owned *pu’u* parcels “one on one” to find out if they are willing to negotiate a conservation easement for the parcel(s). These meetings could include “land owner education” on the tax benefits and other benefits of establishing conservation easements. For willing land owners, proceed with appraisals of the value of a conservation easement, and negotiate a fair price. Seek acquisition funds from the County and/or from the HILT and/or from wealthy donors residing in the Waimea area. Implement the acquisition process, including final negotiations, funding, finalizing a purchase and sale agreement, and a formal closing. Note: some land owners may be willing to donate a conservation easement to the County in order to receive tax benefits.
- **When should actions be initiated?** Initial discussions with land owners can begin as part of the CDP process. Details and a start on actual acquisitions can be pursued after the South Kohala CDP has been enacted.

- **How much will it cost?** The cost of an acquisition program of this kind can be quite high. For example, if the program results in the acquisition of 1000 acres of conservation easements at a cost of \$10,000 per acre, the cost would be \$10,000,000 – not including costs for appraisals, attorneys’ fees, closing costs, and other related expenses. To put these costs in perspective, however, we should keep some of the following numbers in mind:
 - The County of Hawai‘i is setting aside 2% per year of County real property tax revenues in the County’s open space acquisition fund. This percentage currently equates to about \$4,000,000 per year.
 - The Hawai‘i Island Land Trust, first formed in 2004, may eventually be able to raise enough money to fund annual acquisitions of \$1,000,000 or more.
 - In 2007, 1160 acres of open space lands at Pūpūkea-Paumalū on O‘ahu were acquired by the North Shore Community Land Trust (NSCLT). Funding for this acquisition - \$11.5 million – was provided by a coalition of public and private entities, including the U.S. Army, the State legislature, the City and County of Honolulu, the Trust for Public Lands, and the NSCLT)

General conclusion: an open space acquisition program costing in the millions of dollars is expensive, but can be done if the lands in question are important enough. For the “preservation of the Waimea’s sense of place,” the preservation of the green, historic, culturally important *pu‘u* of Waimea is of critical importance.

- **Intended Outcome:** Preservation of the *pu‘u* of Waimea as open space for ranching, forestry, and watershed protection in perpetuity.

Strategy 1.2. Require a Use Permit for Construction on Steep Slopes

Overview

Construction of buildings, roads, and associated structures on steep slopes of over 25 percent often results in significant increases in storm water runoff, soil erosion, and siltation of streams and near shore waters. Homes built on steep slopes have experienced foundation failures, with resulting costly structural damage and injury to the occupants.

The County Planning Department could control construction on steep slopes including construction on otherwise unprotected *pu‘u* or *pu‘u* related slopes by requiring a use permit for proposed grading and construction on any parcel where the average slope of the land is greater than 25 percent. This requirement would include any proposed construction on the steep sides of *pu‘u* and gulches. The use permit requirement would include a requirement for a public hearing on the proposed use. The use permit could be denied if the proposed construction was found to have potential significant negative impacts on the natural and/or visual environment. The permit could also direct the owner to avoid building on steep slopes if there is a less steep building site available on the parcel.

- **Who should take the lead?** Hawai‘i County Planning Department
- **What needs to be done?** Develop appropriate language requiring a use permit for construction on steep slopes, and proceed with the process for amending the Zoning Ordinance.
- **When should actions be initiated?** The Planning Department can move ahead with this Zoning Ordinance amendment in the near future.
- **How much will it cost?** Costs will be primarily staff time and the cost of notifying the public of the proposed Zoning Ordinance amendment.

- **Intended Outcome:** The Planning Department will then have better regulatory tools to control construction activities on steep slopes, including any proposed construction on the scenic and culturally important *pu'u* of Waimea.

4.3.2 ACTION PROGRAM – ACQUIRE CRITICAL OPEN SPACE AREAS IN EAST WAIMEA

The Need for Action

Some of the privately-owned *pu'u* lands of Waimea may need to be acquired – either by the County through the recently formed Open Space Commission or by a non-profit entity like the Hawai'i Island Land Trust.

Also of great importance to the rural and *paniolo* character of Waimea are the visually important small farm lots and ranch lots in East Waimea. Some of these parcels may also be priorities for acquisition in order to preserve their use for farming and ranching – either fee purchase or acquisition of conservation easements.



Open pasture land in East Waimea

From Mud Lane to Church Row, and not including DHHL lands or large parcels that are more or less “country estate” parcels with large homes, there are approximately 40 small farm and ranch parcels 10 or more acres in size in this area that front onto Māmalahoa Highway, and that are still “intact” and in some form of open space – e.g., that have not been subdivided and developed for residential purposes. The “view from the road” driving into Waimea from the east (from Honoka’a) is thus still rural in nature, with grazing horses, sheep, and cattle, woodlots, and small farm fields dominating the view.

For some years, however, the trend for these rural lots in east Waimea has been subdivision actions and/or sale of a parcel and development of expensive homes. A major impediment that discourages the continued use of these lands for agriculture is the heavy traffic on Māmalahoa Highway, especially during peak morning and afternoon commute times. Farmers often must transport slow moving agricultural equipment and products on the highway, which is extremely hazardous during these periods of the day. Potential new farmers, as well as the remaining farmers, consider this condition a deterrent to expanding their operations by seeking more land to lease or purchase in this area.

It is important to note a couple of distinguishing features between the agricultural lands in east Waimea and those in the Lālāmilo Farm Lots. First, east Waimea agricultural lots have been farmed since the era leading up to World War I, whereas the Lālāmilo Farm Lots were first awarded in the 1960s. Second, traffic problems do not exist yet in the Lālāmilo farm lots because it is a concentrated agricultural subdivision that was constructed away from the town center with the express intention of keeping it isolated.

Acquisition of the fee interest or of conservation easements for several critical open space parcels may be possible. Of course, the constraint for this strategy is the availability of acquisition funds.

For those parcels that are being proposed for rezoning by the owner – say from A-40a (40-acre minimum lot size) to A-5a (5-acre minimum lot size) – an alternate strategy would be to work with

the parcel owner and agree to rezoning a portion of the parcel to RS-20 or RS-10 to accommodate a reasonable number of lots, and downzone or place an agricultural easement on the rest of the property. This strategy would be a sort of “internal Transfer of Development Rights” (TDR).

Strategies to consider for the preservation of some of the small farms and ranches thus include:

Strategy 2.1 – Acquisition of Fee Interest or of Conservation Easements

Strategy 2.2 – Internal TDR

Strategy 2.1 – Acquisition of Fee Interest or of Conservation Easements

Overview

Acquisition of the fee interest of a property – by the County or by a non-profit land trust – would provide the higher level of control, but would also be the more expensive type of action. Purchase of a Conservation Easement would give the purchasing entity a limited level of control over future uses of the parcel, but would be less costly. Purchase of a conservation easement would also be more appropriate if the parcel’s owner intends to continue to live on the property and continue using the parcel for farming or ranching. Acquisition of the fee interest would be the better approach for those small farmers and ranchers who need retirement funds.

Generally, the purchase of a conservation easement for a given property would mean that the property cannot be developed for residential, commercial, industrial, or institutional uses, and that the use of the property shall remain agricultural and/or open space.

Based on recent sales of some of the parcels in East Waimea, a 40-acre farm or ranch lot might sell in 2008 for about \$2,000,000. The alternative Conservation Easement cost for the 40-acre parcel might be about 1/2 that amount, or about \$1,000,000.

A further alternative might be the purchase of a conservation easement for only a portion of the parcel – e.g., that portion of the parcel that is most visible from Māmalahoa Highway. For example, if a typical 20-acre parcel is about 400 feet wide by about 2200 feet deep, a conservation easement on the highway frontage section of the parcel measuring 400 feet wide by 1000 feet deep would still provide for a significant amount of open space at a cost of perhaps about 50% of the cost of a conservation easement for the entire parcel.

The **Action Program** for the acquisition of the fee interest or of conservation easements for selected parcels in East Waimea would be similar to the Action Program for the purchase of conservation easements for the *pu’u* parcels, and can be summarized as follows:

- **Who should take the lead?** Waimea-based open space subcommittee of the South Kohala CDP Community Action Committee, with assistance from the County Planning Department, the County Open Space Commission, and the Hawai’i Island Land Trust (HILT)
- **What needs to be done?** Create a detailed map and list of open space parcels, together with notes on their current use and owners. Meet with owners “one on one” or in small groups to find out if they are willing to or planning to or in need of selling their land – either the fee interest or a conservation easement. Set approximate purchase prices and designate one or more parcels as the highest priority for acquisition. Seek acquisition funds from the County and/or from the HILT and/or from wealthy donors residing in the Waimea area. Implement the acquisition process, including appraisals, negotiations, funding, finalizing a purchase and sale agreement, and a formal closing.

- **When should actions be initiated?** Initial discussions with land owners can begin as part of the CDP process. Details and a start on actual acquisitions can be pursued after the South Kohala CDP has been enacted.
- **How much will it cost?** The cost of an acquisition program of this kind can be quite high. For example, if the program results in the acquisition of 100 acres in fee simple at a cost of \$50,000 per acre = \$5,000,000 plus 400 acres of conservation easements at a cost of \$25,000 per acre = \$10,000,000 over a 10-year period, total 10-year costs could easily be \$15,000,000 or more – not including costs for appraisals, attorneys’ fees, closing costs, and other related expenses. To keep these costs in perspective, however, we should keep in mind the funding sources and conservation precedents that are noted for the Strategy 1.2. Acquire Conservation Easements for Critical *Pu’u* Parcels, above.

General conclusion: an open space acquisition program costing in the millions of dollars is expensive, but can be done if the lands in question are important enough. For the “preservation of the Waimea’s sense of place,” the East Waimea small farms and ranches are of critical importance.

- **Intended Outcome:** Preservation of most of the remaining small farms and ranches in East Waimea as open space for farming and ranching.

Strategy 2.2 – Internal Transfer of Development Rights

Overview

During the CDP process, there has been considerable interest in and discussion of the concept of “Transfer of Development Rights” (TDR). This planning/development concept is used in many U.S. mainland communities. In a typical transaction, a developer purchases the development rights for “Farmer A’s” 200-acre farm that has A-5a zoning = development potential for about 36 5-acre lots (assuming 10% of the land for roads and other infrastructure). The developer is then allowed to “transfer” the “development rights” for the 36 units to a “receiving site” – say a 50-acre site near town zoned RS-10. The developer is allowed to increase the density of his development by 36 units without having to go through a rezoning process to be permitted the higher density. Farmer A’s land can no longer be subdivided and developed and the developer’s project near term is more profitable.

The proposed “internal” TDR strategy for some of the small farms and ranches in East Waimea would involve the Planning Department working with the parcel owner to work out an agreement whereby a portion of the parcel would be rezoned to RS-20 or RS-10 to accommodate a reasonable number of lots, and the remainder of the parcel would be downzoned or restricted by means of an agricultural easement or conservation easement.

- **Who should take the lead?** Hawai’i County Planning Department
- **What needs to be done?** The Planning Department can begin discussions with the owners of priority parcels. Rezoning from Ag zoning to Residential zoning will also require a change in State Land Use designation from “Agricultural” to “Urban,” but this change can be accomplished through a County Special Permit/County Council action if the parcel to be rezoned is less than 15 acres.
- **When should actions be initiated?** This program for internal TDR’s could be initiated at any time, and could be applied to several rezonings of East Waimea lands that are currently being proposed.

- **How much will it cost?** The cost to the County will be mainly Planning Department staff time.
- **Intended Outcome:** A number of critical East Waimea open space and farm areas will be preserved and protected in perpetuity, and, at the same time, the parcel owner will be able to create a number of residential lots for use by family members and/or for sale to others.

4.3.3 ACTION PROGRAM – AFFORDABLE HOUSING FOR WAIMEA

The Need for Action

Throughout the “Community Readiness Program” (CRP) and the Community Development Plan (CDP) process, the theme of **AFFORDABLE HOUSING** was discussed by the community many times and with great urgency.

The state-wide real estate market surge from about 2002 through 2006 resulted in a 100% or more increase in house prices in many communities, including Waimea. By the end of 2006, the median price for a new 3-bedroom single family house in Waimea was about \$800,000 – well beyond the means of most local families, even with both husband and wife working full time. As has been the case for many established Hawai’i communities, the people of Waimea found that their young families could no longer afford a home there, and many older couples were struggling to pay their inflated real property taxes.

There are no easy answers to the affordable housing needs – of Waimea, or of Hawai’i County, or of the State of Hawai’i. Even without the impacts of the recent real estate market surge, land and labor and materials are expensive in Hawai’i, and there is little incentive for private developers and contractors to build affordably priced for sale or rental units.

For Waimea, the “land” part of the equation may be solvable to some extent. There are a number of State-owned parcels in or near Waimea that could potentially be developed for affordable housing. In addition, as some of the need for affordable housing is for employees of beneficiaries of Parker Ranch Trust – e.g., teachers at Hawai’i Preparatory Academy and at Parker School, and staff of the North Hawai’i Hospital – Parker Ranch may be able to provide land for affordable housing at a low cost.

For the Waimea community and its affordable housing needs, the most useful tools or strategies may be:

Strategy 3.1 Self-Help Housing

Strategy 3.2 Non-Profit Housing Development Corporation or similar entity

Strategy 3.1 Self-help housing

Overview

The Hawai’i Island Community Development Corporation (HICDC), with offices in Hilo, develops self-help housing projects throughout Hawai’i County.

The mission of HICDC is to provide low income families with housing opportunities. The organization provides technical assistance to participants in self-help housing programs and assists

families in applying for loans from USDA Rural Development. HICDC also develops housing for low income senior citizens.

HICDC is currently developing plans for two affordable housing projects in North Kohala:

- Kamakua Self Help Subdivision – 22 self help homes on 7,500+ sf lots on a 16-acre site near Kohala High School. The 15-acre makai portion of the 31-acre property could be developed as a “phase 2” project.
- Ainakea Senior Residences – 30 1-bedroom, 1 bath units for senior citizens 62+ years of age and with incomes at 50% of area median income. Construction scheduled to start in June 2008.

The Waimea community could establish an ongoing Self-Help Housing Construction Program that would provide 10 to 20 homes per year for at least the next 10 to 20 years. Although these numbers are not very large, the construction of 100 to 200 affordable homes per decade would still be a significant achievement, and would certainly help both young and old to live affordably in their own town.

- **WHO will take the lead?** The South Kohala CDP Action Committee will have an ongoing role for the implementation of the CDP, including the implementation of affordable housing programs. A subcommittee of the Action Committee can work with HICDC and with the County Office of Housing and Community Development (OHCD) to establish an ongoing self-help housing program for Waimea.
- **WHAT needs to be done?** Work with the Hawai'i Island Community Development Corporation (HICDC) to establish an ongoing self-help housing program for Waimea.
- **WHERE will actions take place?** State-owned parcels in and near Waimea may have potential as affordable housing sites. In addition, Parker Ranch may be able to provide land at a nominal cost if employees of Parker Ranch Trust beneficiaries are given preferential status for the purchase or rent of affordable units that would be constructed on that land.
- **HOW MUCH will self-help housing cost?** For a small (10-20 lots) subdivision with 7,500 sf lots, and assuming conformance to current County subdivision standards, and assuming building a new subdivision, the cost of land plus grading, roads, drainage, and utilities (“infrastructure”) will be in the range of \$100,000 to \$150,000 for each house lot. Costs would be lower if land costs are nominal. For a “self-help” constructed home of 1,100 square feet, the cost of materials and contractors for foundations, plumbing and electrical work will be about \$120,000, not including the value of the “self-help” labor. So: total cost for a self-help home could be in the range of \$220,000 to \$270,000 for self-help homes in a new subdivision.
 - **Intended Outcome** - If an average of 10 to 20 moderately priced self-help homes can be constructed every year for the next ten years, there would be a total of 100 to 200 new affordable homes created in Waimea.

Strategy 3.2 Non-profit housing corporation(s)

Overview

There are a number of non-profit corporations in Hawai'i that are focused on the development of affordable housing.

In 2006, the County's Office of Housing and Community Development (OHCD) and others were instrumental in forming a new “501c (3)” non-profit entity called the “Hawai'i Island Housing Trust.

(HIHT).” The mission of HIHT is to plan, finance, and construct affordable housing projects, including “workforce housing projects,” in areas of the County where there is the greatest need.

HIHT is designed to create a number of subsidiary entities, each of which would be a “single member Limited Liability Corporation (LLC)” that would also have tax-exempt status under the 501c (3) certification of HIHT. Each LLC would be the “developer” of a particular housing project.

HIHT’s first project will be the “Kamakoa at Waikoloa Village” workforce housing project. The master plan for this ambitious project calls for the construction of 800 for-sale homes and 400 rental units, plus parks, a community center, a daycare center, and a site for a future elementary school.

For sale homes will be comparable in quality to “market homes,” but will be priced to be affordable to families earning 80% to 140% of the area median income, which in 2007 was about \$57,000 for a family of 4 persons. In 2007 dollars, that would mean that homes would be priced from about \$235,000 to \$385,000, and rents will be from about \$800 to \$1100 a month.

The “For Sale” homes do not include sale of the land; each home buyer will receive a sub-lease for their building lot. Prices for the homes and apartments are to remain affordable “in perpetuity.”

One of the major challenges for affordable housing projects is **financing**: how to design a financing plan that will provide construction financing and “permanent” financing at the lowest possible cost. For the Kamakoa project, the primary financing sources may be summarized as follows:

- Initial planning funds: from the County’s Affordable Housing Revolving Fund
- Infrastructure financing: from County General Obligation (GO) Bond funds and from Tax Exempt Bonds that will be issued through a “Community Facilities District” (CFD), a new entity that will be created for this purpose;
- Vertical (housing construction) financing: from Tax Exempt Revenue Bonds.
- Home mortgage loans for home buyers: special “below market rate” loans guaranteed by the quasi-public national home loan corporation known as “Fannie Mae.”

These financing tools collectively, together with the “Land Trust” land lease structure, lower the price of the for-sale homes to about 60% to 70% or less of the price of a market home. Thus, for example, a \$300,000 home in the Kamakoa project would sell for about \$430,000 to \$500,000 if it was located elsewhere in Waikoloa Village.

A subsidiary LLC of HIHT could be created to develop affordable housing projects for Waimea. There could be one LLC that could develop a number of sites, or alternatively there could be several LLC’s each of which would develop a specific site. Alternatively, a new non-profit entity could be affiliated with HIHT for the purposes of developing affordable homes and rental apartments for Waimea. A second alternative would be to establish a Waimea affordable housing entity that would be affiliated with HIHT but that would NOT need its own 501(c) 3 certification, per IRS rules for what is called “Group Exemptions.” The IRS sometimes recognizes a group of organizations as tax-exempt if they are affiliated with a central (non-profit) organization. (See IRS Rev. Proc. 80-27, 1980-1 C.B. 677). A third alternative would be to create a separate Waimea Housing Non-Profit.

At least for the first several projects, new affordable housing projects for Waimea should probably be relatively small in size: perhaps in the range of 20 to 30 units. Smaller projects would fit better into the fabric of the existing community, and would also be easier to bring on line in a reasonable timeframe. Note that planning for the Kamakoa project began in early 2004, and the project will (finally) begin site construction work in mid 2008 – a planning/design period of 4+ years. The first

homes will not be ready for occupancy until late 2009 – nearly 6 years after planning work began. Large projects require large land areas and large amounts of time to plan and design!

The LLC (or similar Waimea-based entity) would own the land, and home buyers would lease their lot for a nominal amount. Homes would be kept affordably priced **in perpetuity** through deed restrictions that limit price appreciation, and through a requirement that any future sale of a home would have to be to the LLC.

This strategy would thus be to create a non-profit housing development organization (or similar entity) for Waimea that will develop affordable for-sale and rental housing to meet the needs of the Waimea community.

- **WHO will take the lead?** The South Kohala CDP Action Committee should have an ongoing role for the implementation of the CDP, including the implementation of affordable housing programs. A subcommittee of the Action Committee can work with HIHT and with the OHCD to establish the Waimea Affordable Housing LLC or some similar entity.
- **WHAT needs to be done?** Work with the HIHT Board of Directors and the County Office of Housing and Community Development (OHCD) to create an LLC subsidiary or similar entity to develop affordable housing for Waimea. Some of the more detailed tasks include the following:
 - Create and organize the Waimea Affordable Housing Entity: articles of incorporation, bylaws, board of directors, policies and procedures, etc.; seek and obtain initial seed money
 - Tentative selection of a project site or sites,
 - Initial project planning and financial proforma, potentially funded by the County's Affordable Housing Revolving Fund.
 - Proposal to County Council for General Obligation (GO) Bond financing for land acquisition, design, and possibly for some of the infrastructure costs.
 - County Council approval of GO Bond financing for land acquisition and (?) some of the infrastructure costs.
 - Designation of the project site as a "201H experimental affordable housing project."
 - Design and implement financing program for infrastructure and vertical construction.
 - Design and construction of infrastructure and homes. Note: the project could include some "self-help" homes and/or "owner-builder" homes.
 - Marketing and sale of the homes.
- **WHERE will actions take place?** Potential sites for the development of small affordable housing projects in Waimea will need to be identified. Sites within walking distance of Waimea Town Center should be given priority.
- **HOW MUCH will it cost?** Use of the "land trust" land lease model, together with restrictions on appreciation of house values and creative financing can result in sales prices

and rent prices that are significantly below area “market” prices. For Waimea, that could mean, for example, a new 1,100 square foot home on a 7,500 square foot lot might sell for \$250,000 to \$300,000, and a 400 sf 1-bedroom rental apartment might rent for \$600 to \$800 per month.

- **Intended Outcome:** Once organized, up and running, the Waimea Affordable Housing Entity could conceivably develop 20 or more units per year. At this production rate, the Entity could build about 200 or more units over a 10 year period – which would meet a significant amount of the demand for affordable homes.

4.3.4 ACTION PROGRAM – WALKWAYS AND BIKEWAYS FOR WAIMEA

The Need for Action

There is a critical need to plan, design, and construct walkways and bikeways within the existing rights of way of the main Waimea Roads: Kawaihae Road and Māmalahoa Highway.

Except for sidewalks for a few blocks within the center of Waimea Town, there are no walkways or bikeways along the major roads that can be used by pedestrians and bicyclists, including children walking to and from school.

Constructing safe bikeways and walkways along Māmalahoa Highway and Kawaihae Road would provide people with alternatives to travel by car, and would thus potentially alleviate to some degree the peak hour traffic jams that now characterize Waimea.

The typical right-of-way of the main roads leading into and out of Waimea is 50 to 60 feet in width, and the average paved roadway, including travel lanes and a narrow paved shoulder, is about 26 feet. (See map showing rights-of-way widths.) Thus, there is typically about 24 feet of right-of-way, or an average of 12 feet on each side, that is available for walkways and/or bikeways. These dimensions will of course vary, depending on specific site conditions including drainage ditches, slope conditions, adjacent land uses, and the need for left turn lanes at major intersections.

See **Appendix G** for illustrative cross-sections for several “typical existing conditions” for both Māmalahoa Highway and Kawaihae Road, followed by “conceptual walkway and bikeway” cross-sections that illustrate possible widths and locations for permanent walkways and bikeways along these roads.

It should be noted that the pedestrian and bicycle advocacy non-profit known as “PATH” (Peoples Advocacy for Trails Hawai‘i) has proposed that the County adopt a “shoulder stabilization” strategy with future maintenance projects – e.g. extending the new pavement an additional +/- eight feet on both sides of the road to provide a shared use shoulder that would create additional surface for walking, bicycling, emergency breakdown, bus pick up. “Shoulder Stabilization” should be funded with “shoulder preparation” funds that allow for preparation of the shoulder (e.g. grading, grubbing) prior to repaving. PATH and other organizations point out that while this is not considered the ideal treatment for the shoulder (sidewalks and where possible separated shared use paths are far superior to create safe walkways); this treatment uses the existing in-house resources of the Department of Public Works to at least maintain the shoulder for use. This strategy has recently been implemented for the Kawaihae Road repaving project.

Strategy 4.1 Walkways and bikeways for Waimea

The **Action Program** for planning, design, and construction of walkways and bikeways along Waimea’s main roads may be described as follows:

- **Who should take the lead?** Waimea-based walkways/bikeways subcommittee of the South Kohala Community CDP Action Committee, with assistance from the County Planning Department, the County Department of Public Works, the State Department of Transportation, and PATH.
- **What needs to be done?** Receive review and input from the Waimea community on these walkway/bikeway ideas during the implementation of the CDP, including input on phasing the design and construction work. Agree on a “Phase 1” length of walkway/bikeway for early implementation. Soon after enactment of the South Kohala CDP, present a request to County Council for funding of the survey work and design for Phase 1, with the understanding that construction funds will be requested in the following year. Contract for (perhaps through PATH) the survey and design work, and do the work. Put together the request to County Council for construction funds. Receive construction funds and contract for the work. Do the construction work and proceed with design and construction of subsequent phases.
- **When should actions be initiated?** Phasing of the bikeways and walkways should be decided by the CDP Action Committee. A funding request for design and survey work for Phase 1 can be submitted as part of the FY 2009/2010 County CIP program.
- **How much will it cost?** Order of magnitude cost estimates developed as part of the South Kohala CDP work were as follows: “for one mile sections of roadway with improvements on both sides of the road”

| | |
|---------------------------|-----------|
| Curb and Gutter | \$550,000 |
| 5’ wide asphalt bike lane | \$250,000 |
| 5’ wide concrete path | \$300,000 |
| 5’ wide asphalt path | \$200,000 |
| 5’ wide grass strip | \$200,000 |

Thus, if the “typical” bikeway/walkway configuration for the main roadways in Waimea is no curb/gutter, 5’wide bike lane both sides + 5’ wide grass strip both sides + 5’ wide asphalt path both sides, the cost per mile would be approximately \$650,000, or about \$123 per linear foot. These costs do not include topo survey, design costs, or construction management, which would add about 20% to the costs.

- **Intended Outcome:** Completion of a continuous walkway/bikeway system along Māmalahoa Highway from Mud Lane to Waimea Center and from Waimea Center to the vicinity of the Waimea-Kohala Airport; and along Lindsey Road/Kawaihae Road from Waimea Center to Hawai’i Preparatory Academy. The system, when completed, would total about 10 miles. The walkways and bikeways would provide Waimea residents with alternative, safe modes of circulation, promote healthy walking and bicycling, and alleviate traffic congestion and air pollution.

5 WAIKOLOA VILLAGE PLAN

5.1 CURRENT AND FUTURE PLANS AND DEVELOPMENTS

5.1.1 POPULATION

Table 5.1 Waikoloa Village Population

| 1990 | 2000 |
|-------|-------|
| 2,248 | 4,806 |

Source: US Census.

Based on building permit data from County files, it is estimated that the population of Waikoloa Village increased by about 2,000+ people between 2000 and 2007. By the end of 2007, the estimated population was thus about 7,000 people – an increase of over 200% in 17 years, and an average increase of about 280 people per year between 1990 and 2007.

5.1.2 LAND USE

Waikoloa Village is a rapidly growing community. Housing consists of single family homes and condominium units. House lots range from 7,500 square feet to 10,000+ square feet. Currently, Waikoloa Road is the only paved access road to Waikoloa Village from Queen Ka’ahumanu Highway and Māmalahoa Highway. The Waikoloa Shopping Center is located right off of Waikoloa Road at the southern end of the community. The shopping center includes a grocery store, gas station, and small shops and restaurants, and is the only commercial development within Waikoloa Village. The Waikoloa Village Golf course is also located at the southern end of the community. Residential subdivisions and town home condominiums are interspersed along the golf course’s edges. Because it is a young, growing community, Waikoloa Village does not yet have a hospital or medical clinic, community center, or major commercial centers. Given the rapid increase in residential units at Waikoloa, additional public facilities and commercial businesses are needed.

Paniolo Avenue is the main road that runs through the center of Waikoloa Village in a generally north-south direction. Located at the northern end of Paniolo Avenue is Waikoloa Elementary and Middle School and several community churches. Community churches that do not have building locations currently meet at the school, the golf clubhouse, or at a local restaurant. The Ho’oko Street Park is adjacent to Waikoloa Elementary and Middle School on the makai side of the school. The Waikoloa Community Park, the only other park in the village, is located between Pu’u Nani St. and Pu’u Nui St.



Paniolo Avenue fronting the Waikoloa Elementary and Middle School

There are several major developments that are planned in areas surrounding Waikoloa Village. Table 5.2 summarizes the planned build out of these projects (highlighted in gray) as well as the **potential** build out of other large-sized TMK parcels, given the current County Zoning for these parcels.

Figures 5.1 and 5.2 illustrate the General Plan LUPAG and County Zoning designations for Waikoloa Village and the surrounding area.

Table 5.2 Planned Build Out and Potential Future Buildout in Waikoloa Area

| TMK | Development Name | Owner(s)* | Acreage | County Zone | Planned Buildout | Potential Buildout | Status |
|-----------|------------------------|--|---------|----------------------------|--|--------------------|---|
| 368001006 | *** | Frank De Luz III Family Lmtd. Partnership | 100 | A-5a | *** | 17 units | *** |
| 368001024 | *** | TriKohala Development Company/ 1010 Puakō LLC | 661 | A-5a | *** | 112 units | *** |
| 368001037 | Villages of 'Āina Le'a | Bridge 'Āina Le'a LLC and Banter Inc. | 1,507 | A-5a; RA -1a | 2,406 residential units planned; 5 golf courses; 40-unit lodge; 234 acres of open space; 26 acres for parks; 5-acre red ilima preserve | | Completed 1 mi. of the Hulu St. emergency access gravel rd; completed grading of 25 acre shopping center; awaiting approval of Project District Zoning and UIC permit |
| 368001038 | | Bridge 'Āina Le'a LLC and Banter Inc. | 621 | A-5a; RM-4; RM-7; RM-14.5; | | | |
| 368001039 | | Bridge 'Āina Le'a LLC and Banter Inc. | 444 | A-5a; RM-4; RM-7; RM-14.5; | | | |
| 368001059 | *** | TriKohala Development Company/ Brillhante | 100 | A-5a | *** | 17 units | *** |
| 368001060 | *** | TriKohala Development Company/ 1010 Puakō LLC | 150 | A-5a | *** | 25 units | *** |
| 368002001 | *** | Waikoloa Mauka LLC | 1,170 | A-20a | *** | 49 units | *** |
| 368002002 | *** | Waikoloa Mauka LLC | 652 | A-20a | *** | 27 units | *** |
| 368002004 | *** | Waikoloa Prop. | 652 | A-20a | *** | 27 units | *** |
| 368002005 | *** | Waikoloa Inv. Land Tr. | 250 | A-20a | *** | 10 units | *** |
| 368002006 | *** | TriKohala Development Company/ Globe Corp. | 669 | A-20a | *** | 28 units | *** |
| 368002007 | *** | Pu uiwaiwa LLC | 400 | A-20a | *** | 17 units | *** |
| 368002008 | *** | Kilauea Trust I, JMP, RCP, JBP, KBP Education Trust(s), Waimea LTD Partnership | 343 | A-20a | *** | 14 units | *** |
| 368002010 | *** | Kilauea Trust I, JMP, RCP, JBP, KBP Education Trust(s), Waimea LTD Partnership | 741 | A-20a | *** | 31 units | *** |
| 368002011 | *** | Kilauea Trust I, Waimea Ltd. Partnership | 912 | A-20a | *** | 38 units | *** |

Table 5.2 Planned Build Out and Potential Future Buildout in Waikoloa Area (Continued)

| TMK | Development Name | Owner(s)* | Acreage | County Zone | Planned Buildout | Potential Buildout | Status |
|------------------|---|--|---------------|---------------|-----------------------------|--------------------|--|
| 368002012 | *** | Pu uiwaiwa LLC | 1,076 | A-20a | *** | 45 units | *** |
| 368002013 | *** | Pu uiwaiwa LLC | 803 | A-20a | *** | 34 units | *** |
| 368002015 | *** | Waikoloa Village Association | 1,690 | Open | *** | | *** |
| 368002016 | Waikoloa Highlands | Waikoloa Mauka LLC | 744 | RA -1a | 398 Units | 632 units | Final EIS Completed May 2007; Awaiting State LUC action on district amendment from Ag. to Rural |
| 368002016 | *** | Waikoloa Mauka LLC | 2,444 | A-5a | *** | 415 units | *** |
| 368002017 | *** | Waikoloa Mauka LLC | 2,153 | A-5a | *** | 366 units | *** |
| 368002019 | *** | Waikoloa Village Association | 4,908 | Open | *** | *** | *** |
| 368002022 | Waikoloa Heights | Waikoloa Heights Land Investors LP | 867 | RS-10 | 2,400 units. | 3,210 units | Phase I increment One Subdivision Approved |
| 368002026 | Waikoloa Workforce Housing Project | Hawai'i Island Housing Tr. & Waikoloa Workforce Housing LLC | 268 | RS-10 | 1,200 units planned. | 1,200 Units | Construction start June 2008 |
| 368002027 | Wehilani: Makane Kai | Castle & Cook | 256 | RS-10 | 756 units. | 1,115 units | Under Construction |
| 368002028 | *** | Waikoloa Inv. Land Tr. | 333 | A-20a | *** | 14 units | *** |
| 368002029 | *** | Waikoloa Inv. Land Tr. | 154 | A-20a | *** | 6 units | *** |
| 368002030 | *** | Waikoloa Inv. Land Tr. | 155 | A-20a | *** | 6 units | *** |
| 368002032 | *** | | 49 | | *** | 181 units | *** |
| 368002033 | *** | Waikoloa Village Association | 268 | Open | *** | | *** |
| 368002040 | *** | Waikoloa Dev, | 180 | RS-10 | *** | 666 units | *** |
| 368003032 | *** | Waikoloa Mauka LLC | 57 | Open & Rm-1.5 | *** | ? | Planned Shopping Center |
| TOTALS: | | | 25,776 | | 7160 | 8094 | |

*Based on information from Hawai'i County Real Property Tax Office. **BOLD** font indicates TMK parcels have received the necessary entitlements to develop. **Highlighted rows in gray**, in the table, indicates TMK parcels that are designated by the County LUPAG for Urban Expansion.

FIGURE 5.1: GENERAL PLAN LUPAG FOR WAIKOLOA VILLAGE AND SURROUNDING AREA

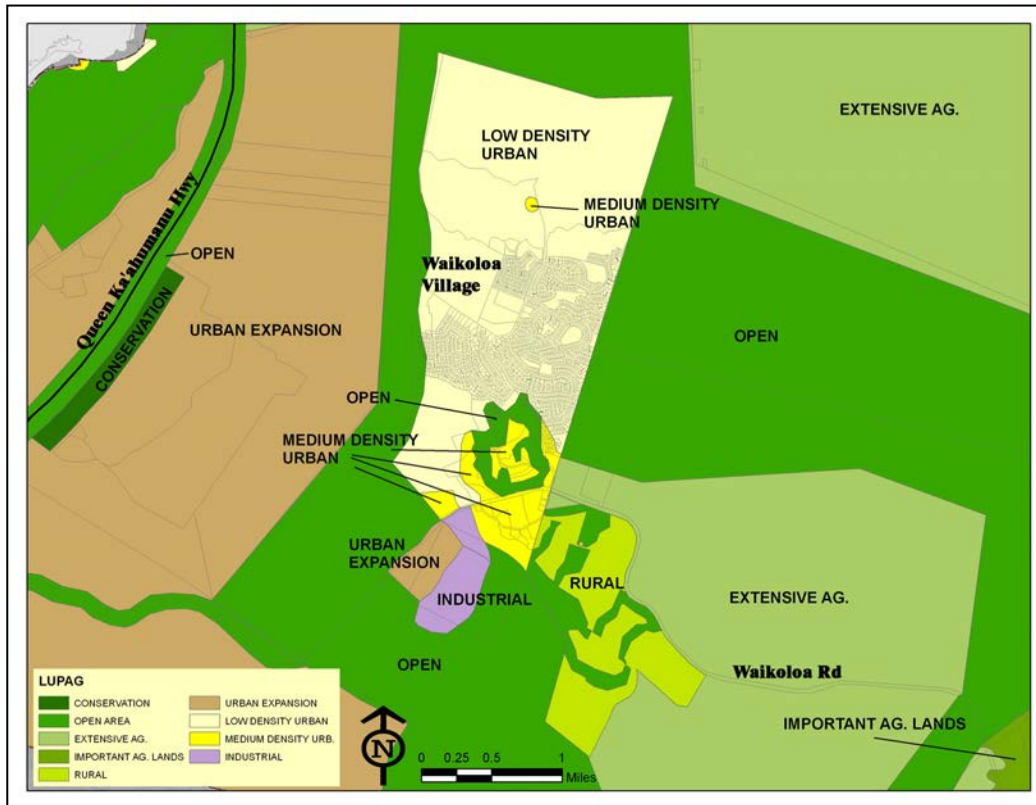
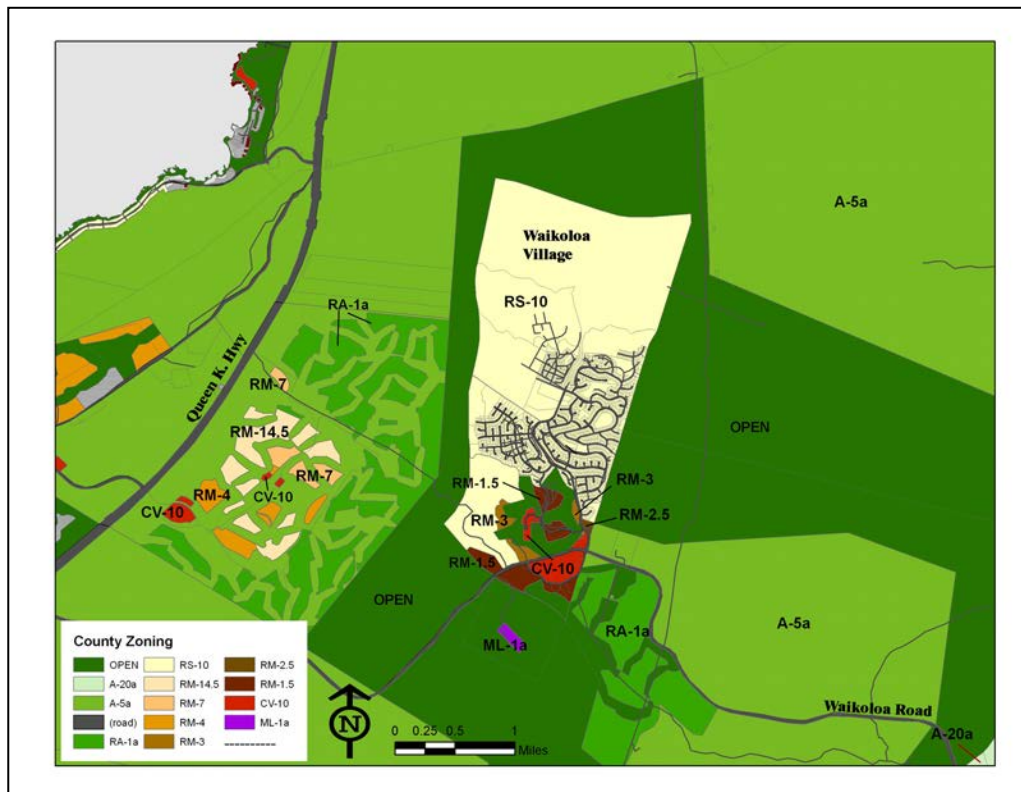


FIGURE 5.2: COUNTY ZONING FOR WAIKOLOA VILLAGE AND SURROUNDING AREA



5.2 WAIKOLOA VILLAGE TOMORROW: WAIKOLOA VILLAGE CONCEPTUAL PLAN & POLICIES

PURPOSE: The **Waikoloa Village Conceptual Plan** presents in graphic and narrative form general policies and strategies for the long-range – 20+ year look-ahead – future of Waikoloa Village, with emphasis on:

- **Providing needed community facilities for a growing town**
- **Environmental Stewardship, Sense of Place, Open Space**
- **Providing transportation and circulation improvements in a timely manner**
- **Affordable housing and smart growth**

During the course of the Community Readiness Process and Waikoloa Focus Group meetings, these priority issues were consistently voiced.

This Conceptual Plan is presented as an important **linking step** between the Waikoloa Focus Group discussions and the resulting “Planning Notes” (November 2007) and the more detailed **Action Plans** that the CDP Team has developed for specific plan elements, including:

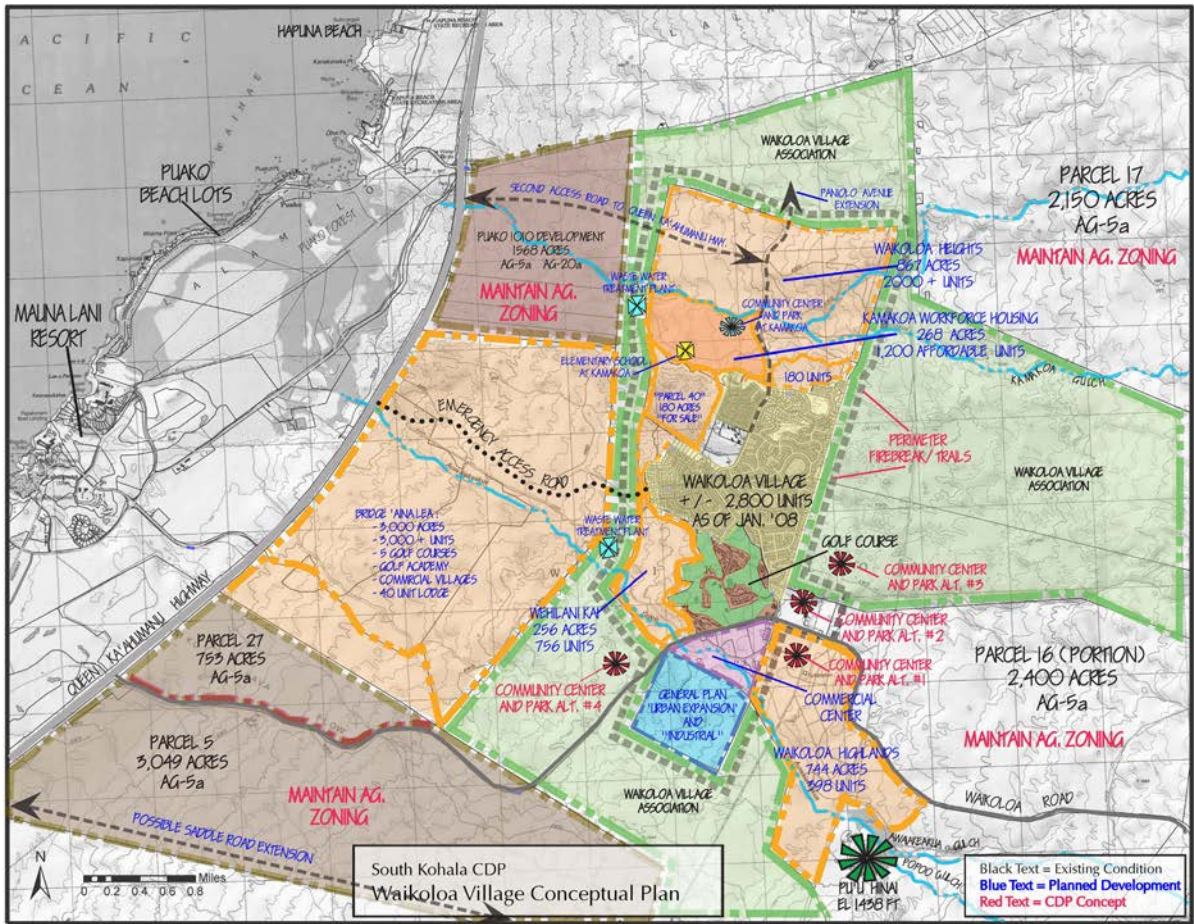
1. Construction of a second access road to Queen Ka’ahumanu Highway
2. Location and funding for a Waikoloa Community Center and Community Park
3. Location and potential phasing for a future Middle School, second Elementary School and High School

A note on the Conceptual Plan graphics and text: the graphic includes a variety of land use elements and ideas, including:

- Existing Land Uses (black text on the graphic)
- Projects planned by various agencies and land owners (blue text)
- Concepts and land uses recommended by the CDP (pink text)

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FIGURE 5.3: WAIKOLOA VILLAGE CONCEPTUAL PLAN



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The Concept Plan text provided here addresses most of but not all of the elements shown on the graphic. The text also includes some policies and details that are not shown on the graphic. Thus, text and graphics are presented as mutually supporting planning tools, but are not intended to be “identical” in content.

Based on input from the Community Meetings and Focus Group Meetings, the South Kohala Steering Committee meetings, and planning studies undertaken to date, suggested overall Policies for Land Use and Environmental Management in Waikoloa Village are:

- Waikoloa Policy 1. PROVIDE INFRASTRUCTURE AND FACILITIES FOR A GROWING COMMUNITY** shall be an overarching planning policy for Waikoloa Village. The County shall work closely with the Waikoloa Village Community and area developers such that funding for important infrastructure projects and community facilities is provided.
- Waikoloa Policy 2. ENVIRONMENTAL STEWARDSHIP, SENSE OF PLACE, OPEN SPACE** shall be an overarching land use policy for Waikoloa Village. Land use decisions shall be based on sustainable management of the open grass lands and natural resources of the Waikoloa area,
- Waikoloa Policy 3. PROVIDE TRANSPORTATION AND CIRCULATION IMPROVEMENTS IN A TIMELY MANNER**, including roadways, bikeways, and pedestrian paths, and with very high priority given to the construction of a second access road connecting Waikoloa Village to Queen Ka’ahumanu Highway.
- Waikoloa Policy 4. ENCOURAGE AFFORDABLE HOUSING AND SMART GROWTH** by concentrating development in areas that are already zoned for Resort, Residential, Commercial, and Industrial growth, or areas that are otherwise appropriate for businesses that address the needs of this community.

Important related strategies of the Waikoloa Village Conceptual Plan are summarized below.

POLICY 1. PROVIDE NEEDED INFRASTRUCTURE AND COMMUNITY FACILITIES FOR A GROWING COMMUNITY

Strategy 1.1 Plan, Fund, and Construct a Community Center and Community Park -- There has been considerable discussion within the Waikoloa community regarding the need for a Community Center and a Community Park. Currently, the Waikoloa Elementary and Middle School and the golf course clubhouse serve as community meeting places, and there are two small active recreation parks within the Village. However, this growing community needs a Community Center that is available for meetings and activities during the day and on weekends, together with an indoor gymnasium that can be used for both day time and evening organized sports such as basketball and volleyball.

The community also needs a larger Community Park of 15 to 20 acres that would have ball fields, soccer fields, and other active recreation facilities that the existing smaller parks cannot accommodate. It should be noted that the “Community Readiness Process” (CRP) found that parks and outdoor recreation were one of the highest community needs. Community members have also voiced the need for smaller playgrounds in addition to the need for a large community park.

The County’s Kamakoa workforce housing project will include a 10,000 square foot Community Center and a 12-acre Community Park. These facilities will be constructed using County CIP funds, and will thus be open to all Waikoloa Village residents. However, this relatively small Community Center will not replace the need for a larger facility, including a full size gymnasium. And given the

strong likelihood of continued growth at Waikoloa Village, a second Community Park will eventually be needed.

In January 2007, a "Community Center Planning Committee" was formed, consisting of a number of Waikoloa Village residents. Through a series of meetings and discussions, including extensive input from the Waikoloa community, the committee identified five alternative sites for a community center. In order of preference, these sites were:

1. Across from the Post Office on Waikoloa Mauka land, adjacent to the proposed housing for seniors;
2. Near the Waikoloa stables, either on WVA land or Waikoloa Mauka land;
3. Behind Waikoloa Hills on WVA land;
4. WVA land makai of Castle & Cooke's property with access off Waikoloa Road;
5. Other possible WVA-owned sites if the above sites should prove to be not feasible for various reasons.

Sites 1 through 4 are shown on the "WAIKOLOA CONCEPT PLAN" graphic on page 97. Please note that these sites are subject to change.

It should also be noted that the Committee determined that suggested sites at Hulu Street, Lina Poe Poe, and Wehilani did not meet the needs of the community, and that these sites be removed from further consideration. Also, in their April 2008 meeting, the Waikoloa Village Association Board approved allowing WVA land to be used for a community center.

The CDP provides some further details in terms of planning criteria for these important facilities. Community members have also suggested that an extensive system of walking/jogging trails, parks, and firebreaks be constructed around the perimeter of Waikoloa Village. This recreation/open space/firebreak system would thus have multiple dimensions and multiple community benefits. This concept is illustrated in the "Waikoloa Village Concept Plan" graphic. See the **Community Center and Community Park Action Program** for details.

Strategy 1.2 Plan, Fund, and Construct Needed Public Schools: Elementary, Middle, High - Waikoloa Elementary and Middle School is the only school in Waikoloa Village. The school services students from grades K-6. The school opened in the fall of 1994 with 320 students. The school's cafeteria was completed in 1997 and the library was completed in 2000. For school year 2007-08, the school expanded to the sixth grade. The plan is to phase in 7th and 8th grades over the subsequent two years. The school will then become a full Elementary and Middle School. With 75 employees, Waikoloa Elementary and Middle School is the largest employer in Waikoloa Village.

Additional facilities will be needed for the 8th grade classes, and DOE requested \$4.4 million from the State Legislature in the 2008 legislative session.

Table 5.3 School Enrollment

| School Name | Grades | Enrollment (2006) | Enrollment Capacity |
|---------------------------------------|--------|-------------------|---------------------|
| Waikoloa Elementary and Middle School | K-6 | 620 | 650 |

Sources: DHHL Lālāmiilo / Pu‘u Kapu Regional Community Development Plan; State Department of Education Facilities Development Branch

The Waikoloa Elementary and Middle School is nearing its physical capacity. The longer-range plan is to convert the existing school to a Middle School, and to construct a new Elementary School on a 12-acre site within the County’s “Kamakoa” workforce housing project. This new Elementary School is on the DOE facilities plan for opening in 2014 – only 6 years from the present. Thereafter, as the population of Waikoloa Village continues to grow, there will be the need for at least one additional Elementary School, and eventually a High School. See the **Schools Action Program** in the next section of this Plan.

Strategy 1.3 Plan, Fund, and Construct a Community Library – There has been some discussion on the need for a public library at Waikoloa Village, including ideas for a “state of the art” facility that would include advanced computer hardware and software as well as traditional books and other reading materials. A modern library would certainly be an important facility and amenity for Waikoloa Village, and would enhance the Village’s sense of community and identity. Options for a Library include: a stand-alone Library, a Library developed as part of the Community Center, or a Library attached to the Middle School.

Strategy 1.4 Develop a Major Commercial Center for Waikoloa Village with shops, stores, and small business opportunities – A mainland company, “Metric Holdings,” with offices in Encino, CA, recently purchased the commercially zoned 45-acre parcel that is located within the “arc” of Pua Melia Road. This parcel is currently “anchored” by the Fire Station at the western end, and the Post Office at the eastern end. The developer’s preliminary plans for this commercial site include a major grocery store, various shops and stores, a small hotel, a business park, and some kind of community gathering place. An “assisted living” project for senior citizens may also be part of the development program. Community members have also suggested that a police substation be located near the existing Fire Station, and that an “urgent care” facility be included in the shopping area. Metric Holdings has told the Waikoloa community that they plan to begin construction of the first phase of the project in 2008. The economic downturn that most areas of the U.S. are currently experiencing may delay the developer’s construction plans. However, as the population and purchasing power of the Waikoloa Village community continue to grow, it is only a matter of time before a large commercial center of this kind becomes a reality.

This proposed 45-acre commercial center could eventually provide about 300,000 square feet of retail commercial space, assuming that about 2/3 of the site will be developed for retail, and the balance for offices, elderly housing, hotel, and other uses. Concern was raised by some community members that this amount of commercial acreage will not be enough to serve the growing Waikoloa Community. A general “rule of thumb” number for retail commercial demand is 30 square feet (sf) per capita. If the current population of Waikoloa Village is about 7,000 people, then the total demand for retail commercial space for that population would be about 210,000 sf. By 2020, the population of Waikoloa Village could be 10,000 to 15,000 people, and the demand for retail commercial would be about 300,000 to 450,000 square feet. Some percentage of this demand – 50% or more – would be met by regional shopping centers located in Waimea and Kona, while the balance of the demand would be met by Waikoloa-based commercial facilities. Given these numbers, it appears that the 45-acre commercial center at Waikoloa Village can provide for the population’s local retail commercial needs for the next 15 to 20 years.

It should also be noted that Waikoloa Mauka LLC owns properties in the vicinity of the proposed commercial center that it may ask to be rezoned for commercial use. These additional sites could provide for still more retail commercial facilities.

In addition, the developers of the “Waikoloa Heights” project have included a small commercial center in their Master Plan. This center would provide convenience shopping for the 1200 families that will some day live in the Kamakoa project, and the 2000 families that will live in Waikoloa Heights.

There is currently no set timetable for any of these “commercial” locations to be developed and there is no certainty that they will in fact be developed for commercial services, or for what types of businesses they may be developed. For this reason, the community should give consideration to allowing for additional commercial locations where small to medium-sized businesses could be established that serve the needs of the Waikoloa community. If appropriately located, these businesses would add to the sense of community and would reduce the amount of traffic to Waimea and Kona.

Strategy 1.5 Manage and Expand the Potable Water System – Potable water for Waikoloa Resort and Waikoloa Village is provided by the West Hawai‘i Water Company, a privately owned company that is a subsidiary of the Waikoloa Development Company, which until recently owned approximately 20,000 acres of undeveloped land in and around the Waikoloa Village area. Most of this land was sold to other parties in 2007. The Water Company owns and operates groundwater wells, reservoirs, water transmission mains, and water distribution lines, and currently provides about 4.5 million gallons per day (mgd) to its users, which includes Waikoloa Resort. A new well was recently installed by the Water Company in anticipation of continuing population growth and increased potable water demand in Waikoloa Village. The existing wells draw water from the “Waimea Aquifer.” Currently, this aquifer also serves some of the potable and non-potable water needs of Waimea Town. As the population of both Waimea and Waikoloa continue to grow, the availability of potable water may become a limiting factor.

West Hawai‘i Water Company representatives recently confirmed that the company is being sold to a large California company that specializes in managing sewer and water systems. This sale is expected to be completed before the end of 2008. Water rates charged by the new owner will still be regulated by the Hawai‘i Public Utilities Commission (PUC).

Strategy 1.6 Manage and Upgrade the Wastewater Treatment and Disposal Systems – Wastewater treatment for commercial, institutional, and multi-family land uses at Waikoloa Village is provided by two existing wastewater treatment plants (WWTP): the Auwaiakeakua WWTP (“A-Plant”) and the Kamakoa WWTP (“K-Plant”). Both WWTPs, together with collection lines and effluent disposal fields, are owned and operated by the West Hawai‘i Sewer Company, a subsidiary of the Waikoloa Development Company. West Hawai‘i Sewer Company is currently expanding the A-Plant and is also designing a new K-Plant in order to service the County’s Kamakoa Workforce Housing project, as well as other planned projects in the northern sector of Waikoloa Village.

West Hawai‘i Sewer Company representatives recently confirmed that the company is being sold to a large California company that specializes in running sewer and water systems. This sale is expected to be completed before the end of 2008. Sewer rates charged by the new owner will still be regulated by the Hawai‘i Public Utilities Commission (PUC).

All of the existing single family homes in Waikoloa Village, with the exception of the homes in the Paniolo Estates subdivision and the new homes in the Wehilani subdivision, utilize cesspools or septic tanks for their wastewater disposal. Although State Department of Health regulations continue to allow the use of septic tanks for lots of at least 10,000 square feet within subdivisions of 50 or fewer lots, there are now over 1,000 single family homes on cesspools or septic tanks within the Village, and **several thousand more homes are planned for development over the next 20 years.** The community should be concerned about the risks of environmental pollution from such a large and concentrated number of on-site sewage disposal systems. The County’s proposed 1200 unit workforce housing project will be tied into a new wastewater treatment plant. Other large projects, including the Waikoloa Heights project of 2,000+ units, should also be required to tie into

a modern wastewater treatment plant. The new WWTP's could also be designed to produce "reclaimed water" that could be used for irrigation of parks and landscaped areas throughout the Village. The production and use of reclaimed water would allow the limited potable water aquifer to better serve the area's growing population.

Strategy 1.7 Provide more emergency facilities -- Currently the only existing shelter in Waikoloa Village is Waikoloa Elementary and Middle School. Waikoloa residents have expressed concern that the amount of shelter space that currently exists in the Village cannot accommodate the emergency needs of the current or future population. Also, in the event of tsunami or coastal flooding, people in the coastal areas of the district such as the Waikoloa Resort, Mauna Lani Resort, and Puakō may need to evacuate to Waikoloa Village. The existing emergency shelter space is totally inadequate to accommodate these potential evacuees.

Future civic buildings in Waikoloa Village, such as the community center, new high school, middle school, or elementary school, should be designed to serve as emergency shelters as well. These civic buildings should be built so that they are "disaster resistant."

Planning for future helipad facilities for medical emergencies should also be considered. Two possible locations for a helipad are near the existing fire station and near Ho'oko Park.

POLICY 2. ENVIRONMENTAL STEWARDSHIP, SENSE OF PLACE, OPEN SPACE

Strategy 2.1 Support Projects and Programs for Environmental Restoration and Alternative Energy

The Waikoloa Village area once supported a native dryland forest ecosystem, and remnants of this forest can still be found, including specimens of the rare and endangered *uhiuhi* tree and the threatened native *wiliwili*. The Waikoloa Village Association (WVA) has approved a 15-year license agreement with the Waikoloa Village Outdoor Circle that sets aside 275 acres of WVA land for the "Waikoloa Dry Forest Recovery Project." The overall goal of this project is to preserve and restore the native dryland forest ecosystem within this 275-acre area. Waikoloa has many native trees and shrubs typically only found in the dryland forest, such as: *La`au* a tree that was used in part for Hawaiian medicine; *A`ali`i* a shrub that is used to adorn the hula dancer and can withstand any severe wind condition; *Kauwila*, an extremely hard wood, was used for traditional housing, weaponry and the canoe; *Ohia* a popular hard wood serving various needs, such as house beams, the canoe and a home for our endangered forest birds; *Lama*, another hard wood, was used for spears, sleds and home building. All of these dry land native plant species are found throughout the kula lands of Waikoloa and contain the spirit of the gods Laka, Kane, and Kanaloa. The County and other governmental entities should aid and support this program and any similar ecosystem restoration programs that may be initiated in this area of South Kohala.

The Waikoloa Village area also provides some special opportunities for the development of alternative energy resources, both at the scale of individual buildings as well as larger community scale energy facilities. The climate of this area of South Kohala is generally hot and dry, with a high level of solar energy. Trade winds are also stronger here than most other areas of the island, with wind speeds of 20 to 30 mph or higher being quite common. Individual solar hot water heating units would save home owners a significant amount of electrical power costs. Small-scale windmills and photovoltaic arrays on public buildings such as schools and community centers would also be cost effective. Larger scale photovoltaic "solar farms" and "wind farms" should also be considered, possibly to be sited on some of the WVA's 10,000 acres of open space lands. In 2007, the County Council passed a resolution requesting the County Planning Director to initiate an ordinance to amend the County Zoning Code in order to permit wind energy facilities in the Open zoned district. Much of the WVA lands are zoned "Open."

There are interesting possibilities for private/public partnerships for alternate energy development projects here, and it may be possible for Waikoloa Village to be largely "energy self-sufficient" sometime in the foreseeable future.

Strategy 2.2 Preserve Waikoloa’s Scenic Views, Landscapes, and Pu’u -- Waikoloa is home to many beautiful sunsets and sunrises. Mauna Kea Mountain is clearly viewed from the dry slopes of Waikoloa, which provides many displays of cloud formations made from strong winds that are unique to the mountain. The view of the island of Maui from Waikoloa will allow a clear vision of Haleakala and the many pali to Hana. Waikoloa has as many *pu’u* if not more, than its sister town of Waimea, many of which have names that convey traditional stories of this ahupua’a. The *pu’u* named Hina’i in the vicinity of Waikoloa and several other *pu’u* in the district are being mined. Mining and also the encroachment of development have degraded the condition of several *pu’u* in the district. These *pu’u* should be protected and preserved in their natural state.

POLICY 3. PROVIDE TRANSPORTATION AND CIRCULATION IMPROVEMENTS IN A TIMELY MANNER

Strategy 3.1 Plan, Fund, and Construct a Second Access Road to Queen Ka’ahumanu Highway – Access to Waikoloa Village is provided by Waikoloa Road, a 2-lane regional arterial road that connects the Village to the Queen Ka’ahumanu Highway to the west (makai) and to the Māmalahoa Highway to the east (mauka).

The County recently funded the construction of an emergency evacuation road from Hulu Street to Queen Ka’ahumanu Highway. Construction of this road was completed in December 2006. In addition, the Planning Department initiated a study to assess alternative financing methods to construct a road that would connect Waikoloa Village to Queen Ka’ahumanu Highway.

A second connecting road to Queen Ka’ahumanu Highway is a top priority, both to accommodate increasing traffic volumes and, perhaps more importantly, to provide a second **emergency egress route** for Waikoloa residents. If feasible, the new access road should also provide pedestrian and bicycle facilities. The preferred general alignment for this second access road is shown on the Waikoloa Village Concept Plan graphic.

The most significant type of natural disaster that threatens the Waikoloa community is the threat of wildfires. The area’s dry climate, combined with the highly flammable introduced vegetation consisting primarily of fountain grass and kiawe trees, and the frequency of high winds make the Waikoloa area especially prone to large-scale wildfires. A 2003 brush fire threatened Waikoloa Village. The fire burned all the way up to the elementary school. Another major fire in August 2005 burned some 20,000 acres to the east and south of Waikoloa Village. That fire burned to the very edge of the Waikoloa Road/Paniolo Avenue intersection, the main intersection in Waikoloa Village. In the case of the 2005 fire, fire fighters were able to control and eventually extinguish the blaze without injuries to people or damage to structures. However, the fire threat is an ever-present danger for the Waikoloa community, and a second access/egress road may well prove to be the difference between successful evacuation of the Village and injuries and even loss of life.

The County has recently retained a special consultant to develop a financing plan for this second access road, and a special committee is currently evaluating the preliminary financing plans. See the **“Second Access Road Action Program”** for more details.

Strategy 3.2 Fund and Construct the Paniolo Avenue Extension – Paniolo Avenue, a major 4-lane local collector road with a right-of-way of 80 feet, is the main collector roadway within Waikoloa Village. The County General Plan shows the eventual extension of Paniolo Avenue northward to Kawaihae Road, which would in effect make Paniolo Avenue a sub-regional arterial road. In the near term, the owner/developer of the “Waikoloa Heights” project is required by their development agreement to extend Paniolo Avenue from its present terminus at Ho’oko Street up to and across Kamakoa Gulch, and eventually to the northern boundary of the Waikoloa Heights property. This extension would also provide for access to the County’s Kamakoa workforce housing project. As of January 2008, the construction plans for the first phase of this extension, about one mile of road up to but not yet across Kamakoa Gulch, were still being reviewed by the County Planning

Department. According to representatives of the developer, construction was scheduled to begin in the second quarter of 2008.

Strategy 3.3 Upgrade the Emergency Access Road from Hulu Street to Queen Ka’ahumanu Highway– In December 2006, the County completed the rough grading of an unpaved “emergency access road” that extended from the terminus of Hulu Street about 2.5 miles westward and down slope to the Queen Ka’ahumanu Highway. The road traverses land that is proposed for development by Bridge ‘Āina Le’a LLC. This road is intended to serve as an emergency egress route when there are natural disasters like wildfires that require evacuation of some or all of the Waikoloa community. The Bridge Company has apparently said that they will eventually pave this road, including the section of road that is on land owned by the Waikoloa Village Association, from the existing terminus at Hulu Street to the eastern boundary of the Bridge property. To date, however, the Bridge Company has not moved forward with construction of the first phase of their project. This emergency access road could also provide a *mauka/makai* route for walking and bicycling. At a minimum, the MOA should be amended between Bridge ‘Āina Le’a LLC and the County to allow for this use. The paving of the roadway would create a more useful emergency route.

Strategy 3.4 Plan, Fund, and Construct Walkways and Bikeways – Most of the streets and roads in Waikoloa Village were constructed without sidewalks and bike lanes or bike paths. With the growing population and the growing awareness of the environmental and health benefits of walking and bicycling, there is a need to “retrofit” existing roads with sidewalks and bike lanes. Paniolo Avenue currently has a sidewalk on one side only. This main collector street, with its generous 80 foot right-of-way, is far too wide to be a safe roadway near an elementary school and park. Its design speed is greater than its posted speed of 35 mph. Consideration should be given to putting Paniolo Avenue on a “road diet” that would reduce it from four lanes to three, with landscaped medians and pedestrian refuges at the Pu’u Nui and Hulu, intersections. Such measures would considerably calm traffic. The additional right of way could be used to create a shared use non-motorized path with generous width.

Strategy 3.5 Develop a Master Circulation Plan for Waikoloa Village – The original Master Plan for the development of Waikoloa Village was commissioned by the original developer, Boise Cascade Corporation, in the 1960’s. The Master Plan included concepts for a system of collector roads that would serve the various neighborhoods of the Village, including Paniolo Avenue and a parallel collector road that is now Laie Street. As of the end of 2007, the zoned acreage of Waikoloa Village had been only about 40% developed. As development proceeds, County planners would benefit from a fairly detailed Master Circulation Plan that would identify the main collector streets, bridges for gulch crossings, and requirements for connectivity between subdivisions. The Plan should include maps, cross-sectional and/or plan diagrams of typical roadway elements and dimensions, and guiding policies regarding connectivity and the separation of collector streets and residential neighborhoods. Future road planning should not adversely affect residential neighborhoods. The WVA and other community representatives should work with the County Planning Department and the County Department of Public Works to develop this Waikoloa Village Master Circulation Plan.

Strategy 3.6 Implement traffic safety improvements along Waikoloa Road - Portions of the two-lane Waikoloa Road are very hazardous. There are parts of the road that are curvy and steep. Furthermore, there are stretches of roadway with little or no paved shoulders, let alone any room on the roadway for bicyclists or pedestrians.

Several suggested traffic safety improvements for Waikoloa Road include:

- 1) Construct paved shoulders that are of a safe width
- 2) Construct separated bicycle and walking paths along the roadway
- 3) Construct truck runaway ramps in appropriate locations along the roadway.

POLICY NO. 4 ENCOURAGE AFFORDABLE HOUSING AND SMART GROWTH

Strategy 4.1 Implement the County’s “Kamakoa” workforce housing project – This project will be a “first of its kind” in Hawai’i County, and in many ways, a first in the State of Hawai’i. The project will use the “land trust model” to ensure that home prices are affordable “in perpetuity.” The land trust model includes leases instead of fee simple purchase of house lots and also limits the appreciation of property values – and thus keeps house prices affordable. The project will also use innovative “Community Facilities District” (CFD) financing to pay for most of the project’s infrastructure. With a planned 800 for-sale and 400 rental units on 267 acres of land, for a gross density of about 4.5 units per acre, the project is significantly more dense and efficient than the typical 10,000 square foot lot development pattern in Waikoloa Village, which works out to about 3 units per acre. The higher density for this project is permitted under State Statute 201(H) that provides for waivers of certain County regulations if the project is an affordable housing project. The Kamakoa project also has a high level of amenities for home owners and renters, including a 10,000 square foot Community Center and 12-acre Community Park, a Daycare Center, a 12-acre site for a future Elementary School, and some 20-acres of trails and greenways. Overall, the project will provide affordable homes and rentals for Waikoloa area workers, and thus reduce the commuting time and expense for many people who have jobs at the resort or in Waikoloa Village.

Strategy 4.2 Plan and eventually develop some of the “Industrial” land near Waikoloa Village Center – The County General Plan “LUPAC” map for the Waikoloa area shows an “Industrial” parcel of about 200 acres adjacent to and to the southwest of the “Medium Density Urban” area that includes the site of the future shopping center. This industrial land, which is owned by the WVA, may provide some opportunities for light industrial development and local jobs sometime in the future. The development of some local jobs would have a positive impact on vehicular traffic during peak periods, and would also provide some economic balance for the Waikoloa community. Future uses of this industrial land could also include alternate energy generation facilities like photovoltaic “solar farms” or smaller scale “wind farms.” Note, however, that the “Waikoloa Dry Forest Recovery Project” area is immediately adjacent to this industrial land, and that at least 2 rare *uhiuhi* trees and a number of the threatened *wiliwili* trees are found within the boundaries of the industrial land. Thus, any future industrial development should take care to preserve these important endemic trees.

Strategy 4.3 The visually and environmentally important open grasslands in the Waikoloa area should be protected from development that would have negative environmental impacts -- Waikoloa Village encompasses about 3,000 acres of land, most of which is zoned “RS-10” – single family lots, minimum lot size of 10,000 square feet. Approximately 60% of this already zoned land has yet to be developed. The potential “build –out” of this zoned land, including the County’s workforce housing project, would add approximately 4,000 to 5,000 additional homes and some 10,000 people to the Village.

Waikoloa Village is surrounded by an irregularly shaped “buffer” of “Open” zoned land totaling about 10,000 acres, which is owned by the Waikoloa Village Association. To the west (*makaī*) of Waikoloa Village are several large land parcels owned by 1010 Puakō LLC and Bridge Company that are being planned for development. The Bridge lands have already been rezoned to “RA-1a” (Rural Agricultural 1 acre lots) and RM-4, RM-7, and RM-14.5 – Residential Multi-Family of various densities. The 1010 Puakō LLC parcels are still zoned A-5a (Agriculture 5-acre minimum lot size). Current zoning for the Bridge ‘Āina Lea project would allow the construction of approximately 2,400 homes in the State “Urban” district and approximately 860 lots in the State “Agricultural” District, plus not more than 5 golf courses, a golf academy, a 40-unit “lodge,” and retail commercial facilities. 1010 Puakō LLC has recently initiated discussions with the County regarding a possible “Planned Unit Development” (PUD) for their property. PUD is a special project design and approval process that allows for some variance from standard County design standards, including the possibility of clustering homes on smaller lots, thereby reducing infrastructure costs and increasing open space.

There are also extensive privately owned A-5a zoned lands to the east (*mauka*) and south of the Waikoloa Village area. Some of the large land parcels in this area are being proposed for future development. Rezoning of any of these parcels should not be approved unless and until concurrency requirements have been met, and until the land owner(s) can demonstrate in detail at least the following:

- Availability of adequate potable water source(s)
- mitigation of adverse traffic impacts
- mitigation of adverse visual impacts and night time light pollution
- positive benefits to the community, including providing parks and shopping facilities, and construction of affordable housing

Owners of these large parcels should also be encouraged to develop “rural cluster” plans that would concentrate homes in “low impact” areas of the site, and set aside large tracts of open space lands that would be preserved via conservation easements or other means.

Strategy 4.4 Revise the County Subdivision Code and Planning Department policies and enforcement procedures to ensure that agricultural subdivisions are created for agricultural purposes and are not used for rural residential purposes without rezoning – State Land Use statutes restrict living units in the State “Agriculture” District to “farm dwellings.” In practice however, the Hawai’i County Planning Department has approved many “agricultural subdivisions” in the State Agriculture District that are actually rural residential developments.

There is certainly a demand for and a place for rural residential projects. However, rural residential projects should be required to apply for and receive State Land Use “Rural” classification, and County “Rural Residential” Zoning designation. These entitlement applications would require public hearings and disclosure of project impacts as well as project benefits. As a corollary, any and all proposed agricultural subdivisions should be required to submit a farming plan for either commercial farming or subsistence farming together with their preliminary subdivision documents, and the Planning Department should design and implement a monitoring program that will ensure implementation of these farming plans. Note: these suggested amendments to County subdivision regulations have County-wide implications. The details of these amendments should therefore be developed in coordination with the other active CDP’s – e.g., the North and South Kona CDP, the Puna CDP, and the North Kohala CDP.

Strategy 4.5 “Ag-zoned” lands west and south of Waikoloa Village that are designated as “Alternate Urban Expansion” lands in the County General Plan and “Ag-zoned” lands north of the Village shall remain in “A-5a” and “A-20a” zoning until already RS-zoned lands at Waikoloa Village have been substantially developed – The current County General Plan LUPAG map for the Waikoloa area includes over 7,000 acres of “Alternate Urban Expansion” land in the Waikoloa area. (See Table 5.2 and Figure 5.2 for reference) This designation is defined in the General Plan (page 14-7) as: *Allows for a mix of high density, medium density, low density, industrial, industrial-commercial and/or open designations in areas where new settlements may be desirable, but where the specific settlement pattern and mix of uses have not yet been determined.*

The consensus of the Waikoloa community is that there is no need in this area of South Kohala for such a large amount of acreage to be designated “Alternate Urban Expansion.” Undeveloped parcels within Waikoloa Village that are already zoned RS-10 will, at “build out,” provide an additional 4,000 to 5,000 homes – thus more than doubling the population of Waikoloa Village. This development process may take 20-30 years to complete. Development of the 7,000+ acres of “Urban Expansion” lands would be **in addition to these 4,000 to 5,000 homes**, and would add something like:

- 7,000 homes and 20,000 people, if developed at an average density of 1 unit per acre of land;
- 14,000 homes and 40,000 people, if developed at an average density of 2 units per acre of land.

The Bridge 'Āina Lea project is part of this "Urban Expansion" area, and has already received State Land Use Urban and County rezoning. However, the balance of the Ag-zoned "Urban Expansion" lands in this area should not be rezoned to a higher density until community needs for such rezoning can be clearly shown.

5.3 ACTION PROGRAMS FOR WAIKOLOA VILLAGE

This last section of the Waikoloa portion of the CDP presents several "Action Programs" for top priority projects. Limited time and funds for this CDP precluded the development of Action Programs for "all" of the Concept Plan policies and strategies. However, additional Action Programs can be developed in the future.

1. ACTION PROGRAM – CONSTRUCT SECOND ACCESS ROAD TO QUEEN KA'AHUMANU HIGHWAY

Current Status and the Need for Action

Access to Waikoloa Village is provided by Waikoloa Road, a 2-lane arterial road that connects the Village to the Queen Ka'ahumanu Highway to the west (*maka'i*) and to the Māmalahoa Highway to the east (*mauka*).

A second connecting road to Queen Ka'ahumanu Highway is needed, both to accommodate increasing traffic volumes and, perhaps more importantly, to provide a second **emergency egress route** for Waikoloa residents.

In 2005, the County retained an engineering company to develop an analysis of alternative routes for a second access road, and to develop preliminary cost estimates. As a result of that study, and related meetings with the Waikoloa community, a consensus on a preferred general road alignment was reached: the second access road will be constructed from the extension of Paniolo Avenue, through the "Waikoloa Heights" project, then through a strip of land owned by the Waikoloa Village Association, and finally through lands owned by 1010 Puakō LLC to Queen Ka'ahumanu Highway near the entrance to Mauna Lani Resort, a distance of approximately 3 miles. The estimated construction cost for this road was \$40,000,000 in 2005.



The northern end of Paniolo Avenue

The County recently retained a special consultant to develop a financing plan for this second access road, and a special committee of Waikoloa community members is currently evaluating the preliminary financing plans. The consultant's draft report estimated annual costs to Waikoloa Village home owners as follows:

- Existing Single Family Homes: \$90 per year
- Existing Multi-Family Homes: \$45 per year
- New Single Family Homes: \$1,463 per year
- New Multi-Family Homes: \$ 731 per year

Although the annual cost to current residents is not that large, some community members have already voiced strong opposition to "more taxes."

There has also been some discussion with the developer of the Waikoloa Heights project to the effect that the developer might fund the construction of the road as part of "Phase 2" of this 2,000+ unit project. In addition, there has been some recent discussion with the owner of the parcel

through which the second access road may pass, 1010 Puakō LLC, regarding possible construction of the road by that developer as part of their proposed “Planned Unit Development” project.

Another related issue that has been raised by members of the local non-profit organization known as “PATH” (Peoples Advocacy for Trails, Hawai‘i) is the possibility of a bike path/jogging path adjacent to the second access road. This path would provide for an alternate means of circulation between Waikoloa Village and the Kohala resorts.

There are thus at present at least three strategies being considered for the financing and construction of this critical access road project, as follows:

Strategy 1.1. Finance through a Community Facilities District (CFD), with construction to be coordinated by the County.

Strategy 1.2. Financing and construction by the developer of the Waikoloa Heights project.

Strategy 1.3. Financing and construction by 1010 Puakō LLC.

There may be an opportunity here for the County and the community to work with both developers, and to resolve a planning and financing strategy that works well for all parties. Provided below are some preliminary thoughts on how this partnering process could be designed.

- **Who should take the lead?** County Council Member for North and South Kohala, with the support of the Mayor’s staff, the Planning Department, the Department of Public Works, and the Waikoloa community.
- **What needs to be done?** Form a “Waikoloa Village Second Access Road” working group chaired by the County Council Member and consisting of representatives from the Waikoloa Community, the Planning Department, the Department of Public Works, the Waikoloa Heights developer, and 1010 Puakō LLC. Through a series of meetings and discussions, work out how much funding each of the two developers can provide for the project, and the amount, if any, of the funding shortfall. If there is a funding shortfall, look at alternative funding mechanisms, including CFD, Improvement District (ID), County CIP, other. Based on all of the above, develop and resolve an overall funding strategy for the access road.
- **When should actions be initiated?** Discussions and negotiations involving the County and the two developers are already taking place. As of early May 2008, these discussions were ongoing, and no firm plans or commitments had been resolved.
- **How much will the new access road cost?** The 2005 Preliminary Engineering Study estimated a cost for the preferred access road alignment of approximately \$40,000,000. More precise cost estimates can be developed after preliminary engineering design work has been undertaken. This road will be a fairly costly project. However, it is of vital importance for the residents of Waikoloa Village, both in terms of day to day access to jobs and other destinations in the region as well as community safety.
- **Intended Outcome:** Construction of this second access road to Queen Ka’ahumanu Highway will greatly reduce the risk of a potential disaster and loss of life from a major wildfire or other natural catastrophe that might strike the growing but still relatively isolated community of Waikoloa Village. A second road will also accommodate some of the increased traffic to and from the Village as the population continues to grow.

2. ACTION PROGRAM – COMMUNITY CENTER AND COMMUNITY PARK

Current Status and the Need for Action

There has been considerable discussion within the Waikoloa community regarding the need for a Community Center and a Community Park.

Currently, the Waikoloa Elementary and Middle School serves as a community meeting place, and there are also two small active recreation parks within the Village. The golf course clubhouse is also used for various community meetings and functions. However, this growing community needs a Community Center that is available for meetings and activities during the day and on weekends, together with an indoor gymnasium that can be used for both day time and evening organized sports such as basketball and volleyball.

Based on the CDP meetings with the Waikoloa Community, it appears that there has been considerable discussion on the Community Center, but not so much on the Community Park. Depending on site location, however, there may be an opportunity to plan, design, and construct both the Center and the Park as one coordinated project.

Two of the major development companies that are proposing new luxury home projects in the area – Bridge Company and the developer of the Waikoloa Highlands project, Waikoloa Mauka LLC – have said that they would provide a total of about \$4.5 million for the design and construction of a Community Center at Waikoloa Village. As of early May 2008, however, neither of these developers had as yet actually committed any money to this project.

The community also needs a large Community Park of 10 to 20 acres that would have ball fields, soccer fields, and other active recreation facilities that the existing smaller parks cannot accommodate.

As previously discussed under Strategy 1.1, a committee of community volunteers has already done some planning for a Community Center. The Committee’s recommended alternative sites are listed under Strategy 1.1.

The overall **strategy** for developing a Community Center and Community Park for Waikoloa Village should generally be similar to the strategy for the construction of the second access road: that is, there may be an opportunity here for the County and the community to work with both developers, and to resolve a planning and financing strategy that works well for all parties. Provided below are some preliminary thoughts on how this partnering process could be designed. The **Action Steps** could be as follows:

- **Who should take the lead?** County Council Member for North and South Kohala, with the support of the Mayor’s staff, the Planning Department, the Department of Parks and Recreation, and the Waikoloa community.
- **What needs to be done?** Reconvene the “Waikoloa Community Center Planning Committee” and broaden its mission to include planning for a Community Park. Solicit and obtain the participation of the Planning Department, the Department of Parks and Recreation, Bridge Company, and Waikoloa Mauka LLC. Assuming the formation of the “SOUTH KOHALA CDP ACTION COMMITTEE, the “Community Center and Park Planning Committee” could be a subcommittee of the Action Committee. Through a series of meetings and discussions, work out how much funding each of the two developers can provide for the project, and the amount, if any, of the funding shortfall. If there is a funding shortfall, look at alternative funding mechanisms, including CFD, Improvement District (ID), County CIP, other. Based on all of the above, develop and resolve an overall funding strategy for the Community Center and Community Park.

The Committee also should revisit the five sites identified earlier by the Committee as preferred sites (as referenced in Strategy 1.1) as well as any other new alternative sites that may be presented, and should consider each of these sites' suitability for a combined Community Center and Community Park project. The Committee should discuss and agree upon the advantages and disadvantages of a combined project at each of these sites, and then agree upon which of these sites is best suited for these community facilities. It is also possible that the Committee will decide that the two facilities should be on separate sites.

Once the funding strategy has been worked out and a preferred site has been selected, design of the Community Center and/or of the Community Park can begin.

- **When should actions be initiated?** Discussions and negotiations involving the County, the Waikoloa Community, and the two developers are already taking place. As of early May 2008, these discussions included the possibility of developing the Community Center on lands owned by the Waikoloa Village Association.
- **How much will the Community Center and Community Park cost?** To date, there have been no architectural or landscape architectural plans developed for either the Community Center or the Community Park, and thus there are no official cost estimates.

Preliminary cost estimates developed for recreational facilities for the County's "Kamakoa Workforce Housing Project," to be constructed at Waikoloa Village beginning in mid 2008, included the following estimates:

- **Community Park** of about 10 acres: \$2,500,000
(baseball field, soccer field, tennis courts, Basketball courts, tot lot, picnic area, restrooms, parking)
- **Community Center** of about 10,000 sf \$4,000,000
(large meeting room, smaller activity rooms, offices for community programs, weights room, restrooms, parking)
- **Swimming Pool** of about 30 X 50 yards \$3,000,000
(including pool, pumps, equipment room, restrooms w/dressing areas, parking)

These costs do not include land costs, design, permitting, or project management. It should be noted that all of the above recreational facilities within the Kamakoa project are being funded by the County of Hawai'i, will be managed by the County Department of Parks and Recreation, and will be open to all residents of Waikoloa Village. However, the planned Community Center at Kamakoa is relatively small at 10,000 sf.

The Kamakoa project also does not include a gymnasium. Assuming a basic gymnasium with full-size basketball court and bleacher seating on both sides, plus locker rooms, restrooms, equipment room, and weights room, the structure might be in the range of 25,000 square feet. If the square foot construction cost is \$300 to \$400 per square foot, the cost would be in the range of \$7,500,000 to \$10,000,000 – not including land costs, design, permitting, or project management.

- **Intended Outcome:** Construction of a Waikoloa Village Community Center and Community Park will greatly enhance Waikoloa Village's sense of community, and will provide many recreational programs and opportunities for all age groups.

3. ACTION PROGRAM – NEW ELEMENTARY SCHOOL, MIDDLE SCHOOL AND HIGH SCHOOL

Current Status and the Need for Action

As previously noted, the population of Waikoloa Village will continue to grow, and so there will be the need for at least one additional Elementary School, a Middle School, and eventually a High School. These schools are very important for this growing community, both as educational institutions and as strong signs of community identity and strength. The need for a Middle School will be met by expansion of the existing Elementary School to serve grades 6, 7, and 8, and the eventual conversion of this school to a full Middle School campus.

The CDP addresses possible site locations for these longer-range school needs. Some people have said: *“The CDP is a County Plan. The schools are State schools, so why is the CDP addressing schools? The County has no say in the planning and construction of these State schools.”* This comment is not unreasonable. However, the Community can, working with land owners and County planners, **preliminarily locate preferred sites for future schools**, with reference to population centers, roadways, environmental constraints, and other factors.

The overall strategy for the CDP is thus to preliminarily locate sites for future schools that would best serve both the existing and future residents of Waikoloa Village. The **Action Steps** for this strategy are thus as follows:

- **Who should take the lead?** The initial identification of potential school sites will be done through the CDP process, with advice and input from the Waikoloa Village community members.
- **What needs to be done?** Some basic criteria for site sizes and site locations should be established. As of June 2008, the DOE has a new policy that provides size ranges for schools:

Elementary School

Site Size: (400 to 750 students) 8 to 15 useable acres.

Site Location: Not fronting on a highway or regional arterial roadway. Preferably fronting on a local collector road, in a residential neighborhood, with good access via local streets for cars and safe sidewalks and/or paths for children walking or bicycling to school.

The Elementary School site at the Kamakoa Workforce Housing Project is about 12 acres in size; with frontage on the “loop road” that provides access to the various neighborhoods within the project. The loop road and a system of sidewalks and recreational paths provide adequate and safe access to this site. The Elementary School at Kamakoa, together with the existing Elementary School/Middle School, will provide for the community’s needs until such time as the Elementary School/Middle School is converted to a full Middle School campus.

Eventually, then, a second Elementary School site with similar characteristics needs to be located. Potential Elementary School sites include: (1) WVA land in the vicinity of the Castle and Cooke “Wehilani Kai” housing project and (2) land near the proposed small commercial center for the Waikoloa Heights project.

Note that the DOE currently has a second Waikoloa Elementary School programmed to open in 2014.

Middle School

Site Size: (500 to 1000 students) 15 to 20 useable acres.

Site Location: Preferably located with frontage on a major local collector street, but not on a highway or regional arterial road; at the edge of but not contained within a residential neighborhood.

The existing Waikoloa Elementary and Middle School, including its fairly large parking areas, currently occupies about six acres of land, not including the recently completed 3-acre park. There remain approximately 14 acres that were originally intended for a future Waikoloa Middle School. However, the current plan is now to eventually convert the existing Elementary School to a Middle School. The total site size for the Middle School would thus be about 23 acres, which is within the current DOE site size standards. The site fronts on Paniolo Avenue, which is currently the primary collector street for Waikoloa Village. In the long range, however, Paniolo Avenue may become a regional arterial roadway, in which case traffic conditions in the vicinity of this school site may eventually be a problem.

Note: Currently, the DOE has a “Waikoloa Middle School” programmed for opening in 2018.

High School

Site Size: (800 to 1600 students) 45 to 55 useable acres

Site Location: Preferably located with frontage on a major local collector street or regional arterial road, but not on a highway; at the edge of but not contained within a residential neighborhood. Could be located between a residential neighborhood and a commercial or industrial area. For Waikoloa Village, a High School site with frontage on Waikoloa Road or on the planned “Second Access Road” would be preferred.

Currently, the DOE does not have a Waikoloa High School programmed.

Preliminary locations for a possible High School include: (1) Waikoloa Mauka lands in the vicinity of the existing Waikoloa Stables, (2) WVA lands on the north side of Waikoloa Road and just below the Wehilani Kai project, (3) a site within the Bridge ‘Āina Lea project.

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6 KAWAIHAE COMMUNITY PLAN

6.1 CURRENT AND FUTURE PLANS AND DEVELOPMENT

6.1.1 POPULATION

The majority of people who work in the Kawaihae area do not live in the area. Instead, these people commute to work from neighboring communities such as Waimea or Waikoloa. The Kawaihae population figures were estimated from adding population totals for census block groups that were located around the Kawaihae Harbor area. The estimated population of Kawaihae and the nearby Mauna Kea Resort is 321 people, which is approximately 2.4% of the entire South Kohala population.

6.1.2 DEVELOPMENT PATTERNS AND LAND USE

The main development feature of the area is the Kawaihae Harbor. The Kawaihae canoe club utilizes the area north of the commercial harbor. To the south of the commercial harbor is the Kawaihae Small Boat Harbor which will be used by recreational boat users once the harbor's construction is completed. Further south of the small boat harbor is the Pu'ukohola Heiau. Still further south of the small boat harbor and the *heiau* is Spencer Beach Park.

A small commercial center is located on the *mauka* side of Kawaihae Road directly across from the commercial harbor. The businesses in the commercial center include a restaurant and several other smaller stores and shops. Small residential subdivisions are also located in the Kawaihae area to the south and east of the commercial center.



Kawaihae Harbor

Commercial Harbor

The main development feature of the area is the Kawaihae Commercial Harbor. It is the only harbor in West Hawai'i and the only other harbor in the County besides Hilo Harbor. The harbor has two piers and offers combined space for berthing of approximately 1,600 feet. The main pier has a berthing space of 1,150 feet. Barges load and unload at the smaller pier.

The harbor is facing a significant shortage of pier and storage space caused by recent events and also from the anticipated arrival of the Superferry. Pier 1 and Pier 2a were damaged during the October 15, 2006 earthquake and are currently not useable. Only the Hawaiian Cement Co. operates out of Pier 1 with a special use permit from the Coast Guard. Repair monies for the piers from FEMA and insurance companies have not been released because those piers were previously in disrepair prior to the earthquake. It is difficult to distinguish earthquake caused damages from other damages that may have resulted from a lack of pier maintenance.

The recent success of mining and desalinating deep sea water and exporting the desalinated sea water to Japan has maxed out the capacity of the harbor. Currently, Young Brothers ships six barges per week carrying the bottled water to Honolulu. In previous years, the company only needed three barges per week to ship bottled water to Honolulu. However, it is difficult to determine if this trend of high Japanese demand for bottled deep sea water will continue.

Kawaihae Harbor does not currently handle passenger traffic. However, the harbor will soon have to accommodate significant amounts of passenger traffic, as the Hawai'i inter-island Super Ferry is scheduled to begin service to the Big Island in 2009. The Superferry will be able to transport a maximum passenger load of 866 people and 282 passenger cars daily. (Hawai'isuperferry.com) It

was originally planned to have the Superferry dock at Kawaihae Harbor's Pier 1 where passengers disembarking from the ferry could exit the harbor through a separate access gate instead of the main harbor access gate. However, due to the earthquake damage, the Superferry will have to use an alternative pier and disembarking passengers will most likely have to use the main harbor access gate to exit from the harbor. The commercial harbor is also currently being used by 23 light draft recreational vessels. As the commercial harbor operations expand, these vessels will need to be relocated to the DLNR Small Boat Harbor.

South Small Boat Harbor and "Coral Flats"

To the south of the commercial harbor is the Kawaihae South Small Boat Harbor which is planned to be used by recreational boat users. DLNR's Division of Boating and Ocean Resources recently completed a Master Plan for the South Small Boat Harbor. At full project build out, the master plan for the Kawaihae South Small Boat Harbor will provide a main floating dock along the existing revetted coastline with finger piers, a concrete two lane boat launch ramp, loading docks, accessible boat trailer parking in near proximity to the boat launch ramp, accessible comfort stations, buildings for a Boat Club, retail shops, restaurants and administration space, ice-fish storage and fuels docks, and approximately 318 parking spaces to support future growth and development in the Kawaihae South Small Boat Harbor.

A draft EA has been completed for Phase 1 of the small boat harbor improvements. Phase 1 improvements include construction of a 45-foot wide concrete two-lane boat ramp that accesses one of the two fixed loading docks, a main floating dock with an accessible gangway and mooring blocks to berth approximately 30 boats, boat washdown area, a parking area, comfort station, and shower. Phase I of the South Small Boat Harbor is about to enter the bid process. Currently, recreational boaters utilize the North Small Boat Harbor.

The DOT-Harbors division is considering the transfer of ownership of a portion of the land referred to by local residents and users as "Coral Flats" to DLNR-DOBOR. The amount of land that DLNR-DOBOR would receive is dependent upon the type and extent of land utilization that is proposed. The land transfer has not been finalized and is still in negotiation. Currently, the YMCA and a local surf club utilize a portion of the Coral Flats area for educational and recreational programs. The YMCA has partnered with Kanu o ka 'Āina Charter School in Waimea. The YMCA and the school share and maintain an outdoor learning lab at Coral Flats.

Further south of the small boat harbor is the Pu'ukohola Heiau. The heiau is on the register of national historic sites. A little farther south of the small boat harbor and the heiau is Spencer Beach Park.

Department of Hawaiian Home Lands

Up the road to the north of the harbor is the Kawaihae Industrial Park located on DHHL owned lands. DHHL has minimal plans to expand the industrial park. The DHHL industrial park is connected to the Lālāmilo Water System. However, the industrial park was only allotted nine water meters by the County, limiting future development. DHHL plans to offer one water meter for potential industrial use in 2008, but after that meter is in use, there will be no more water meters available for future expansion.

DHHL owns the 10,000 acre Kawaihae ahupua'a that extends from the top of the Kohala Mountains to the sea. DHHL's 2002 Hawai'i Island Plan calls for portions of their Kawaihae tract to be developed for residential, agricultural / pastoral, industrial, and community uses. Currently, DHHL has a partially developed 90-acre park and residential lot subdivision in this area. There are 217 residential homesteads on DHHL Kawaihae land. DHHL has no current plans to develop more residential homestead lots due to lack of potable water. DHHL plans to build two parks along the future Kawaihae Bypass. The makai park will be a larger gathering place and the mauka park will be a smaller playground sized park.

Queen Emma Lands

The Queen Emma Foundation owns approximately 10,200 acres in South Kohala near Kawaihae Harbor. Located on a portion of Queen Emma Lands is the Kawaihae Transitional Housing Program operated by the Catholic Charities of Hawai'i. The transitional housing program consists of a 24-unit facility that has a bed capacity of 104 for families with children. The facility is slated to be closed on June 30, 2009 because it will be too costly to remove its cesspool system and replace the system with an EPA approved wastewater system. The Kawaihae Transitional Housing Program is currently the only shelter program for homeless families in all of West Hawai'i. Residents of the transitional housing program have provided a reliable supply of labor for several of the area's local businesses. The future planned Kaloko Housing Program is planned to help ease the loss of the Kawaihae Transitional Housing Program. However, the Kaloko Housing Program is located in the district of North Kona. Currently, the Queen Emma Foundation has no plans for future development nor does the County have any plans for low-income housing or shelters in South Kohala. The Queen Emma Foundation is considering building a Kawaihae historic museum next to the location of the Kawaihae Transitional Housing.

County Land Use Designations

The maps on the following pages illustrate the General Plan LUPAG and the County zoning designations for the Kawaihae area.

FIGURE 6.1: GENERAL PLAN LUPAG FOR THE KAWAIIHAЕ AREA

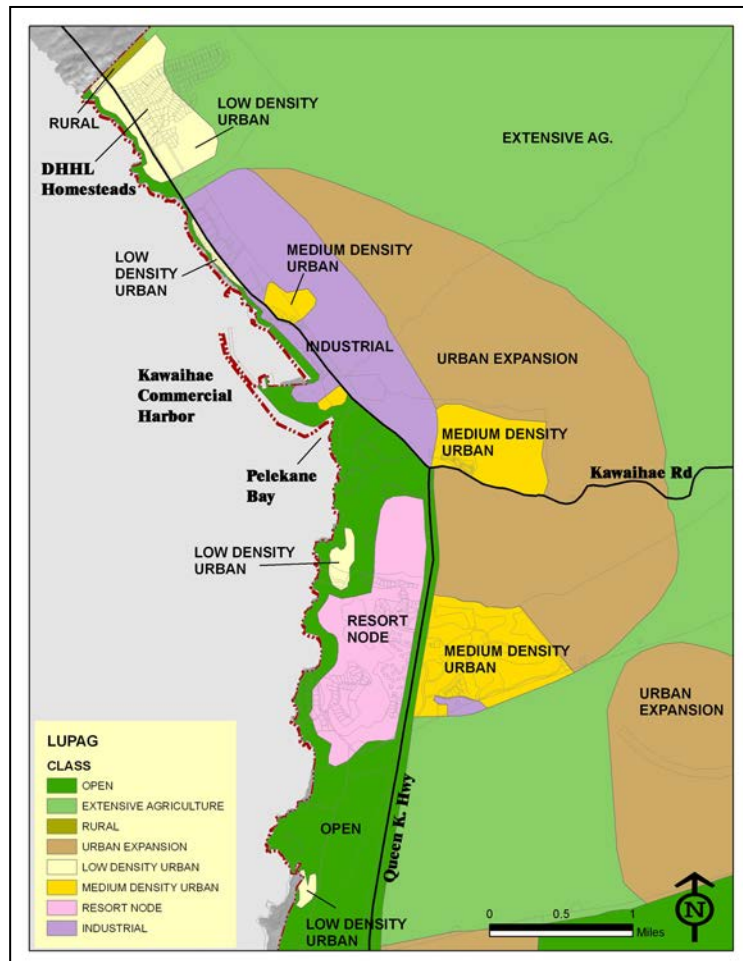
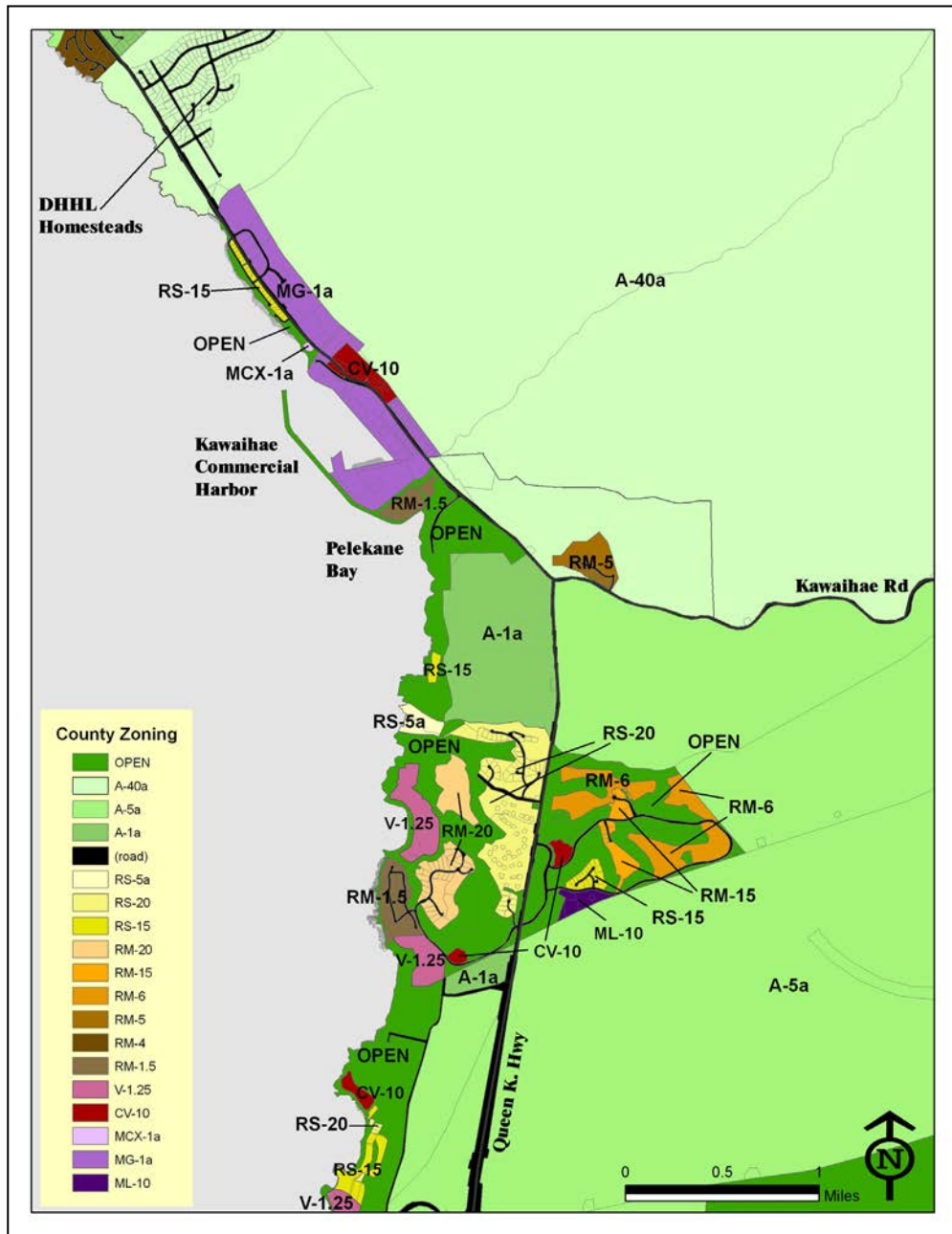


FIGURE 6.2: COUNTY ZONING FOR THE KAWAIIHAE AREA



6.2 KAWAIHAE TOMORROW: KAWAIHAE CONCEPTUAL PLAN & POLICIES

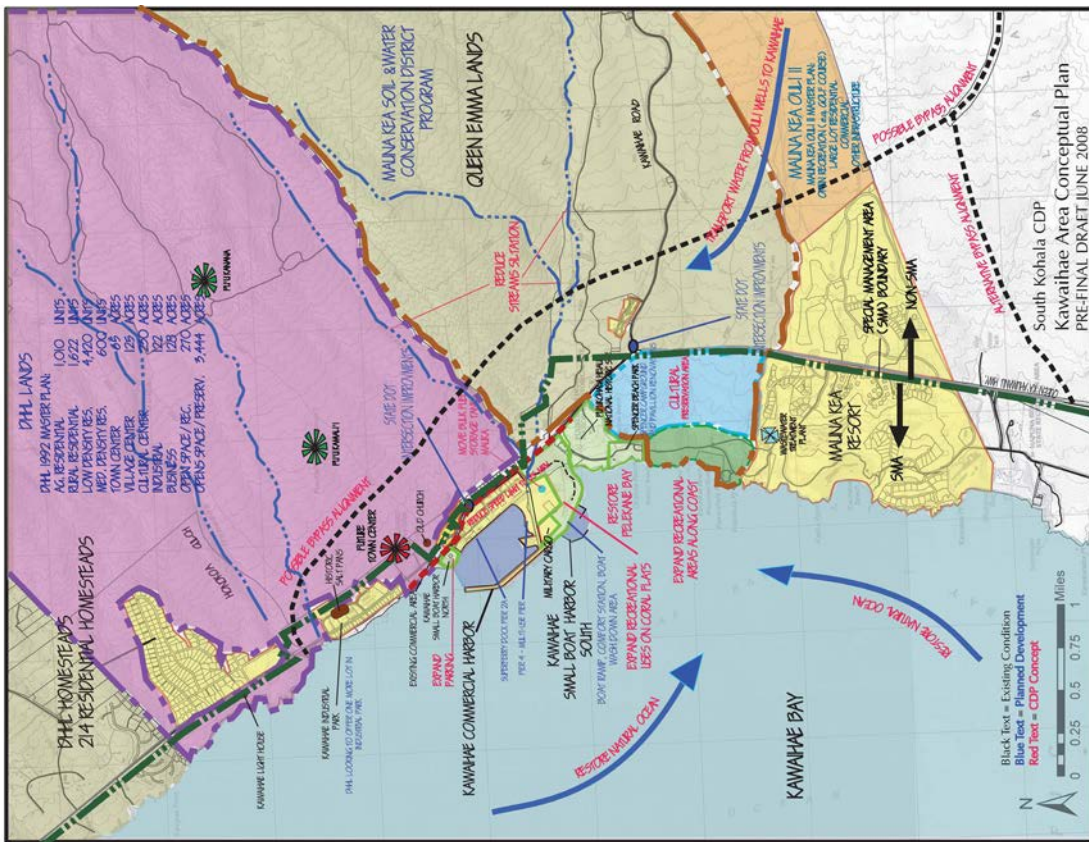
Suggested overall Goals for Land Use for the Kawaihae Community are:

- Kawaihae Policy 1.** The County and State Governments shall work closely with the Kawaihae Community to create a balance of recreational, commercial, and industrial uses around the harbor area while preserving the cultural and historic importance of the area.
- Kawaihae Policy 2** The County Water Department shall seek new sources of potable water for the Kawaihae area.
- Kawaihae Policy 3.** The County shall work with the Kawaihae Community and other State and Federal agencies to improve the ocean water quality along the Kawaihae coast.
- Kawaihae Policy 4.** The County and State Governments shall work closely with the Kawaihae Community to improve traffic safety for both vehicular and non-vehicular transportation along Akoni Pule Highway.

Important elements of the Kawaihae Conceptual plan are summarized below. The text and graphics are not exactly reflective of each other. Some elements in the text may not be reflected in the graphics and some elements in the graphics may not be explained in the text.

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FIGURE 6.3: KAWAIIHAE AREA CONCEPTUAL PLAN



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POLICY 1 CREATE A BALANCE OF RECREATIONAL, COMMERCIAL, AND INDUSTRIAL USES AROUND THE HARBOR AREA WHILE PRESERVING THE CULTURAL AND HISTORIC IMPORTANCE OF THE AREA.

Strategy 1.1: Encourage State DOT to build the Kawaihae Road Bypass through the Kawaihae area

During the November 1, 2007 Focus Group meeting, community members preferred the most mauka alignment alternative for the Kawaihae Bypass. Routing heavy traffic around the village center would allow for the development of a real village center with a sense of place and pedestrian friendly streets.

Strategy 1.2: Encourage the development of a regional industrial park at Kawaihae --

One of the policy recommendations from the County of Hawai'i General Plan is to encourage the development of a regional industrial park. An industrial park in the Kawaihae area would benefit from its close proximity to the Commercial Harbor. The industrial park would also provide more jobs for residents in the region.

Strategy 1.3: Support DOT Commercial Harbor expansion mauka of Akoni Pule Highway --

Another policy recommendation from the County of Hawai'i General Plan is to support the expansion of the DOT Commercial Harbor mauka of Akoni Pule Highway. Current harbor facilities are nearing capacity for cargo storage and as population and economic activity of West Hawai'i increase, there will be a need for more cargo storage space and other harbor facilities. DOT should also be encouraged to move its bulk fuel storage tanks mauka of the highway out of the tsunami inundation zone.

Strategy 1.4: Expand commercial activities around the harbor area --

Focus group members expressed the desire for more commercial activity around the harbor area. Currently, the harbor area is dominated by industrial uses. More commercial activity would help to preserve the "small harbor" quality that community members desire and also allow for more local area businesses to expand.

Strategy 1.5: Expand recreational activities around the harbor area and encourage canoe club activities --

Currently, the DLNR has plans to improve its South Small Boat Harbor facilities as part of its Kawaihae Small Boat Harbor Master Plan. The Master Plan also calls for development of other facilities such as a boat club, restaurant, and open areas to accommodate more recreational users. The County of Hawai'i General Plan also calls for the improvement of picnic and camping areas at Spencer Beach Park. The General Plan LUPAG map also delineates land south of Spencer Beach Park and mauka of Spencer Beach Park as "Open". These "Open" lands could be used for recreational use.

Strategy 1.6: The County shall encourage and support revitalization of Kawaihae's cultural and historic resources --

With the establishment of a County Historic Preservation Commission, the County can work with the community to identify fish spawning locations, burial grounds, church sites, areas that have been historically used for salt making, or other special areas and resources deemed important by the community for preservation and protection.

Preservation of these cultural sites also includes installing proper signage to identify these resources. The preservation and protection of these cultural sites, in particular, the Pu'ukohola Heiau, includes the preservation of view planes for these sites. The Pu'ukohola Heiau should be the dominant visual element of the Kawaihae area. Future developments in the area should preserve viewing planes to the heiau.

Strategy 1.7: Mitigate the effects of industrial sprawl around the harbor and industrial areas --

Industrial sprawl negatively impacts the visual resources of the area. Future utility lines should be placed under ground where feasible in order to protect the visual scenery of Kawaihae. Wires, poles, and transformers block the view of the coastline. Future expansion of harbor and industrial uses should occur in a way that mitigates the impact on view planes and scenic beauty of the area.

Strategy 1.8: Decide on site locations for a community center, affordable housing, and school --

The 1992 DHHL Kawaihae Homestead Master Plan outlined the locations for several of these developments. However, DHHL is encouraged to review and update the 1992 Kawaihae Homestead Master Plan as needed to reflect the changes that have occurred in the region over the last decade and a half.

POLICY 2. ESTABLISH ADDITIONAL SOURCES OF POTABLE WATER FOR THE KAWAIHAE AREA

Strategy 2.1: Complete the development of the Ouli Well Field and transmit the water from Ouli to the Kawaihae area --

The lack of potable water severely limits any new type of development whether it is recreational, commercial, or industrial. Any significant expansion of any of these uses will require a larger amount of potable water. The completion of the development of the Ouli Well Field could provide the Kawaihae area with more water that would allow for more development in the area.

Strategy 2.2: Conduct studies to analyze the economic feasibility of constructing a desalination plant and the environmental impact a desalination plant may have on the surrounding environment --

Future feasibility studies should determine if desalination is worth pursuing from an economic standpoint and also take into consideration the environmental impact a desalination plant may cause, such as the disposal of brine and other by-products of the desalination process.

POLICY 3. IMPROVE THE MARINE WATER QUALITY ALONG THE KAWAIHAE COAST

Strategy 3.1: Engage the Queen Emma land managers, Parker Ranch, Department of Hawaiian Home Lands, National Park Service, watershed experts and the Kawaihae community in a program to re-vegetate the mauka areas of the watershed and reduce erosion and sedimentation --

Improving the near shore water quality along the coast will help to restore fish spawning areas and also remove silt from the underwater Hale o Kapuni Heiau. In addition to maintaining existing partnerships between the large land owners and government agencies in the Kawaihae area, the Pelekane Bay Watershed Sediment Run-off Analysis also recommended the following mitigation strategies:

1. Continued promotion of partnerships among landowners, government agencies, and other stakeholders as a means for addressing the complex and interrelated issues of watershed management.
2. Increase ground cover density into Pelekane Bay from upland watershed use
3. Implement feral goat management and continue to monitor grazing management
4. Minimize the number of fires within and adjacent to the watershed
5. Restoration of Pelekane Bay
6. Implement monitoring programs to measure the success and effectiveness of watershed restoration and protection activities

Strategy 3.2: The community and County shall coordinate with the Army Corps of Engineers and State agencies to dredge Pelekane Bay -- Pelekane Bay is filled in with silt from storm water runoff over the course of many years. While reducing the amount of new sediment that enters the bay will help with the long term health of the bay, the existing sediment needs to be removed in order to restore the bay to its natural condition.

Strategy 3.3: The County of Hawai'i shall work closely with State and Federal Agencies and with the Kawaihae community to design solutions to restore ocean circulation along the Coast through the creation of a washout channel -- In the long run, it may be necessary to restore the natural circulation of the harbor in addition to reducing sediment runoff into Pelekane Bay and dredging Pelekane Bay. If sediment run off into the bay is reduced significantly over time but large amounts of silt still collects in the bay, then restoration of the natural ocean circulation may still be necessary to "wash out" the silt from the bay.

It will take a collaborative interagency approach that involves community participation to restore the natural ocean circulation along the coast. State agencies such as the DOT and DLNR as well as the Army Corps of Engineers will need to participate in the process. The County and the community can help to initiate the process by bringing all the players to the table.

POLICY 4. IMPROVE TRAFFIC SAFETY FOR VEHICULAR AND NON-VEHICULAR TRANSPORTATION ALONG AKONI PULE HIGHWAY

Strategy 4.1: Reduce the Speed Limit from 35 mph to 25 mph along Akoni Pule Highway in the vicinity of Kawaihae Harbor as indicated on the Conceptual Plan Map -- Upon completion of the Kawaihae Bypass, the speed limit along Akoni Pule Highway should be reduced in order to improve safety for both vehicular and non-vehicular traffic.

Strategy 4.2: Prohibit parking along the shoulder of Kawaihae Road to allow more room for pedestrians and bicyclists -- Often, the shoulder along the roadway is blocked by parked cars, forcing pedestrians and bicyclists to walk or bike dangerously close to on-coming traffic. Restricting cars from parking along the highway would give pedestrians and bicyclists more room to travel safely along the highway.

Strategy 4.3: Form an agreement with DLNR to utilize the land by the old cattle loading area for overflow parking from local businesses -- Many of the people who park their cars along the highway are patrons of local businesses and shops. Alternative spaces for parking will be needed. A possible site for more parking is the space near the old cattle loading area. The area is directly across from existing commercial shops

Strategy 4.4: Construct pedestrian paths and bikeways along Akoni Pule Hwy. through the Kawaihae corridor and add appropriate signage to increase safety -- Well designed pedestrian and bike paths will not only clearly designate these areas for non-vehicular traffic, but well designed pedestrian and bike paths will also encourage more people to walk and bike along the roadway. Also, more signage is needed on the Kawaihae Road to increase safety for bikers and pedestrians.

6.3 ACTION PROGRAMS FOR KAWAIHAE

Action Program details are provided for the following Conceptual Plan elements:

1. **Provide for additional sources of water for the Kawaihae area**
2. **Restore the ocean water quality along the coast**
3. **Implement traffic safety measures**

6.3.1. ACTION PROGRAM - PROVIDE ADDITIONAL SOURCES OF POTABLE WATER FOR THE KAWAIHAE AREA

The Need for Action

As mentioned previously, the lack of potable water severely limits any new type of development whether it is recreational, commercial, or industrial. In 1992, the Department of Hawaiian Home Lands completed its Kawaihae Ten-Year Master Plan. Since then, very few of the DHHL Kawaihae Master Plan's elements have been implemented, primarily due to the lack of potable water. The Kawaihae community would like to see more opportunities available for more commercial, residential, recreational, and community activities in the area. Expansion of any of these activities will require more potable water.

Strategy 1.1: Complete the development of the Ouli Well Field and transmit the water from Ouli to the Kawaihae area

Overview

There are three wells in the Ouli Well Field. Bridge 'Āina Le'a estimates the sustainable yield of the Ouli well field at approximately 2.2 MGD. Each of the three wells is estimated to provide 1.1 MGD of water. However, one well will be used as a back-up well and will not be in regular use. 2.2 MGD of water would be enough to provide for the needs of about 9,000 people or 4,000 households.

The County negotiated a water development agreement with Bridge 'Āina Le'a in 2006. The agreement calls for Bridge to develop the Ouli Well Field and design and construct a transmission system to connect the water from the Ouli Wells with the Lālāmilo Water System to service the Mauna Kea Resort and Kawaihae areas. The County would receive **20%** of the water source while Bridge would receive **80%**. The Lālāmilo Water System would receive an estimated additional 0.8 MGD (2.2 MGD × 20% = 0.8 MGD), enough water to accommodate 3,200 people or 1,600 households.

In addition, Bridge 'Āina Le'a would also provide 2 million gallons of water storage capacity. More importantly, the DWS Lālāmilo Water System would become a dual source system, as the Ouli wells would provide a back-up source of water to the system. In exchange for developing the Ouli Wells, Bridge would be allowed to connect to the water system facilities in Lālāmilo.

It should be noted that over 15 years ago, the County Department of Water Supply commissioned a preliminary engineering study for the development of well fields in North Kohala and a major water transmission line that would transport that water to the South Kohala Resorts. Based on 1993 costs, the estimated cost for this major project was \$80 million. That number would be in the range of \$200 million in 2008. The project was discontinued when exploratory wells indicated that the potential North Kohala well fields had significantly lower yields than had been assumed.

The **Action Program** for developing an alternative source of water for the Lālāmilo Water System is as follows:

- **Who will take the lead** – Bridge ‘Āina Le‘a LLC with assistance from the County Department of Water Supply.
- **What needs to be done** – Bridge ‘Āina Le‘a LLC needs to plan, finance, and construct the water infrastructure at Ouli.

Bridge could also form a partnership with the Department of Hawaiian Home Lands to help finance the development of the well field in exchange for allowing DHHL Kawaihae Homesteads to be connected to the Lālāmilo Water System.

Development of this well field would include construction of the three wells, construction of water storage reservoirs and transmission lines, and water system hardware to tie the system to Kawaihae Harbor and the DHHL Kawaihae Homesteads.

- **When will actions take place** – Upon enactment of the CDP, initial agreements between the parties could be reached within one year – provided that Bridge ‘Āina Le‘a LLC is prepared to move forward with the Villages of ‘Āina Le‘a project. In the event that this project does not move forward – which may well be the case, given the slowing of development projects throughout the U.S. and the growing scarcity of loan monies – it may be possible for the County and DHHL to work out a lease or purchase agreement with Bridge ‘Āina Le‘a LLC.
- **How much will it cost** – Full development of the Ouli Well Field may cost in the range of \$10 million to \$20 million.
- **Intended Outcome** – With the Ouli Wells as an additional source of water for the Lālāmilo Water System, there will be additional water that can be provided to Kawaihae Harbor, the DHHL Kawaihae Homesteads, and other future commercial, residential, recreational, and industrial uses in the area.

6.3.2 ACTION PROGRAM - IMPROVE OCEAN WATER QUALITY ALONG THE KAWAIHAE COAST

The Need for Action

Kawaihae was known for its pristine marine waters. The waters off of Kawaihae once supported a diverse array of marine life. Local residents would like to see Kawaihae continue its tradition of fishing for years to come. The waters off of Kawaihae were also used extensively for recreational purposes; it was one of Kamehameha’s favorite surfing spots and old timers reminisce that the coastal waters were once their “playground.”

However, the marine waters off of Kawaihae have become stressed from significant alterations to the coastline from the development of the commercial harbor and also from increased sedimentation that enters the coastal waters from area streams. The manmade Coral Flats and the breakwater block the natural ocean circulation along the coast.



Pu'ukohola Heiau overlooking the muddy waters of Pelekane Bay

Consequently, silt and other pollutants are trapped at Pelekane Bay. Before the harbor was built, the ocean currents cleaned out the waters of the bay. Actions to improve the marine water quality along the coast involve **moving forward with feasibility studies to examine different alternative strategies or a combination of strategies for improving marine water quality**. Previously proposed mitigation strategies included but were not limited to: mitigating the amount of sediment run off that enters the ocean, dredging Pelekane Bay to remove the existing silt buildup, and restoration of the natural ocean circulation along the coast line by constructing a “wash-out” circulation channel.

Strategy 2.1: Move forward with feasibility studies to examine different alternative strategies to improve marine water quality along the coast.

Overview

The 2005 Pelekane Bay Watershed Management Plan (PBWP), prepared by Mauna Kea Soil and Water Conservation District (MKSWCD), outlined several actions to help reduce sedimentation including: the creation of a sediment/catchment basin(s), dredging Pelekane Bay to remove silt, or creating a “washout” channel to restore ocean circulation. All of these potential actions would require significant amounts of funding to implement. In addition, these activities would require intensive inter-agency collaboration at federal, state, and county levels.

There have been differing views over which course of action would be most efficient, feasible to implement, or cost effective. Several community members feel that the loss of near shore circulation is a major reason for the current polluted condition of the bay because the current used to “wash out” the sediments from the bay. However, the State DOT has stated that a circulation channel may not be the most effective solution for restoring the waters of Pelekane Bay. Restoring ocean circulation may not be sufficient to wash out the sediment in the bay and may also cause tidal problems within the harbor. Instead, the State DOT recommends reducing the amount of sediment that enters into the bay through actions that minimize soil erosion. Before any actions are implemented, the Pelekane Bay Watershed Management Plan recommended that studies be undertaken to determine if any of these concepts deserve further attention.

In 2002, the Corps of Engineers, with the Mauna Kea Soil and Water Conservation District (MKSWCD) as the local sponsor, began a feasibility study to assess feasibility of restoration actions, including sediment reduction facilities, erosion control measures, and a circulation channel connecting Kawaihae Harbor with Pelekane Bay. The purpose of the study was to reverse degradation to the coral reef ecosystem and to improve water quality in Pelekane Bay to conditions that existed prior to the development of the Kawaihae Deep Draft Harbor. The Pelekane Bay Watershed Sediment Runoff Analysis, completed in January 2008, was a technical study for the feasibility investigation.

While no funding was required on the local sponsor’s part until the project was approved to continue into the design phase, MKSWCD was seeking an agency with funding to co-sponsor the project. In February 2008, after finding no co-sponsors to financially support the project, the MKSWCD requested termination of the feasibility study due to the lack of sponsor funding.

Unless a new local sponsor is found, the feasibility study investigations of Pelekane Bay will not resume. Currently, no federal funding is being budgeted for the study. The earliest funding that could be available would be in the Federal 2010 fiscal year. A new sponsor will be responsible to cost share the existing phase 50:50 (including past expenses accrued). Should the State DOT assume local sponsorship of the Pelekane Bay Restoration Project, federal funding would still not be available until fiscal year 2010 at the earliest. However, the State DOT is working with the Army Corps of Engineers to utilize the existing Kawaihae Deep Draft Harbor Navigational Study to analyze the circulation channel as it may benefit the circulation of Pelekane Bay and its impact on Kawaihae Harbor. By pursuing this course of action, both State & Federal funds are currently

available to proceed with this specific study. The Army Corps of Engineers will analyze various channel connection alternatives between Kawaihae Commercial Harbor and Pelekane Bay.

The **Action Program** for moving forward to improve the ocean water quality is as follows:

- **Who will take the lead** – State Department of Transportation Harbors Division in coordination with the Army Corps of Engineers, County of Hawai'i and the Kawaihae community.
- **What needs to be done** – The State DOT is working with the Army Corps of Engineers to analyze various alternative channel connections between Kawaihae Commercial Harbor and Pelekane Bay. In conjunction with the analysis, navigational and water circulation impacts within Kawaihae Commercial Harbor will be addressed. .

Currently, the involvement of the State DOT is limited to determining the feasibility of a circulation channel between Pelekane Bay and Kawaihae Harbor. While this is certainly a step in the right direction, other actions in addition to studies of the circulation channel as outlined in the PBWP need to be taken . Other local sponsors will be needed to co-sponsor additional feasibility studies and restoration projects to reduce sedimentation runoff into the bay and also to possibly dredge Pelekane Bay in order to remove existing sediments. Local residents need to organize and ask County elected officials to co-sponsor other Pelekane Bay restoration studies and projects with the Corps of Engineers.

- **When will actions take place** – The State DOT is currently working with the Army Corps of Engineers. Community members need to organize now and speak with elected officials and also with candidates who are seeking elected office and convince them the County should help to sponsor future restoration projects.
- **How much will it cost** – **The cost to complete feasibility studies** will be cost shared 50:50 with the local sponsor and Corps of Engineers. **Design and construction** of restoration projects will be cost shared 25:75 with the local sponsor paying 25% and the Corps paying the remainder 75%. Design and construction costs cannot be estimated at this time for Pelekane Bay restoration projects.

Intended Outcome - Completion of all feasibility studies should identify the best option or combination of options to help with the restoration of Pelekane Bay

6.3.3 ACTION PROGRAM - IMPLEMENT TRAFFIC SAFETY MEASURES

The Need For Action

Although a relatively small traffic corridor, the Akoni-Pule Highway that runs through the Kawaihae area is not a safe roadway due to large industrial vehicles coming and going from the commercial harbor, no clear designated areas for pedestrians and bicyclists to travel, and poor roadway design at several intersections. The community's desire for a balance of commercial, recreational, and residential uses would be better realized if the roadway that passes through the area is safer for both vehicular and non-vehicular traffic.

Strategy 3.1 Reduce the Speed Limit from 35 mph to 25 mph along Akoni Pule Highway in the vicinity of Kawaihae Harbor as indicated on the Conceptual Plan Map.

Overview

Since the Akoni-Pule highway is a major highway connecting North and South Kohala, vehicles that travel along the highway usually speed through Kawaihae. Slowing down the traffic through this corridor would increase the safety for all travelers through the corridor. Well designed pedestrian

and bike paths will not only clearly designate these areas for non-vehicular traffic, but well designed pedestrian and bike paths will also encourage more people to walk and bike along the roadway.

The **Action Program** for developing for reducing the speed limit is as follows:

- **Who will take the lead** – Akoni Pule Highway is a State highway, so the State DOT will set the speed limit for this section of road.
- **What needs to be done** - The County will need to send a formal request to DOT to change the speed limit from 35 mph to 25 mph.
- **When will actions take place** – After enactment of the South Kohala CDP.
- **How much will it cost** – Costs to the State will entail new signage and administrative expenses. These costs should be relatively minor.
- **Intended Outcome:** Slower moving traffic will increase traffic safety along Akoni-Pule Highway through the Kawaihae area and allow for pedestrian friendly streets that will contribute to establishing a village center and sense of place for the area.

7 PUAKŌ COMMUNITY PLAN

7.1 CURRENT AND FUTURE PLANS AND DEVELOPMENTS

7.1.1 POPULATION

Population figures for Puakō were not kept until the 1990 U.S. Census. In 1990, the population of Puakō was 397 people and by 2000 population had increased to 429 people. Of the resident population, 84% are 25 years or older. The residents of Puakō are mostly retirees and second home owners. Most of the residents that do work commute to their jobs in Waimea or to the resorts in South Kohala.

7.1.2 DEVELOPMENT PATTERN AND LAND USE

The community consists mainly of single-family homes that were built along both sides of Puakō Beach Drive. There is one store in the community. The Puakō Store is central to the area and serves as a meeting place and a place for information sharing. The coastline bordering Puakō is home to an extensive coral reef system while the dry lowlands to the east support a large kiawe forest.

The northern end of the community is bordered by residential homes at Waialea Bay and the Hapuna State Recreational Area. The State Recreational Area includes several beaches including Hapuna Beach and Beach 69. Local residents, residents from around the whole island, and tourists frequent these beaches, making them some of the most popular and crowded beaches on the island. The southern end of the community is called Paniau, a surf spot with a rocky beach. Further south is Holoholokai Beach Park and the Mauna Lani Resort. Puakō also contains several cultural and historical sites, including the Puakō petroglyph field and the Hokuhoa Church.



Hapuna Beach State Park

In addition to its marine and coastal resources, another major natural resource unique to Puakō is an underground aquifer that supports to a dense kiawe forest. The Puakō forest is very lush and productive. The underground aquifer is regarded by some as a “natural oasis in a desert like climate.” These large kiawe trees produce flowers heavy with nectar. A small bee-keeping company is producing internationally known gourmet quality honey from these trees.

7.1.3 MAJOR DEVELOPMENTS

Within the core community of Puakō along Puakō Beach Drive, there is little or no room for major development. However, there are several large developments outside of the core community that may have a significant impact on Puakō. The Villages of ‘Āina Le‘a, a development on the mauka side of Queen Ka‘ahumanu Highway almost directly across from Puakō, has proposed to develop 2,406 multi- and single- units, not more than five golf courses, golf academy, commercial villages, and a 40-unit resort lodge. The development also includes 863 lots in the State agriculture land use district. In addition to these developments, 234 acres will be set aside for open space and 26 acres will be used for parks. A five acre red ilima preserve area is also planned. The total project area is approximately 3,000 acres.

Another major proposed project within the Mauna Lani Resort and mauka of the Puakō forest, is the Stanford Carr Development for which, 691 residential units, 284 hotel units, and three golf holes are

planned. On the mauka end of the Puakō forest, a private company, Colony Capital, is planning to develop a golf course.

Puakō Bay Investors LLC is planning to develop an 8-lot single family residential subdivision along Puakō Beach Drive near the Puakō small boat ramp. Also, the University of Hawai'i is considering building a marine research center on land on the northern side of the small boat ramp.

County Land Use Designations

The maps on the following page illustrate the County of Hawai'i General Plan Land Use Pattern Allocation Guide (LUPAG) and current County zoning of lands in the Puakō area.

FIGURE 7.1: GENERAL PLAN LUPAG DESIGNATION FOR PUAKŌ

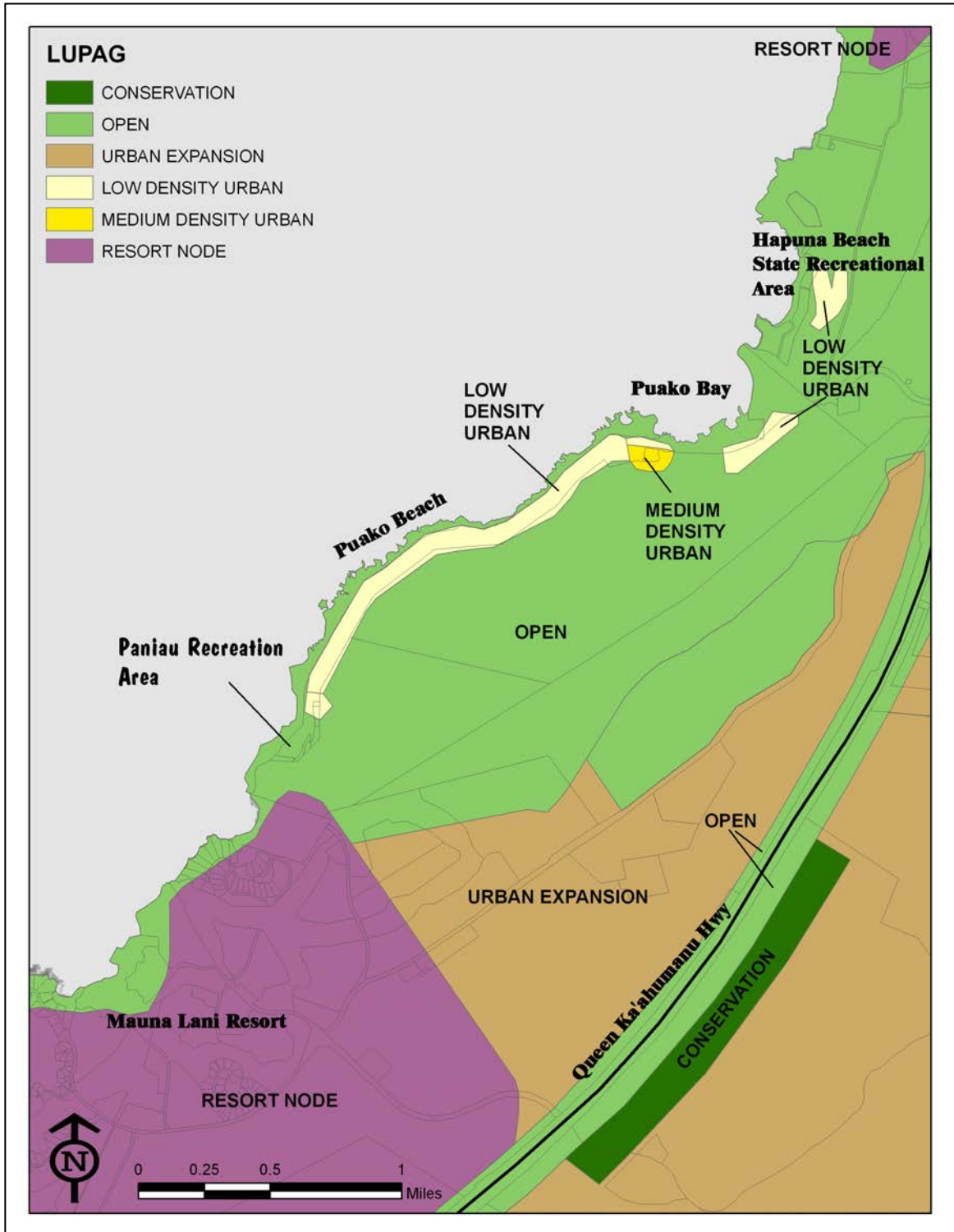
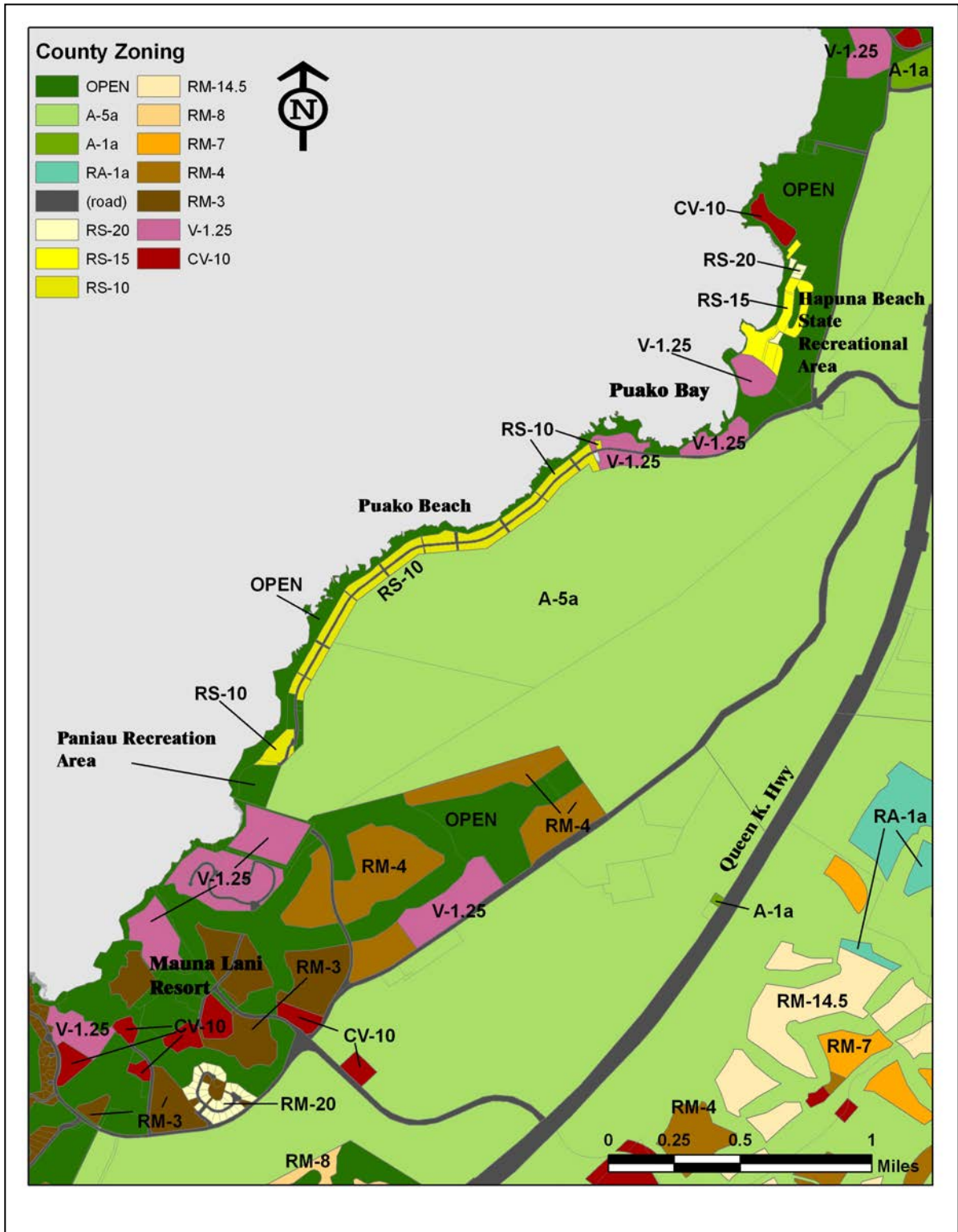


FIGURE 7.2: COUNTY ZONING FOR PUAKŌ



There are some areas in Puakō that are zoned resort (V-1.25). However, it is important to note that some of these resort zoned areas are designated as either low density or medium density by the General Plan LUPAG. Therefore, if these properties apply for SMA permits (these properties are also all in the SMA as well), the properties cannot be developed to the zoned density because it would be inconsistent with the General Plan LUPAG map.

7.2 PUAKŌ TOMORROW: PUAKŌ CONCEPTUAL PLAN & POLICIES

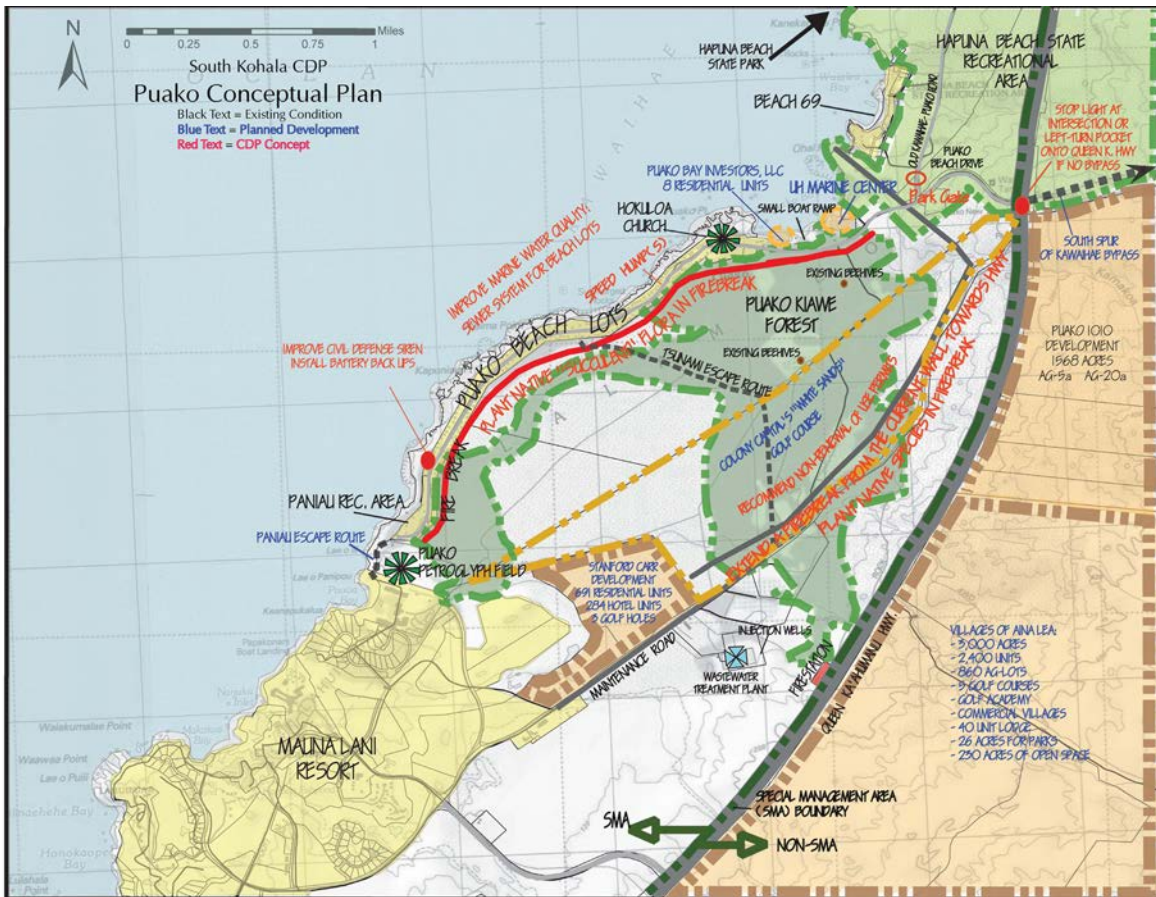
Suggested overall Goals for the Puakō Community are:

- Puakō Policy 1. MANAGE THE EFFECTS OF GROWTH AND DEVELOPMENT**
The County Government shall work closely with the Puakō Community to manage the effects of growth and development in a responsible manner.
- Puakō Policy 2. MITIGATE THE RISKS OF NATURAL DISASTERS**
The County Government and the Puakō Community shall work with other State and Federal agencies to reduce the risk to life and property from natural disasters.
- Puakō Policy 3. ENVIRONMENTAL STEWARDSHIP**
The County Government and the Puakō Community shall work with other State and Federal agencies to protect and manage the rich coastal and near shore marine environment.
- Puakō Policy 4. INCREASE TRAFFIC SAFETY**
The County Government shall work closely with the Puakō Community to improve traffic safety.

Important related land use strategies for the Puakō Community are summarized on the following pages:

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FIGURE 7.3 PUAKO CONCEPTUAL PLAN



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POLICY 1. . MANAGE THE EFFECTS OF GROWTH AND DEVELOPMENT

Strategy 1.1 Preserve the historical integrity of Puakō -- Historically, Puakō was a small fishing village. The petroglyph field is a unique resource of the pre-contact period. The Hokuloa Church, built in 1858, is still used today for weekly services and community meetings. The Puakō Sugar Plantation was established in 1895. The area was also used for cattle grazing and pig farming. For over 100 years the Puakō forest has been an important apiary and has supported a substantial honey business. These elements of Puakō's past should be preserved.

Strategy 1.2 Mitigate the impacts of development within the Puakō Community – The low density, single family home character of Puakō makes this area a very desirable and pleasant place to live. Some privately owned land at the north end of Puakō Beach Drive is zoned for urban development. However, the overwhelming majority of residents in Puakō oppose any development in this area that is not in keeping with the existing character of the community. Multi-family, resort related, and multi-story structures should be prohibited.

Strategy 1.3 Mitigate the impacts of development in the surrounding area -- Full build-out of permitted housing projects in the Waikoloa and Mauna Lani area adjacent to Puakō would result in over 4,000 additional single family homes and condominiums. In addition, one option under consideration for the proposed Kawaihae bypass road would result in significantly increased use of Puakō Beach Drive by non-residents. The Superferry will also impact Puakō and Waialea Bay directly because of its proximity to the Kawaihae Harbor. Taken together, anticipated growth in the area has the potential to severely impact the integrity and character of the Puakō community. To mitigate these impacts, the following actions are proposed:

- The State Division of Land Management and/or the Division of State Parks should actively manage public use of the Paniau "park" area at the south end of Puakō Beach Drive by controlling illegal activities (e.g. camping, open fires, alcohol consumption, human waste, etc.), constructing necessary infrastructure and enlisting enforcement support from the Division of Conservation and Resource Enforcement (DOCARE) and County Police.
- Similar problems exist at the Hapuna Beach Recreation area. The County should transfer control of the Old Puakō Beach Road to the Division of State Parks. State Parks will then be able to secure the perimeters of the Hapuna Beach Recreation area at night by gating the entry points at both ends.
- The State DLNR's Division of Boating and Ocean Recreation should actively manage increasing public use of the Puakō boat ramp and expand facilities as necessary.
- The County of Hawai'i should actively manage the designated pedestrian and vehicle access corridors within the community to ensure that they remain accessible, clear of vegetation, and be kept in sanitary condition.
- Regulations to control vehicle speeding on Puakō Beach Drive should be aggressively enforced. Additional action should be taken to reduce the frequency of burglaries in the Puakō community.
- The County should aggressively assert its jurisdiction over Puakō Beach Drive to prevent encroachment of vegetation, parking within the right-of-way and deterioration of the bike lane.

Strategy 1.4 Mitigate the impacts of surrounding land uses on historical and cultural resources --

There have been several instances in the community where uses next to a historical or cultural resource have impinged upon the use and enjoyment of the resource. For instance, there are parcels that are zoned 'Resort' that neighbor the Hokuloa Church. Uses of the resort zoned properties have sometimes interfered and conflicted with the use of the church. Interferences such as these have diminished the enjoyment of historical and cultural sites. Adjacent property users should be encouraged to be "good neighbors."

POLICY 2. MITIGATE THE RISK OF NATURAL DISASTERS

Strategy 2.1 Support the construction of the Paniau Evacuation Route -- Puakō has one paved access road, Puakō Beach Drive, which provides access into and out of the community from the north. Having only one access way to the north is potentially hazardous, especially since brushfires may come from the northeast and move in a southwest direction with trade winds, cutting off the northern path of escape. There are current plans to construct a southern evacuation route at Paniau. The Puakō Community Association has nearly completed studies needed to file Conservation District Use and Special Management Area permits in order to commence construction of this route. Various governmental agencies, including State and County Civil Defense, County Council members, and the State Representative, have offered help.

The community considers the construction of the Paniau Evacuation Route as a top priority. The route should be completed before other evacuation routes are considered.

Strategy 2.2 Maintain existing fuel break behind mauka houselots -- During and immediately after the October 2007 fire, the County used bulldozers to clear and expand the fuel break from Paniau, north to the road leading to the Puakō boat ramp. Rainfall in December caused buffel grass to grow on much of the exposed fuel break areas. The Puakō Community Association contracted to hydroseed additional areas with exposed soil, to minimize wind-blown dust and deter reemergence of kiawe. Over the longer term, the community association plans to experiment with more succulent and fire resistant plant species. The Puakō Community Association plans to also work with the State and County to explore strategies that will mitigate the fire hazard resulting from the piles of kiawe debris left during the bulldozing work.

Installation of a water pipeline along the full length of the fuel break would facilitate fire response and provide irrigation water for planting. The water sources for the pipeline could be (1) recycled treated water from the Mauna Lani Waste Water Treatment Plant or a future smaller scale community waste water treatment facility, and (2) the County water system.

Strategy 2.3 Establish a fuel break between Queen Ka'ahumanu Highway and the northeastern section of Puakō Beach Drive -- The current fuel break is located in close proximity to and behind the mauka beach lots. The location of the current fuel break does little to prevent wildfires from burning the kiawe forest. Should a wildfire reach the forest, the fire may increase tremendously in intensity as kiawe wood has a high fuel load or quickly race across the tops of the trees in a crown fire. The location of the current fuel break will not prevent a strong fire from engulfing homes and the uniqueness of Puakō's forest would be destroyed with significant negative impacts to the offshore reef. Most fires start along roads and highways. With the strong trade winds from the northeast, the greatest fire vector and threat to Puakō may be a fire that starts along Queen Ka'ahumanu Highway or the northeast section of Puakō Road. Establishing a fuel break between Queen Ka'ahumanu Highway and the northeastern portion of Puakō Road will better protect homes, the kiawe forest, and reef.

Strategy 2.4 - Mitigate flooding from Kamakoa Gulch -- Much of the flooding that occurs in Puakō comes from Kamakoa Gulch. Flood mitigation measures such as clearing and maintaining of the ditch around Kamakoa Gulch need to be implemented either at the mouth of the gulch or further up mauka to control the flooding in Puakō.

Detention basins downstream of Kamakoa Gulch, which can be located within the existing flood plain, should be employed to capture and retain flood waters.

An early warning system for floods needs to be employed. The system would be triggered by large rain events mauka (specifically in places such as Waikoloa Village or the new developments in the surrounding area of the Village). There are three gulches that empty into the Puakō flood plain and they all need to be monitored in mauka areas so that the Puakō community can be warned of an imminent flood. The flood warning system could be integrated with the sirens that already exist.

Strategy 2.5 Encourage more community participation in hazard mitigation activities and emergency response training -- Picking up litter that may contribute to ignition of a wildfire is a good example of an activity that communities can participate in to mitigate a hazard. Wildfires may be caused by littering and illegal dumping of rubbish in public areas, especially if the rubbish includes glass fragments. In the hot sun, glass may cause grass to catch fire. Regular monitoring and cleanup of rubbish may help to reduce the chance of wildfire, especially along Queen Ka'ahumanu Highway.

The Community Emergency Response Team (CERT) Program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Using the training learned in the classroom and during exercises, CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. CERT members also are encouraged to support emergency response agencies by taking a more active role in emergency preparedness projects in their community. To date, only one CERT class has been held in Puakō and only three residents took part in that training. The Puakō Community Association plans to approach the County to schedule additional training in the community.

Strategy 2.6 Upgrade existing emergency warning signals to have back up electrical power in the event that a power outage occurs -- There is a concern that these sirens will not function if power lines are downed. An early warning system for natural disasters would give residents more time to prepare for oncoming natural disasters and may save lives. However, there may also be a lack of widespread knowledge in the community of what the appropriate response is when the sirens are activated. Thus an awareness and education program needs to be implemented in conjunction with construction of more emergency warning signals.

POLICY 3. ENVIRONMENTAL STEWARDSHIP

Strategy 3.1 Work with Mauna Lani Resort, County Department of Environmental Management, and other State and Federal agencies on possible construction of a sewer system for the Puakō community -- A sewer system would reduce the amount of untreated effluent entering the ocean from Puakō. However, this idea has been proposed in the past, but has never been implemented because the project would be very costly. Coordination among various government agencies at different levels to provide funding should be possible because the coastal waters are a natural resource not just for the immediate community, but for the larger region as well.

The Mauna Lani Waste Water Treatment Plant could accommodate and treat waste water from a Puakō waste water system. However, hook-up to the Mauna Lani Treatment Plant may be quite costly as waste water would most likely have to be pumped to the Mauna Lani Plant due to the topography of the area.

Alternative waste water treatment systems that would be more appropriate for smaller communities such as Puakō should also be considered. For instance, *Effluent Sewers* (also known as Septic Tank Effluent Pump (STEP) systems) are starting to be recognized as effective and economical waste water systems for small to mid-sized communities in environmentally sensitive areas and have been used by many coastal communities on the West Coast. Effluent Sewers have been known to be cheaper than traditional gravity sewers.

The community has voiced a strong desire that treated waste water be used for irrigation of fuel breaks or the kiawe forest, regardless of the sewer technology that will be eventually chosen. Using treated waste water for irrigation should be a requirement to be included in future waste water system feasibility studies.

Strategy 3.2 Encourage the development of the University of Hawai'i Kalākaua Marine Center on the parcel of land near the Puakō Boat Ramp -- Although the specific research activities at the proposed Marine Research Center are still to be determined, the center could play an important role in helping to improve the marine water quality of the nearby area. One possible role that the marine center could fulfill is conducting regular marine water quality monitoring. Should future water quality monitoring show that the coastal waters are put at severe risk by nearby coastal developments, it would be more likely that public monies would be allocated to remedy the pollution from coastal developments. In any case, consistent monitoring and data collection should be maintained for the near shore waters.

Strategy 3.3: Consider a wide range of management options for the Puakō forest -- The kiawe forest here is a "one of a kind" natural resource unique to Puakō. Kiawe trees in this forest are 60 feet high, while average kiawe trees only reach heights of 15 feet. It has been suggested that the kiawe forest could be utilized as a multi-use park for recreation, food production, and the restoration of native plant species. Designing a system of trails and access ways into the forest would allow people to safely hike through the forest. The forest is also a source of food production, as a small local company produces organic honey. The honey is of gourmet quality and is world renowned. The dense canopy of the 60 foot kiawe trees would shade native plant species and allow them to grow.

Several management options to preserve the forest from future development include: putting the forest into the State Hapuna Beach Recreational area or some other type of conservation easement, purchase by a conservation buyer, change in management within DLNR, or the formation of a non-profit management group to manage the forest.

Proper management of the forest also includes thinning the forest to reduce the fuel load. If done in a prudent, well-planned manner, thinning the forest may not only reduce the fuel load, it can also be economically profitable. Kiawe wood can be sold as firewood or other related products such as kiawe flour, honey, and artisan wood could be provided. Money earned from the sale of kiawe wood could go back into the management of the forest.

However, before any of the above benefits can be realized, the forest must first be protected from development. A portion of the forest is under possible threat of development. Colony Capital has plans to develop a portion of the forest (TMK: 6-8-001-022) into a golf course. The parcel is approximately 500 acres. There are two County issued permits associated with this project, an SMA permit and a use permit. Currently Plans for the golf course have stalled as no action has taken place since 2001 to develop the golf course. In 2005, Colony Capital requested and received an extension of time until May of 2011 for their permits.

The Planning Department should recommend **non-renewal** of the two permits associated with this project if a time extension is applied for in 2011.

Strategy 3.4 Community and County should collaborate with various State and Federal agencies and various non-profit organizations to share information and provide community resources to manage and protect Puakō's ocean resources -- There are various areas for community and government collaboration to take place in order to manage and protect Puakō's coastal waters. Several opportunities for collaboration include helping with enforcement of current laws and regulations, consistent monitoring coastal resources, and data collection. Currently, State DLNR's Division of Conservation and Resources Enforcement (DOCARE) does not have the resources to hire more officers to regularly monitor the coastline for illegal use of marine resources. A "community watch" type program may help DOCARE officers to prevent poaching along the coast.

Another potential opportunity for community collaboration is with Mālāma Kai Foundation (MKF). MKF is a non-profit organization dedicated to ocean stewardship for current and future generations through community service and public education. The organization raises funds to sponsor projects that help conserve Hawai'i's coastal and marine resources, and educate people about these resources. Currently MKF has helped to install seven day-use mooring buoys along the coast within the vicinity of Puakō. Eventually, more than seven day-use mooring buoys will be needed to accommodate future larger populations of recreational boaters. The Nature Conservancy and Sea Grant currently have been working with the community to monitor public activities on the reef to create a marine project-related website and to conduct shallow and deep water reef transects to document the condition of many reef species. Collaborative efforts such as these should be continued and promoted.

Strategy 3.5 Future development and uses need to take into consideration water quality and promote proper watershed management -- Many of Puakō's issues are centered on water quality. The needs of both the forest and the reef indicate that all efforts in Puakō should be viewed as watershed management issues. Proposed future developments should be evaluated against the criteria of how a development affects water flow and water quality in the watershed. Developments that are more mauka in the watershed, that are outside of the immediate vicinity of Puakō should also be evaluated as well. Developments that adversely affect ground water quality or ocean water quality should not be approved.

POLICY 4. IMPROVE TRAFFIC SAFETY

Strategy 4.1 Consider and decide upon effective and appropriate strategies to improve traffic safety within the community - The Puakō Community Association agrees on the need for speed reduction strategies to increase traffic safety within the community. Possible speed reduction strategies include: speed humps, increased police speed traps, and portable radar speed indicators. However, the community has not reached a consensus on which strategies to implement. Future discussions within the community need to take place in order for the community to reach consensus on which speed reduction strategies should be implemented.

Strategy 4.2: Improve traffic safety for vehicles merging onto Queen Ka'ahumanu Highway from Puakō Beach Drive -- Installing a stoplight at the intersection of Queen Ka'ahumanu and Puakō Beach Drive would help to improve traffic safety of motorists entering and exiting Puakō as vehicles traveling along Queen Ka'ahumanu Highway often travel at 50 mph or more. A stoplight would be necessary if the Kawaihae Road Bypass is located at the Puakō junction. The Puakō community would accept the bypass intersection at the Puakō junction. Furthermore, as a design option, a grade separated (flyover) intersection should be considered if this alignment occurs.

If there is no stoplight, a refuge lane is needed. The State DOT should construct a refuge lane for left turns out of Puakō onto Queen Ka'ahumanu Highway. The refuge lane out of Puakō onto Queen Ka'ahumanu Highway would improve the safety of motorists merging onto the highway traveling north.

7.3 ACTION PROGRAMS FOR PUAKŌ

Action Program details have been developed for the following Conceptual Plan elements:

- Strategy for preserving the Puakō forest
- Strategies for mitigating impacts of natural disasters
- Strategy for improving marine water quality

7.3.1 ACTION PROGRAM – MITIGATE IMPACTS OF NATURAL DISASTERS

The Need for Action

The Puakō community is very vulnerable to natural disasters. Located along the coastline, Puakō is threatened by coastal flooding caused by storm events and by the potential of tsunamis. In 1946, a tsunami struck the South Kohala coastline. Fortunately during 1946, development along the Puakō coast was minimal and few lives were threatened. However, with the current level of development in the Puakō community, a future tsunami would put many lives at risk.

Puakō's location on the dry arid leeward side of the island coupled with strong gusty winds blowing in a south westerly direction make it extremely susceptible to wildfires. The village itself is protected by a fire break but this must be maintained regularly, and over time is often neglected due to lack of resources. The brush fire of 2007 was a very close call for this quiet little community. The community's vulnerability to coastal flooding, tsunami, and wildfire coupled with limited evacuation routes put Puakō's residents at severe risk.

Strategy 1.1 Establish a fuel break between Queen Ka'ahumanu Highway and the northeastern section of Puakō Road.

Overview

As mentioned previously, currently there is a fuel break located in close proximity to and behind the mauka beach lot homes along the kiawe forest. The location of the current fuel break does little to prevent wildfires from burning the forest. Strong winds blowing in a south westerly direction would spread a wildfire to the forest rapidly. Should a wildfire reach the forest, the fire may increase tremendously in intensity as kiawe wood has a high fuel load, or it may quickly race across the tops of trees in a crown fire. The location and size of the current fuel break may not prevent a strong fire from engulfing homes. Furthermore, the uniqueness of Puakō's kiawe forest would be destroyed and the reef would be severely impacted by ash deposition, increased runoff and sedimentation due to the loss of vegetative cover, and increased nutrient input since kiawe trees help to mediate nutrient inputs from groundwater. As development occurs upslope, the role of the forest in protecting water quality and the reef will become more vital. Establishing a fuel break between Queen Ka'ahumanu Highway and the northeastern portion of Puakō Road will better protect homes and also protect the kiawe forest.



Aerial view of Puakō taken a few days after the October 2007 wildfires

The **Action Program** for establishing a fuel break is as follows:

- **Who should take the lead?** Puakō-based subcommittee of the South Kohala CDP Action Committee, and the Puakō Community Association, with assistance from the County

Planning Department, the County Civil Defense, County Department of Public Works, the State Department of Land and Natural Resources, and the Mauna Lani Resort.

- **What needs to be done?** A fuel break needs to be designed, established, and maintained. The Hawai'i Wildfire Management Organization in cooperation with the PCA and landowners is designing a fuel break. HWMO is working to secure funds from FEMA to establish the break. HWMO will ensure maintenance of the fuel break for three years while HWMO works with the community and landowners to identify the best long-term maintenance options, including conversion of fuels to vegetation that does not carry fire as easily as grasses and kiawe.
- **When should actions be initiated?** An application for funding the project has been submitted to FEMA and is being considered for funding. Inclusion of this action in the CDP will increase opportunities for funding from other sources if necessary.
- **How much will it cost?** Fuels management in this landscape is approximately \$8,000 per acre based on previous experience in this area. The fuel break will be between 15 and 30 acres depending on the final width chosen and final funding allotment. Therefore, costs will be between \$120,000 and \$240,000.
- **Intended Outcome:** A fuel break that will mitigate fire would be located along Queen Ka'ahumanu Highway and along the northeastern portion of Puakō Road providing additional protection against wildfire for the Puakō kiawe forest, reef, and homes of Puakō residents.

Strategy 1.2 Upgrade existing emergency warning sirens to have a battery electrical power backup in case of power outages.

Overview

Presently, there are two tsunami warning sirens in Puakō. There is a concern that these sirens will not function if power lines are down. An early warning system for natural disasters would give residents more time to prepare for oncoming natural disasters and may save lives.

The County Civil Defense also needs to help design and provide informational material educating residents of what to do after the emergency signals are activated.

- **Who should take the lead?** Puakō-based subcommittee of the South Kohala CDP Action Committee, with assistance from the County Planning Department, the County Department of Public Works, County Civil Defense, and State Civil Defense.
- **What needs to be done?** The costs to upgrade tsunami warning sirens are covered by State Civil Defense, so a funding request to State Civil Defense will need to be made. Community leaders and County Civil Defense also need to design an educational and awareness program to inform Puakō residents of what to do when emergency warning signals are activated.
- **When should actions be initiated?** Actions can be initiated upon adoption of the CDP.
- **How much will it cost?** An emergency warning siren costs around \$80,000 to install. Costs to upgrade existing warning sirens with a battery back up should be less than the cost of installation of a new signal. The costs of emergency warning sirens are normally covered by State Civil Defense. Designing an educational and awareness program to inform residents of what to do in case the signals are activated would entail administrative staffing

costs and also printing costs or advertising costs depending on what type of program community members and Civil Defense devise. However, overall costs should be minimal.

- **Intended Outcome:** An improved early alert system that will save lives

Strategy 1.3 Construct the Paniau Evacuation Route

The Need for Action

As stated previously, Puakō has only one *paved* evacuation route in case of emergency. Residents agree that another evacuation route is urgently needed. Construction of an escape route in the Paniau area would allow residents to evacuate in a southern direction to Mauna Lani Resort. Currently, the only paved evacuation route is at the north end of the community. If that route becomes blocked, then area residents will be left without a paved escape route. This potential situation could prove disastrous.



Proposed location for the Paniau Evacuation Route

The **Action Program** for the construction of a Paniau escape route is as follows:

- **Who should take the lead?** Puakō Community Association, with assistance from the County Planning Department.
- **What needs to be done?** A Conservation District Use Permit (CDUP) needs to be completed and approved by the State Department of Land and Natural Resources. In addition to the CDUP, a Special Management Area (SMA) permit is also required by the County Planning Department. After obtaining these approvals, further design and construction of the escape route can proceed.
- **When should actions be initiated?** The Puakō Community Association is currently in the process of obtaining the necessary permits and approvals.
- **How much will it cost?** The Puakō Community Association has estimated costs of the escape route to be \$70,000.

Intended Outcome: A second escape route that will increase the safety and welfare of coastal residents in the area.

7.3.2 ACTION PROGRAM – IMPROVING MARINE WATER QUALITY

The Need for Action

The marine waters off of Puakō along with the coral reefs and white sand beaches are not just natural resources enjoyed by Puakō residents; these are natural resources that are enjoyed by the entire district of South Kohala and the County. The coral reefs off the coast by Puakō still teem with diverse marine life. The nearby white sand beaches are arguably the best white sand beaches on the entire island and are a popular recreation spot for both locals and visitors. It is crucial that these unique resources be preserved and protected for future generations.

The marine resources of the South Kohala coastline are under threat from a variety of sources. Marine vessels sometimes anchor illegally on the coral reefs. The anchors drag along the reefs, damaging the reef structure. While rules, regulations, and more environmentally friendly mooring options are in place, enforcement and monitoring are the key actions needed for reducing the damage to the reefs from illegal anchoring.

However, marine waters and reefs are also under threat from sewerage discharges from development along the coast. The Puakō Beach lots have no sewer system; each lot has an individual wastewater system or cesspool system. Wastewater seeps into the marine waters from these cesspools.

The amount of untreated wastewater entering the ocean needs to be reduced. The County General Plan specifically calls for the construction of a sewage treatment system for the Puakō Beach Lots and that the sewerage system should utilize the existing resort waste water treatment plant. Action to protect the marine resources off of Puakō's coast needs to occur sooner rather than later. Delaying action may result in severe damage to the marine environment that may not be able to be undone.

Strategy 2.1: Construct a wastewater treatment system for the Puakō Beach Lots

Overview

In Puakō, the groundwater table is near the surface. With the beach lots on individual wastewater systems and cesspools, the environmental degradation from wastewater will continue until a permanent solution to treat and dispose of the wastewater is found. However, the financing of such a large project is a major barrier to implementation. Quite simply, constructing a sewer system, even for a small community such as Puakō, will be expensive. The major question that needs to be asked is how much residents are willing to pay to protect the marine resources off of Puakō?

The **Action Program** for the financing and construction of a sewer system for the Puakō Beach lots is as follows:

- **Who should take the lead?** Puakō-based subcommittee of the CDP Action Committee, with assistance from the County Planning Department, the County Department of Environmental Management, and the County Finance Department.
- **What needs to be done?** Gauge community interest in setting up an Improvement District to finance costs of constructing a sewer system. The next step would be to do a preliminary engineering study to explore alternative sewer systems for Puakō. The study would cover preliminary costs and alternative financing strategies. The alternatives could include connection with the existing waste water treatment plant that services the Mauna Lani Resort or a small stand alone system for Puakō. The preliminary study should include analysis of the feasibility of treating waste water to R1 quality, i.e., nearly drinking water

quality. The study should also consider the feasibility of using treated waste water for irrigation of fuel breaks or the kiawe forest.

- **When should actions be initiated?** The Puakō subcommittee should conduct a community survey to gauge interest in installing a sewer system.
- **How much will it cost?** Unknown at this time. Depending on the specifications for Waste Water treatment and disposal and on environmental land use factors, a small waste water treatment plant and disposal system might cost \$5 to \$10 million. These costs do not include operation and maintenance cost.
- **Intended Outcome:** Reduction in pollution entering waters off of Puakō and subsequent improvement in marine water quality

8 CDP IMPLEMENTATION

8.1 CDP ACTION COMMITTEE

Throughout the community development plan process residents expressed concern that other critical issues were not being addressed during this initial CDP process. There was also concern that a community-based entity be created to oversee implementation of the plan recommendations.

At the time of this writing, Bill 297, regarding the establishment of *Community Development Plan Action Committees*, had recently been passed by the County Council and was awaiting signature from the Mayor. The CDP Action Committee will consist of nine community members from the particular CDP area. The actual text of the bill is located in **Appendix I**.

The bill specifies the duties of the CDP Action Committee to be the following:

- 1) Provide ongoing guidance and advocacy to advance implementation of the CDP goals, objectives, policies, and actions;
- 2) Broaden community awareness of the CDP;
- 3) Build partnerships, as appropriate, with governmental and community-based organizations to implement CDP policies and actions;
- 4) Provide timely recommendations to the county on priorities relating to the county operational budget and the CIP budget and program;
- 5) Receive periodic briefings from the planning department on pending and approved permit applications involving property located within the planning area, and on other issues related to the CDP;
- 6) Receive briefings from other county agencies, as requested, on priority actions identified in the CDP, which briefings may be integrated and consolidated by the mayor's office or the planning department into a plan of action for the forthcoming year and a status report on the current year's plan of action;
- 7) Monitor the progress and effectiveness of the CDP including the need for CDP revisions based on emerging statewide plans, new technologies, innovative ideas, or changing conditions;
- 8) Review and make recommendations on interim amendments to the CDP;
- 9) Serve as the steering committee, as set forth in the General Plan, in any comprehensive update of the CDP;
- 10) Provide recommendations to amend the General Plan;
- 11) Carry out other duties specified in the CDP and / or in agreement with the Planning Department.

ADDITIONAL DUTIES OF CDP ACTION COMMITTEE

In section 16-6-11 of Bill 297, the bill states that other duties specified in the CDP and/or in agreement with the Planning Department, can be assigned to the CDP Action Committee.

Below are suggested additional duties of the South Kohala CDP Action Committee:

- Review and comment on various types of development applications including subdivisions, PUD's, plan developments, and cluster developments, on a timely basis and provide a public forum for these reviews.
- Coordinate with the Department of Hawaiian Home Lands regarding DHHL developments as well as any proposed CDP actions that may impact DHHL Lands. Coordination with DHHL should also include partnering with or assisting DHHL on issues of mutual concern.
- Establish Standing Committees and/or Ad-Hoc Committees on subject matters related to CDP implementation. Committees may include members of the public as well in order to promote broader participation in the implementation process.

8.2 IMPLEMENTATION MATRIX

Table 8.1 is the implementation matrix for the South Kohala CDP. The Implementation Matrix provides a summary of the actions needed to implement elements of the various *Action Programs* that have been outlined for the four focus areas of Waimea, Waikoloa Village, Kawaihae, and Puakō. The Action Programs are meant to be actions that can be implemented within a short-term period upon enactment of the CDP.

Key to Acronyms in Implementation Matrix

| | |
|--------------|---|
| CCD | County of Hawai'i Civil Defense |
| CDPAC | Community Development Plan Action Committee |
| COE | U.S. Army Corps of Engineers |
| COSC | County Open Space Commission |
| DEM | County Department of Environmental Management |
| DHHL | State Department of Hawaiian Homelands |
| DLNR | State Department of Land and Natural Resources |
| DOT | State Department of Transportation |
| DPW | County of Hawai'i Department of Public Works |
| DWS | County Department of Water Supply |
| HICDC | Hawai'i Island Community Development Corporation |
| HIHT | Hawai'i Island Housing Trust |
| HILT | Hawai'i Island Land Trust |
| HPA | Hawai'i Preparatory Academy |
| OHCD | County Office of Housing and Community Development |
| PATH | People's Advocacy for Trails Hawai'i |
| PD | County of Hawai'i Planning Department |
| SCD | State Civil Defense |

Table 8.1: IMPLEMENTATION MATRIX OF ACTION PROGRAMS

| WAIMEA TOWN PLAN | | | | | |
|------------------------------|---|-----------------|---|---|---|
| No. | Action/Strategy | Page No. | Implementers | Estimated Cost | Intended Impact on Community |
| 1.1 | Acquire Conservation Easements for Critical <i>Pu'u</i> Parcels | 79 | CDPAC, PD, COSC HILT | \$1,000,000 or more | Preservation of Waimea's <i>Pu'u</i> for future generations |
| 1.2 | Require a Use Permit for Grading on Steep Land | 80 | PD | Minimal costs | Preservation of Waimea's <i>Pu'u</i> for future generations |
| 2.1 | Acquisition of Fee Interest or of Conservation Easements of Open Space Areas in East Waimea | 82 | CDPAC, PD, COSC, HILT | \$15,000,000 or more | Preservation of some East Waimea small farms and ranches |
| 2.2 | Internal Transfer of Development Rights | 83 | PD | PD staff time | Critical East Waimea open space and farm areas will be preserved; Also the parcel owner will be able to create a residential lots for use |
| 3.1 | Self-help housing | 84 | CDPAC, HICDC, OHCD | \$220,000 to \$270,000 per 1,100 sqft. house on 7,500 sqft. lot | More affordable housing for the Waimea Community |
| 3.2 | Non-profit housing corporation(s) | 85 | CDPAC, HIHT, OHCD | \$250,000 to \$300,000 per 1,100 sqft. house 7,500 sqft. lot \$600 per month for a 1-bedroom apartment rental | More affordable housing for the Waimea Community |
| 4.1 | Walkways and Bikeways for Waimea | 88 | CDPAC, PD, DPW, DOT, PATH | \$650,000 per mile | Provide residents with alternative, safe modes of transportation, within Waimea Town. |
| WAIKOLOA VILLAGE PLAN | | | | | |
| 1.1 | Finance and construct a second access road to Queen Ka'ahumanu | 107 | County Council Member for NK and SK, PD, DPW, CDPAC, Waikoloa community | \$40,000,000 | 1) Reduce the risk of hazards by providing an alternative evacuation route; 2) Alleviate traffic entering and exiting the village |

| No. | Action/Strategy | Page No. | Implementers | Estimated Cost | Intended Impact on Community |
|--------------------------------|--|----------|---|--|--|
| 2.1 | Finance and construct a community center and community park | 109 | County Council Member for North and South Kohala, with the support of the Mayor's staff; PD, DPW, CDPAC, Waikoloa community | \$10,000,000 or more | Enhance Waikoloa's sense of community and provide recreational programs for all age groups |
| 3.1 | New elementary school, middle school, and high school | 111 | CDP Action Committee, DOE with advice and input from the Waikoloa community | ---- | Provide students in the district with an opportunity to go to school in South Kohala |
| KAWAIHAE COMMUNITY PLAN | | | | | |
| 1.1 | Complete the development of the Ouli Well Field and transmit the water from Ouli to the Kawaihae area in order to provide additional sources of potable water for the area | 125 | Bridge 'Āina Lea LLC with assistance from DWS and possibly DHHL | \$10,000,000 to \$20,000,000 | Provide additional water sources that can provide for more commercial, residential, recreational, and industrial uses in the area. |
| 2.1 | Move forward with feasibility studies to examine alternative strategies to improve marine water quality along the coast | 127 | DOT; COE, CDPAC, Kawaihae community | Feasibility Studies - \$500,000 to \$2,000,000 (Corps of Engineers to cover 50% of the costs) Design and Construction costs Unknown at this time) | Identify the best strategy or strategies to help clean up Pelekane Bay. |
| 3.1 | Reduce the speed limit from 35 mph to 25 mph along Akoni Pule Hwy. in the vicinity of Kawaihae Harbor as indicated on the Conceptual Plan Map | 128 | DOT | Costs to the State will entail new signage and administrative expenses. These should be minimal costs. | Increase traffic safety along Akoni-Pule Highway through the Kawaihae area and encourage pedestrian friendly streets. |

| PUAKŌ COMMUNITY PLAN | | | | | |
|----------------------|--|----------|---------------------------------|--|---|
| No. | Action/Strategy | Page No. | Implementers | Estimated Cost | Intended Impact on Community |
| 1.1 | Establish a fuel break along Queen Ka'ahumanu Highway and the northeastern section of Puakō Road | 143 | DPW, PD, CCD, DLNR, CDPAC | \$120,000 | Protect the Puakō community from wildfires that start along Queen Ka'ahumanu Hwy. |
| 1.2 | Upgrade existing emergency warning sirens to have a battery electrical power backup in case of power outages | 145 | CCD, SCD, DPW, PD, CDPAC | Less than \$80,000 | An improved early alert warning system that will save lives |
| 1.3 | Construct the Paniau Evacuation Route | 145 | Puakō Community Association; PD | \$70,000 | A second escape route that will increase the safety and welfare of coastal residents in the area. |
| 2.1 | Construct a sanitary sewer system for the Puakō Beach Lots | 147 | DEM, PD, CDPAC | \$5,000,000 to \$10,000,000 Including additional future operation and maintenance costs | Reduce pollution entering the waters off of Puakō and improve marine water quality |

9 MONITORING PLAN: Are We Making Progress?

This chapter outlines the types of “indicators” that can be used to monitor the effectiveness of the policies and programs of the South Kohala CDP. An “**indicator**” is something that *helps a community to understand where it is, which way it is going, and how far it is from where it wants to be*. Indicators in the South Kohala CDP will be used to serve as an information resource to provide a snapshot of current community conditions and trends based on selected quantitative and qualitative data gathered from a variety of sources.

A report card will answer each **evaluative question** below with the following grades:

+ GOOD TREND OR PROGRESS

/ NO CHANGE

- NO IMPLEMENTATION ACTION TAKEN, BAD TREND, WORSENING CONDITION

9.1 DISTRICT-WIDE POLICIES MONITORING PROGRAM

9.1.1 PRESERVE THE CULTURE AND SENSE OF PLACE OF SOUTH KOHALA COMMUNITIES

Evaluative Question: How many programs and actions has the County Cultural Resources Commission taken to protect South Kohala historical and cultural sites?

Indicators:

- Number of programs or actions that the Cultural Resources Commission has established to protect South Kohala sites and sites County-wide.

Data Source: County of Hawai‘i Cultural Resources Commission

- Number of sites identified as “culturally important” by the Cultural Resources Commission

Data Source: County of Hawai‘i Cultural Resources Commission

Evaluative Question: Can existing infrastructure systems support planned new developments?

Indicators:

- Number of infrastructure concurrency standards that have been established by the County Planning Department and approved by the South Kohala CDP Action Committee

Data Source: County of Hawai‘i Planning Department

- Number of building permits, subdivision applications, rezoning applications, or plan reviews that have been approved by the County Planning Department in the district of South Kohala.

Data Source: County of Hawai‘i Planning Department

- Number of new capital improvement projects funded by Federal, State, County, or private monies that are in the planning, design, or construction phases in the district of South Kohala.
Data Source: State CIP list, County CIP list.

9.1.2 PROVIDE FOR THE TRANSPORTATION AND CIRCULATION NEEDS OF THE SOUTH KOHALA COMMUNITY AND FOR COMMUTERS TO / FROM SOUTH KOHALA.

Evaluative Question: Has traffic congestion in the district's major population centers improved?

Indicators:

- Traffic counts
Data Source: State DOT Periodic Traffic Surveys in the district's population centers
- Commute Times
Data Source: State DOT Traffic Branch

Evaluative Question: Are we providing alternative choices to reduce dependence on automobiles?

Indicators:

- Increase in total linear miles of pedestrian / bike / equestrian paths in the district
Data Source: County GIS
- Number of bus routes that service areas within the district
Data Source: County Mass Transit Agency
- Number of trips residents take in which they do not use an automobile
Data Source: Community surveys administered by the CDP Action Committee

9.1.3 PROVIDE AFFORDABLE AND WORKFORCE HOUSING RESOURCES FOR LOW AND MODERATE INCOME INDIVIDUALS AND FAMILIES OF SOUTH KOHALA

Evaluative Question: How expensive are the median home prices and rents in South Kohala relative to the average median income of district residents?

Indicators:

- Median home prices and median rent prices in South Kohala
Data Source: Kona Board of Realtors
- Median income for South Kohala residents
Data Source: County of Hawai'i Data Book, U.S. Census, State Department of Business Economic Development and Tourism

Evaluative Question: Has the South Kohala Community organized one or more community-based non-profits for the development of affordable housing?

Indicator:

- Number of affordable housing non-profits that have been organized in South Kohala
Data Source: CDP Action Committee

Evaluative Question: Is the inventory of affordable homes increasing?

Indicators:

- Number of homes where the fee title is owned by government or a non-profit, or a privately owned home subject to buy back, controlled or shared appreciation, by government or a non-profit
Data Source: County Office of Housing and Community Development
- Number of homes on the market that have sale prices below the South Kohala median home price
Data Source: Board of Realtors
- Number of rentals that are being rented below the South Kohala median rental price
Data Source: Board of Realtors
- Number of Hawaiian Homesteads that have been awarded to beneficiaries in South Kohala
Data Source: Department of Hawaiian Home Lands

9.1.4 DEVELOP PROGRAMS AND STANDARDS THAT WILL PROTECT THE SOUTH KOHALA COMMUNITY FROM NATURAL HAZARDS, INCLUDING MAJOR STORMS, FLOODING, TSUNAMI, LAVA FLOWS, AND WILDFIRES

Evaluative question: How many emergency routes are there in the district?

Indicator:

- Number of emergency routes that are in the planning, design, or construction phases of development
Data Source: State CIP list, County CIP list

Evaluative question: How many hazard mitigation programs or standards have been approved by County agencies and the CDP Action Committee?

Indicator:

- Number of standards or programs that have been approved by County agencies and the CDP Action Committee
Data Source: County Planning Department, CDP Action Committee

Evaluative question: Has the threat of natural hazards to lives or property been reduced?

Indicators:

- Number of occurrences of manmade wildfires
Data Source: County Fire Department
- Proximity of wildfire burns to developed areas
Data Source: County Fire Department
- Acreage of land being actively grazed in the district
Data Source: County Finance Department
- Property damage (in dollar amount) or lives that have been lost due to a natural hazard
Data Source: FEMA, Insurance companies, State and County Civil Defense

9.1.5 DEVELOP GUIDELINES AND PROGRAMS THAT PROMOTE ENVIRONMENTAL STEWARDSHIP AND SUSTAINABILITY

Evaluative Question: How well are we protecting our water resources?

Indicators:

- Number of new water conservation measures that have been developed by the County
Data Source: County Department of Water Supply
- Number of water conservation plans that have been submitted by new large scale developments in the district
Data Source: County Department of Water Supply, County Planning Department
- Number of new absorption systems for new septic systems that have been installed in South Kohala
Data Source: County Department of Environmental Management, County Planning Department
- Progress on establishing regular water quality monitoring programs for the district's water resources
Data Source: CDP Action Committee
- Turbidity levels of marine waters of the district
Data Source: State Department of Health
- Bacteria levels in groundwater, anchialine ponds and in sand on beaches
Data Source: State Department of Health

Evaluative Question: Are we promoting green building and green design?

Indicators:

- Number of LEED certified buildings in the district
Data Source: County Planning Department
- Progress made by the County to establish tax incentives to encourage LEED developments
Data Source: County Finance Department, County Clerks Office

Evaluative Question: How well is the County enforcing its lighting code?

Indicators:

- Number of lighting code citations issued by the County
Data Source: County Planning Department
- Level of ambient glare in night time skies
Data Source: Mauna Kea Observatory

Evaluative Question: How well are we managing our watersheds?

Indicators:

- Number of watershed management programs that have been or are planned to be developed
Data Source: CDP Action Committee, County Planning Department
- Number of watershed management projects that have been implemented including: number of vegetative cover restoration projects, number of detention basins, or other run-off control programs
Data Source: CDP Action Committee, County Planning Department
- Marine water quality
Data Source: State Department of Health

9.2 WAIMEA TOWN PLAN MONITORING PROGRAM

9.2.1 PRESERVE THE SENSE OF PLACE OF WAIMEA TOWN

Evaluative Question: Are we maintaining Waimea’s rural character and preserving agriculture?

Indicators:

- Land area in agricultural use or in conservation easements
Data Source: County Planning Department
- Acreage of privately owned lands in the “Pu’u Protection Zone” that has been either voluntarily down-zoned or put into conservation easements.
Data Source: County Planning Department
- Value of tax credits that have been granted to Waimea area farmers
Data Source: County Finance Department
- Progress made on establishing Waimea as an official “historic district”
Data Source: CDP Action Committee
- Number of trees identified by the Waimea Trees Advisory Committee as “exceptional”
Data Source: Waimea Trees Advisory Committee

9.2.2 “RESPONSIBLE GROWTH”: MODERATE THE PACE OF GROWTH AND CHANGE IN WAIMEA

Evaluative Question: Has the pace of growth and change in Waimea increased or decreased?

Indicators:

- Number of acres that have been rezoned by the County of Hawai‘i from agriculture to urban-type uses from year to year
Data Source: County of Hawai‘i Planning Department
- Number of acres that have been re-designated from “Low Density Urban” on the General Plan LUPAG map to less intensive type of LUPAG designation
Data Source: County of Hawai‘i Planning Department
- The rate of Waimea Town’s population growth per decade (as indicated by the U.S. Census, Waimea Census Designated Place)
Data Source: U.S. Census Bureau

Evaluative Question: What is the status of the Parker 2020 Plan implementation?

Indicators:

- Number of building permits issued for the Parker 2020 Plan
Data Source: County of Hawai‘i Planning Department
- Number of linear feet of inter-town constructed roadways (Parker Connector Road and/or Lālāmilo Connector Road)
Data Source: County of Hawai‘i Planning Department

9.2.3 ENVIRONMENTAL STEWARDSHIP

Evaluative Question: Has the amount of land currently identified as IAL increased, decreased, or remained the same?

Indicator:

- Number of acres designated as IAL
Data Source: County of Hawai‘i Planning Department

9.2.4 DEVELOP AFFORDABLE HOUSING FOR WAIMEA

Evaluative Question: How expensive are the median home prices and rents in Waimea relative to the average median income of Waimea residents?

Indicators:

- Median home prices and median rent prices in Waimea
Data Source: Kona Board of Realtors
- Median income for Waimea residents
Data Source: County of Hawai‘i Data Book, U.S. Census, State Department of Business Economic Development and Tourism

Evaluative Question: Has the South Kohala Community and/or Waimea Community organized one or more community-based non-profits?

Indicator:

- Number of affordable housing non-profits that have been organized in South Kohala and/or Waimea

Data Source: CDP Action Committee

Evaluative Question: Is the inventory of affordable homes increasing?

Indicators:

- Number of homes where the fee title is owned by government or a non-profit, or a privately owned home subject to buy back, controlled or shared appreciation, by government or a non-profit

Data Source: County Office of Housing and Community Development data

- Number of homes on the market that have sale prices below the South Kohala median home price

Data Source: Board of Realtors

- Number of rentals that are being rented below the South Kohala median sale price

Data Source: Board of Realtors

- Number of Hawaiian Homesteads that have been awarded to beneficiaries for the Lālāmilo Homesteads or Pu‘u Kapu Homesteads.

Data Source: Department of Hawaiian Home Lands

9.2.5 TIMELY IMPLEMENTATION OF NEEDED TRANSPORTATION AND CIRCULATION IMPROVEMENTS

Evaluative Question: Are we providing alternative choices to reduce dependence on automobiles?

Indicators:

- Increase in total linear miles of pedestrian / bike / equestrian paths in the district

Data Source: County GIS

- Number of trips residents take in which they do not use an automobile

Data Source: Community surveys administered by the CDP Action Committee

Evaluative Question: Has the needed roadway infrastructure been developed to alleviate traffic in Waimea Town?

Indicators:

- Number of linear feet of newly constructed inter-town roadways (Parker Connector Road and/or Lālāmilo Connector Road)

Data Source: County Department of Public Works

- Progress of the Waimea Bypass and/or Kawaihae Road Bypass Projects

Data Source: State Department of Transportation

9.3 WAIKOLA VILLAGE PLAN MONITORING PROGRAM

9.3.1 PROVIDE INFRASTRUCTURE AND FACILITIES FOR A GROWING COMMUNITY

Evaluative Question: Has progress been made to provide Waikoloa Village and the surrounding area with needed infrastructure and facilities?

Indicators:

- Amount of County CIP money designated for Waikoloa area infrastructure projects
Data Source: County Finance Department
- Amount of State CIP money designated for Waikoloa area infrastructure projects
Data Source: State Department of Accounting and General Services
- Number of public/private partnerships that have been formed to provide for infrastructure
Data Source: County Planning Department
- Number of Community Facility Districts that have been implemented
Data Source: County Finance Department

Evaluative Question: Has progress been made with the State Department of Education towards programming future elementary, middle, and high schools in the Waikoloa area?

Indicators:

- Number of commitments made between the Waikoloa community and the State Department of Education for building needed schools in the community.
Data Source: South Kohala Community Action Committee

9.3.2 ENVIRONMENTAL STEWARDSHIP

Evaluative Question: Are the unique natural resources in the Waikoloa area being protected?

Indicator:

- Number of trees in the “Waikoloa Dry Forest Recovery Project” area that are healthy.
Data Source: Waikoloa Village Outdoor Circle

Evaluative Question: Are we doing our part to be more energy-efficient and using renewable energy sources?

Indicators:

- Number of homes with solar photovoltaic or solar hot water heating installations per lot, as a percentage of the total homes
Data Source: County Planning Department
- Number of acres used for alternative energy facilities
Data Source: County Planning Department

9.3.3 PROVIDE TRANSPORTATION AND CIRCULATION IMPROVEMENTS IN A TIMELY MANNER

Evaluative Question: Has progress been made to plan, fund, design, and construct needed roadways in Waikoloa Village?

Indicators:

- Amount of County CIP money designated for Waikoloa area road projects
Data Source: County Finance Department
- Amount of State CIP money designated for Waikoloa area road projects
Data Source: State Department of Accounting and General Services
- Number of public/private partnerships that have been formed to provide for roadways
Data Source: County Planning Department

9.3.4 ENCOURAGE AFFORDABLE HOUSING AND SMART GROWTH

Evaluative Question: Have development patterns become more centered around existing development in the Waikoloa Village area?

Indicators:

- Number of acres of new urban development that have been or will be developed that are within close proximity of Waikoloa Village versus the number of acres of new urban development that have been or will be developed that are not within close proximity of Waikoloa Village
Data Source: County Planning Department
- Number of acres of land that are zoned as Agriculture by the County that are still undeveloped open space areas
Data Source: County Planning Department

9.4 KAWAIHAE COMMUNITY PLAN MONITORING PROGRAM

9.4.1 CREATE A BALANCE OF RECREATIONAL, COMMERCIAL, AND INDUSTRIAL USES AROUND THE HARBOR AREA WHILE PRESERVING THE CULTURAL AND HISTORICAL IMPORTANCE OF THE AREA

Evaluative Question: To what extent have plans been implemented for the Kawaihae area for recreational, commercial, or industrial uses?

Indicators:

- Completion and implementation of the State DOT Commercial Harbors 2030 Plan Update
Data Source: State Department of Transportation Harbors Division
- Implementation progress of the State DLNR Division of Boating and Ocean Recreation Kawaihae Small Boat Harbor Master Plan

Data Source: State DLNR DOBAR

- Implementation progress or update progress of State Department of Hawaiian Homelands Kawaihae Master Plan

Data Source: State Department of Hawaiian Home Lands

- Numbers of acres with readily available access for recreational activities

Data Source: County Planning Department, County Department of Parks and Recreation, State DLNR DOBAR

Evaluative Question: Has the integrity of the community's historic and cultural resources been preserved?

Indicator:

- Number of historic and cultural sites that have been identified by the County Historic Preservation Commission

Data Source: County Historic Preservation Commission

9.4.2 ESTABLISH ADDITIONAL SOURCES OF POTABLE WATER FOR THE KAWAIHAE AREA

Evaluative Question: Has progress been made in developing additional sources of potable water for the Kawaihae area?

Indicators:

- Progress on the development of the Ouli Well Field

Data Source: County Department of Water Supply, Bridge 'Āina Le'a

- Progress on feasibility studies for desalination plant

Data Source: CDP Action Committee

9.4.3 IMPROVE THE MARINE WATER QUALITY ALONG THE KAWAIHAE COAST

Evaluative Question: Has progress been made to improve the marine water quality along the Kawaihae Coast?

Indicators:

- Number of programs planned or being implemented to re-vegetate the mauka areas of the watershed

Data Source: South Kohala CDP Action Committee

- Progress on finding local sponsor(s) to fund feasibility studies and restoration projects for Pelekane Bay

Data Source: South Kohala CDP Action Committee

Evaluative Question: Has the marine water quality along the Kawaihae Coast improved?

Indicators:

- Turbidity levels of marine water in Pelekane Bay
Data Source: State Department of Health
- Bacteria levels in water and in sand on beaches
Data Source: State Department of Health

9.4.4 IMPROVE TRAFFIC SAFETY FOR VEHICULAR AND NON-VEHICULAR TRANSPORTATION ALONG AKONI PULE HIGHWAY

Evaluative Question: Has traffic safety for vehicular and non-vehicular traffic along Akoni Pule Highway improved?

Indicators:

- Number of accidents occurring along roadway corridor
Data Source: County Police Department
- Local community's perception of safe environment along the roadway corridor
Data Source: Survey of local residents

9.5 PUAKŌ COMMUNITY PLAN MONITORING PROGRAM

9.5.1 MANAGE THE EFFECTS OF GROWTH AND DEVELOPMENT

Evaluative Question: Is the historical integrity of Puakō being preserved?

Indicators:

- Physical condition of Puakō historic and cultural resources
Data Source: Puakō Community Association
- Number of new developments built within close proximity of historic and cultural resources
Data Source: County Planning Department
- Number of appropriate programs and activities associated with the historic and cultural resources
Data Source: Puakō Community Association

Evaluative Question: To what degree are the appropriate government agencies managing park areas, recreational facilities, and public access corridors?

Indicators:

- Number of incidences of reported public disturbances at coastal parks and beaches
Data Source: DOCARE, County Police, Puakō Community Association
- Physical condition of park areas, recreational facilities, and (i.e. frequently littered, moderately littered, or rarely littered or sanitary or unsanitary)
Data Source: Puakō Community Association

9.5.2 MITIGATE THE RISKS OF NATURAL DISASTERS

Evaluative Question: To what degree have programs and projects been implemented to mitigate the risks of natural disasters?

Indicators:

- Progress made on the Paniau Evacuation Route
Data Source: County Planning Department, County Department of Public Works
- Condition of existing fuel break behind mauka houseslots
Data Source: Puakō Community Association
- Progress made on establishing a fuel break between Queen Ka‘ahumanu Highway and the northeastern section of Puakō Beach Drive
Data Source: County Department of Public Works, County Planning Department, South Kohala Action Committee
- Number of detention basins in flood plain
Data Source: County Civil Defense, County Planning Department
- Number of early warning systems that have been upgraded
Data Source: County Civil Defense
- Number of Puakō residents who have received CERT training
Data Source: Puakō Community Association

9.5.3 ENVIRONMENTAL STEWARDSHIP

Evaluative Question: Has progress been made to improve the marine water quality along the Puakō Coastline?

Indicators:

- Progress made on planning, designing, and construction of a sewer system for Puakō
Data Source: South Kohala Community Action Committee
- Progress made on establishing community watch programs
Data Source: Puakō Community Association
- Frequency of collecting data on water quality along the Puakō coast
Data Source: State Department of Health

Evaluative Question: Has the marine water quality along the Puakō coastline improved?

Indicators:

- Turbidity levels of marine water in Pelekane Bay
Data Source: State Department of Health
- Bacteria levels in water and in sand on beaches
Data Source: State Department of Health

Evaluative Question: Is the Puakō forest being properly managed?

Indicators:

- Frequency of thinning the forest
Data Source: Puakō Community Association

- Number of recreational programs or plans being designed or implemented for the forest
Data Source: Puakō Community Association

9.5.4 INCREASE TRAFFIC SAFETY

Evaluative Question: Has the Puakō community reached consensus on appropriate courses of action to improve traffic safety?

Indicator:

- Number of traffic safety programs or actions that the community has reached consensus on to implement
Data Source: Puakō Community Association

Evaluative Question: Has progress been made on improving the safety for vehicles merging onto Queen Ka'ahumanu Highway from Puakō Beach Drive?

Indicator:

- Progress made finalizing the Kawaihae Road Bypass
Data Source: State Department of Transportation
- Progress made on planning, designing, and constructing a refuge lane for left turns out of Puakō onto Queen Ka'ahumanu Highway.
Data Source: State Department of Transportation

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10 GLOSSARY

Action Program – The set of steps needed to carry out a “Strategy,” including “WHO will take the lead,” “WHAT needs to be done,” “WHEN will actions take place,” “HOW MUCH will it cost,” and “Intended Outcome.”

Aquifer Sector Area (ASEA) – A large region with hydrogeological similarities. “Sectors reflect broad hydrogeological similarities yet maintain traditional hydrographic, topographic and historical boundaries where possible. An ASEA usually consists of one or more Aquifer System Areas.

Aquifer System Area (ASYA) – An area within an ASEA showing ground water hydraulic continuity.

Cluster Development – Development in which the lots are clustered on a portion of a site so that significant environmental/historical/cultural resources may be preserved or recreational amenities provided. While smaller lot sizes are permitted in a cluster subdivision to preserve open space, the overall density cannot exceed that which is permitted in the zoning district if the site were developed as a conventional subdivision.

Complete Street – A street that is designed and operated to enable safe access for all users including pedestrians, bicyclists, motorists, and bus riders.

Concurrency – An infrastructure finance and growth management policy implemented by local government that is designed to match public facilities and levels of public services (such as streets or recreational facilities) with proportionate levels of private development. When implemented, a concurrency policy withholds land development approval unless selected facilities and services exist in accordance with locally adopted level of service standards by the time the impacts of the land development on those facilities occur.

Conservation Easement - A restriction placed on a piece of property to protect its associated resources. The easement is either voluntarily donated or sold by the landowner and constitutes a legally binding agreement that limits certain types of uses or prevents development from taking place on the land in perpetuity while the land remains in private hands. In many instances, conservation easements protect land for future generations while allowing owners to retain many private property rights and to live on and use their land, at the same time potentially providing them with tax benefits.

Easement - A right to use another person's real estate for a specific purpose. A common type of easement is the right to travel over another person's land, known as a right of way. In addition, property owners commonly grant easements for the placement of utility poles, utility trenches, water lines or sewer lines.

Environmental Assessment (EA) – An informational document prepared in compliance with Chapter 343, Hawai'i Revised Statutes, and which discloses the environmental effects of a proposed action, effects of a proposed action on the economic and social welfare of the community and state, effects of the economic activities arising out of the proposed action, measures proposed to minimize adverse effects, and alternatives to the action and their environmental effects. An EA is usually prepared for proposed actions that are assumed to have no significant impact on the surrounding environment. If it is determined that a project will have a significant impact, then an EIS will be required for the project.

Environmental Impact Statement (EIS) – Similar to an EA, except that an EIS is prepared for projects that are highly likely to have significant impacts on the surrounding environment. An EIS is much

more detailed and thorough than an EA and usually takes a substantially longer time to prepare than an EA.

Farm Dwelling – A single-family dwelling located on or used in connection with a farm, or if the agricultural activity provides income to the family occupying the dwelling.

Firebreak – Areas that are cleared of all vegetation, down to the dirt. Firebreaks are usually cleared by bulldozers and usually require substantial approvals or permits.

Fuelbreak – Areas where vegetation is reduced, but not completely eliminated. Fuelbreaks may also contain vegetation that does not easily carry fire. Fuelbreaks do not usually require substantial approvals or permits.

Green Building – The design, construction, and operation of buildings in an environmentally friendly way.

Injection Well - A well constructed for the purpose of injecting treated water, often wastewater, directly into the ground.

Leadership in Energy and Environmental Design (LEED) – A rating system designed to encourage Green Building. The rating system was designed by the United States Green Building Council. The LEED rating system awards points to projects based on how the project incorporate green building principles into its design and construction.

Leech field - A method used to treat/dispose of sewage in rural areas not accessible to a municipal sewer system. Sewage is permitted to be filtered and eventually discharged into a section of the lot called a leech field

Lot – A building site or a parcel of land shown as a unit on an approved subdivision map, or a survey map.

Land Use Pattern Allocation Guide (LUPAG) – The County of Hawai'i General Plan LUPAG map indicates the General location of various existing and future land uses in relation to each other.

Non-potable water - Water that is unsafe or unpalatable to drink because it contains pollutants, contaminants, minerals, or infective agents

Ordinance – Law enacted by a municipal body, such as a city or county council. Ordinances govern matters not already covered by State or Federal laws.

Ohana Dwelling – A second dwelling unit permitted to be built as a separate or an attached unit on a building site, but does not include a guest house or a farm dwelling.

Plan - A coordinated set of actions, which may not work unless implemented in a fairly comprehensive way.

Planned Unit Development (PUD) - A zoning classification that allows flexibility in the design of a subdivision. PUDs include individually owned units as well as some common space that is jointly owned usually by a community association of which all owners inside of the PUD area are members.

Policies – A specific statement that guides decision-making. It is based on and helps to implement a plan's vision and values. In this document, policies are referred to as either "General Policies" or "Sub-Policies."

Potable water - Water of a quality that is suitable for drinking.

Program - A set of actions that can be implemented individually, any of one which would make a positive contribution to the achievement of a policy.

Purchase of Development Rights – A program where a landowner voluntarily sells his/her rights to develop a parcel of land to a public agency or qualified conservation organization. The landowner retains all other ownership rights attached to the land, and a conservation easement is placed on the land and recorded on the title. The buyer (often a local unit of government or land trust) essentially purchases the right to develop the land and extinguishes that right permanently, thereby assuring that development will not occur on that particular property. In placing such an easement on their farm and/or forest land, participating landowners often take the proceeds from sale of the development rights to invest in their farming operations or retire from the business, and may allow another farmer to purchase the land at lower rates (i.e. rates devoid of development rights).

Reclaimed Wastewater - Wastewater that becomes suitable for a specific beneficial use as a result of treatment.

Run-off – That part of rain, snow or irrigation water that runs off the land into streams or other surface water. It can carry pollutants from the air and land such as soil and sediments into receiving waters such as streams, rivers, lakes, or the ocean.

Special Management Area – The land extending inland from the shoreline as delineated on the maps filed with the County Planning Commission as of June 8, 1977 or as amended pursuant to State of Hawai'i Revised Statutes 205A-23.

Strategies – Specific ways for policies to be reached. The strategies then need a sequence of action steps to be carried out.

Subdivision – The division of a tract of land into defined lots, either improved or unimproved, which can be separately conveyed by sale or lease, and which can be altered or developed.

Sustainable Yield – Forced withdrawal rate of ground water that could be sustained indefinitely from an aquifer without affecting either the quality of the pumped water or the volume rate of pumping. The sustainable yield is meant to be a guide for planning.

Timeshare – A term used to describe a method of use and/or shared ownership of vacation real estate where purchasers acquire a period of time (often one week) in a condominium, apartment or other type of vacation accommodation.

Transfer of Development Rights – The conveyance of the rights to develop from one property to another, typically involving the relocation of development from an area undesirable for development (e.g., environmentally sensitive areas) to an area suited for development.

Watershed – An area of land that contributes runoff to one specific delivery point; large watersheds may be composed of several smaller "sub-sheds", each of which contributes runoff to different locations that ultimately combine at a common delivery point.

Vision Statement – A statement that describes a community's ideal conditions for its future.

Zoning - The division of a municipality, town or city by legislative act into districts where construction is limited to a prescribed type of building, with specific structural and architectural design and where only certain uses of the land are permitted.

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APPENDIX A

List of Focus Group Members

Waimea

Leslie Agorastos
Billy Bergin
Pomai Bertelmann
Gail Byrne
Cheryll Callahan
Linda Copman
Judith Ellis
Zion Estes
Anne Field-Gomes
Paul Fischer
Susan Fischer
Ian Glass
David B. Gomes
Howard Hall
Jacqui Hoover
Bob Hunter
Mary Hunter
William N. Jardine
Chris Kanezawa
Uvonne Lindsey
Mike Luce
Douglas MacIlroy
Joan Maute
Calley O'Neill
Mike Price
Joleen Quitugua
John Ray
Najha Ray
Eric Renz
Tim Rice
Ric Rocker
Patrick Sullivan
Bevil Walker
Margaret Wille

Waikoloa

Val Belanio
Ruth Bernstone
Gail Byrne
Molly Carter

Lorie Casuga
Sherry Davis

Waikoloa (Continued)

Carol Douglas-Hammer
Mike Fischer
Jennifer Grossart
Bryan Hilman
Gail Jackson
Sandy Jilton
Tom Kelley
Zack Kennedy
Ben Kenney
Cindy Kester
Pohai Kirkland
Mike Luce
Cliff Luczak
Allyson Milberg
Grant Mitchell
Sara Peck
Mike Price
Becky Ryan
Les Seto
Bill Simonsma
Ruth Smith
Alice Tinsman
Morris Torbert
Sharon Torbert
Mark Willig
Lisa Yee

Kawaihae

William Akau
Lani Akau
Mayden Bowman
Doug Carr
Lyle Case
Kristy Copp
Jim Donovan
Katherine Donovan
Tammie Ferry
Susan Fischer
Paul Fischer
Roger Harris
Pete Hendricks
Danette Kahanui
Diane/Roger Kaneali'i

Kawaihae (Continued)

Roger Kaneali'i
Rebekah Kaufmann
Greg Kaufmann
Daniel K. Kawaiaea Jr.
Mike Luce
Gunner Mench
Sara Peck
Virgil A. Place
Irine Place
Kelly Pomeroy
Mike Price
Jeff Sacher
Analu Silva
Marcia Sullivan
Josephine "Jojo" Tanimoto
Sherm Warner
Marcia & Stanley Wishnick

Puakō

Gail Byrne
M. Cabntaye
Mary Fox
George Fry
Peter Hackstedde
John Hoover
Michael Kimball
Neil Logan
Mike Luce
Holly O'Riordan
Narand Patel
Barbara Poole
Warren Poole
Mike Price
George Robertson
Rob Shallenberger
Annarie Shallenberger
Richard Spiegel

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APPENDIX B: Meetings held during the CRP and CDP processes

CRP MEETINGS – SUMMARY OF CAPACITY BUILDING & GATHERING IDEAS

| TIMEFRAME | ACTIVITY | # OF PARTICIPANTS |
|------------------------------------|--|--------------------------|
| Jan 5th, 2006 | South Kohala CRP Introduction in Waimea | 70 |
| April 1 st 2006 | Smart Growth Workshops | 54 |
| June 4 th 2006 | CRP Introduction for Kawaihae Stakeholders | 22 |
| June 22 nd | CRP introduction to Puakō Stakeholders | 17 |
| July 14 th 2006 | “Nobody asked me?” Waikoloa Meeting | 76 |
| July 19 th 2006 | W.C.A. CRP/CDP follow up | 43 |
| June – July 2006 | Script Facilitation Briefing | 32 |
| September 8th 2006 | South Kohala Land Use Workshop | 72 |
| June – October 2006 | Small Group Meetings | 678 |
| October 6th 2006 | Waikoloa “Housing & Nobody asked me 2?” | 71 |
| October 2006 | South Kohala CRP Follow up meeting – Waimea | 37 |
| January 26th 2007 | South Kohala CRP Follow up “What are we saying?” | 67 |
| Total # of CRP Participants | | 1239 |

**SOUTH KOHALA
STEERING COMMITTEE MEETINGS**

| MEETING # | MEETING DATE |
|-----------|---------------------|
| 1 | June 27, 2007 |
| 2 | July 25, 2007 |
| 3 | August 22, 2007 |
| 4 | September 26, 2007 |
| 5 | October 24, 2007 |
| 6 | November 28, 2007 |
| 7 | January 23, 2008 |
| 8 | February 27, 2008 |
| 9 | March 26, 2008 |
| 10 | April 23, 2008 |
| 11 | April 30, 2008 |
| 12 | May 28, 2008 |
| 13 | June 4, 2008 |
| 14 | June 11, 2008 |
| 15 | June 20, 2008 |
| 16 | June 25, 2008 |
| 17 | July 16, 2008* |
| 18 | August 27, 2008* |
| 19 | September 24, 2008* |

*Meetings to be held

SOUTH KOHALA FOCUS GROUP MEETINGS

| WAIMEA | WAIKOLOA VILLAGE | KAWAIHAE | PUAKŌ |
|-------------------|------------------|------------------|------------------|
| October 19, 2007 | October 12, 2007 | November 1, 2007 | November 7, 2007 |
| November 16, 2007 | November 9, 2007 | January 26, 2008 | January 26, 2008 |
| January 26, 2008 | January 26, 2008 | March 29, 2008 | March 28, 2008 |
| March 29, 2008 | March 28, 2008 | May 17, 2008 | May 16, 2008 |
| May 17, 2008 | May 16, 2008 | | |

SOUTH KOHALA COMMUNITY MEETINGS

| MEETING # | MEETING DATE | LOCATION |
|-----------|-------------------|------------------|
| 1 | August 29, 2007 | Waimea |
| 2 | August 30, 2007 | Waikoloa Village |
| 3 | February 12, 2008 | Waimea |
| 4 | February 15, 2008 | Waikoloa Village |
| 5 | May 20, 2008 | Waimea |
| 6 | May 22, 2008 | Waikoloa Village |

APPENDIX C County Zoning Acronyms and Descriptions

| Zoning Acronym | Zone | Description |
|-----------------------|------------------------------------|--|
| A | Agricultural | Provides for agricultural and very low density agriculturally-based residential use, encompassing rural areas of good to marginal agricultural and grazing land, forest land, game habitats, and areas where urbanization is not found to be appropriate. |
| RS | Single-Family Residential | Provides for lower or low and medium density residential use, for urban and suburban family life. |
| RA | Residential Agricultural | Provides for activities or uses characterized by low density residential lots in rural areas where “city-like” concentrations of people, structures, streets, and urban level of services are absent, and where small farms are intermixed with low density residential lots. The RA district is intended to be only within areas designated as being in the State land use Rural or Urban districts. |
| RM | Multiple-Family Residential | Provides for medium and high density residential use. It covers areas with full community facilities and services. It may occupy transition areas between commercial or industrial areas and other districts of less intense land use. |
| CV | Commercial Village | Provides for a broad range or variety of commercial and light industrial uses that are necessary to serve the population in rural areas where the supplementary support of the general business uses and activities of a central commercial district is not readily available. |
| OPEN | Open | Applies to areas that contribute to the general welfare, the full enjoyment, or the economic well-being of open land type use which has been established or is proposed. The objective of this district is to encourage development around it such as a golf course and park, and to protect investments which have been or shall be made in reliance upon the retention of such open type use, to buffer an otherwise incompatible land use or district, to preserve a valuable scenic vista or an area of special historical significance, or to protect and preserve submerged land, fishing ponds, and lakes (natural or artificial tide lands). |
| FR | State Conservation District | Includes all lands designated by the State as Conservation. Conservation lands are under the jurisdiction of the State DLNR and not the County of Hawai‘i |
| MG | General Industrial | Applies to industrial areas for uses that are generally considered to be offensive or have some element of danger. |
| V | Resort-Hotel | Applies to areas to accommodate the needs and desires of visitors, tourists and transient guests. It applies to specific areas where public roads and public utilities are available or where suitable alternate private facilities are assured. It may apply to a single isolated hotel or resort with or without a commercial mall or shopping section. |

Source: County of Hawai‘i Zoning Code adopted as Ord. No. 96-160

Numbers following acronym indicate maximum lot size, usually indicated in 1000s of square feet or in acres (a)

APPENDIX C LUPAG Acronyms and Descriptions

| LUPAG Acronym | Land Use | Description |
|----------------------|------------------------------------|--|
| HDU | High Density | General commercial, multiple family residential and related services (multiple family residential – up to 87 units per acre) |
| MDU | Medium Density | Village and neighborhood commercial and single family and multiple family residential and related functions (multiple family residential – up to 35 units per acre) |
| LDU | Low Density | Residential, with ancillary community and public uses, and neighborhood and convenience-type commercial uses; overall residential density may be up to six units per acre |
| REN | Resort Node | These areas include a mix of visitor-related uses such as hotels, condominium-hotels (condominiums developed and/or operated as hotels), single family and multiple family residential units, golf courses and other typical resort recreational facilities, resort commercial complexes and other support services. Only Major Resort Areas are identified as Resort Nodes on the LUPAG Map. |
| RES | Resort Area | These areas include a mix of uses such as hotels, condominium-hotels (condominiums developed and/or operated as hotels), and support services. Intermediate Resort, Minor Resort, and Retreat Resort Areas are identified as Resort Areas on the LUPAG Map. |
| UE | Urban Expansion | Allows for a mix of high density, medium density, low density, industrial, industrial-commercial and/or open designations in areas where new settlements may be desirable, but where the specific settlement pattern and mix of uses have not yet been determined. |
| IND | Industrial Area | These areas include uses such as manufacturing and processing, wholesaling, large storage and transportation facilities, light industrial and industrial-commercial uses. |
| RUR | Rural | This category includes existing subdivisions in the State Land Use Agricultural and Rural Districts that have a significant residential component. Typical lot sizes vary from 9,000 square feet to two acres. These subdivisions may contain small farms, wooded areas, and open fields as well as residences. Allowable uses within these areas, with appropriate zoning, may include commercial facilities that serve the residential and agricultural uses in the area, and community and public facilities. The Rural designation does not necessarily mean that these areas should be further subdivided to smaller lots. Most lack the infrastructure necessary to allow further subdivision. |
| ORC | Orchard | Those agricultural lands which though rocky in character and content support productive macadamia nuts, papaya, citrus and other similar agricultural products |
| IAL | Important Agricultural Land | Important agricultural lands are those with better potential for sustained high agricultural yields because of soil type, climate, topography, or other factors. |
| EA | Extensive Agriculture | Lands not classified as Important Agricultural Land. Includes lands that are not capable of producing sustained, high agricultural yields without the intensive physical application of modern farming methods and technologies due to certain physical constraints such as soil composition, slope, machine tillability and climate. Other less intensive agricultural uses such as grazing and pasture may be included in the Extensive Agriculture category |

APPENDIX C: County Zoning and LUPAG Acronyms and Descriptions

| LUPAG Acronym | Land Use | Description |
|----------------------|--------------------------|--|
| UU | University | Public university, including ancillary public uses, residential, and support commercial uses. |
| OPE | Open | Parks and other recreational areas, historic sites, and open shoreline areas |
| CON | Conservation Area | Forest and water reserves, natural and scientific preserves, areas in active management for conservation purposes, areas to be kept in a largely natural state, with minimal facilities consistent with open space uses, such as picnic pavilions and comfort stations, and lands within the State Land Use Conservation District. |

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APPENDIX D: GENERAL PLAN "Courses of Action" for the District of South Kohala

The **County of Hawai'i General Plan** is the policy document for the long range comprehensive development of the Island of Hawai'i. Community Development Plans are intended to translate the broad General Plan statements to specific actions as they apply to specific geographical areas. This "PREFACE" to the CDP lists "courses of action" that the General Plan specifies for the district of South Kohala. These General Plan "courses of action" provide direction for the more detailed CDP recommendations and "action programs."

ECONOMIC

- a) Assist in the development of agriculture by protecting important agricultural land from urbanization, providing or having provided the necessary capital improvements, such as water, and working cooperatively with the agricultural sector and government.
- b) Work closely with the State and the Department of Hawaiian Home Lands to provide adequate land close to Kawaihae Harbor for industrial activities.
- c) Recognize the diversity of climate, the quality of the ocean water and the natural beauty of the hills as vital economic and social assets of the region to be protected through appropriate regulations.
- d) Resort development in the district shall be in an orderly fashion and consistent with the physical and social goals of the residents of the area. Utilize tools such as incremental zoning to insure development that will best meet the needs of the County.
- e) Encourage the preservation of the rural, ranching character within the town of Waimea.
- f) Support the growth of astronomical research and development.

ENVIRONMENTAL QUALITY (POLICIES)

- a) Take positive action to further maintain the quality of the environment.
- b) Reinforce and strengthen established standards where it is necessary, principally by initiating, recommending, and adopting ordinances pertaining to the control of pollutants that affect the environment.
- c) Advise the public of environmental conditions and research undertaken on the island's environment.
- d) Encourage the concept of recycling agricultural, industrial, and municipal waste material.
- e) Encourage the State to establish air and water quality monitoring stations in areas of existing and potential urban growth.
- f) Encourage the State to continue aircraft noise abatement strategies at Hilo International Airport and the Kona International Airport at Keahole.
- g) Participate in watershed management projects to improve stream and coastal water quality and encourage local communities to develop such projects.

- h) Work with the appropriate agencies to adopt appropriate measures and provide incentives to control point and non-point sources of pollution.
- i) Support programs to prevent harmful alien species from becoming established.
- j) Require golf courses to implement best management practices to limit leaching of nutrients to groundwater in areas where they may affect streams or coastal ecosystems.
- k) Require implementation of the management measures contained in Hawai'i's Coastal Nonpoint Pollution Control Program as a condition of land use permitting.
- l) Review the County grading and grubbing ordinances to ensure that they adequately address potential erosion and runoff problems.

ENVIRONMENTAL QUALITY (STANDARDS)

- a) Pollution shall be prevented, abated, and controlled at levels that will protect and preserve the public health and well being, through the enforcement of appropriate Federal, State and County standards.
- b) Incorporate environmental quality controls either as standards in appropriate ordinances or as conditions of approval.
- c) Federal and State environmental regulations shall be adhered to

FLOODING AND OTHER NATURAL HAZARDS

- a) The Hawai'i County "Drainage Master Plan" for the Kawaihae, Hapuna Bay-Puako, Pauoa Bay-Honokaope Bay, and Waimea areas shall be updated and implemented.
- b) Conduct a flood study for the Auwaiakeakua Stream.

HISTORIC SITES

- a) Support the establishment of Hawaiian Heritage Corridors.

HOUSING

- a) Require developments that create a demand for employee housing provide for that need.
- b) Aid and encourage the development of State lands for housing for all socioeconomic levels through leasehold or purchase.
- c) Aid and encourage housing programs for low and moderate income, "gap groups" and the elderly.
- d) County-owned land at Waikoloa Village shall be made available for the development of affordable housing.

NATURAL BEAUTY (POLICIES)

- a) Increase public pedestrian access opportunities to scenic places and vistas.
- b) Develop and establish view plane regulations to preserve and enhance views of scenic or prominent landscapes from specific locations, and coastal aesthetic values.
- c) Maintain a continuing program to identify, acquire and develop viewing sites on the island.
- d) Access easement to public or private lands that have natural or scenic value shall be provided or acquired for the public.
- e) Develop standard criteria for natural and scenic beauty as part of design plans.
- f) Consider structural setback from major thoroughfares and highways and establish development and design guidelines to protect important viewplanes.
- g) Maintain a continuing program to identify exceptional trees or tree masses.
- h) Protect the views of areas endowed with natural beauty by carefully considering the effects of proposed construction during all land use reviews.
- i) Do not allow incompatible construction in areas of natural beauty.

NATURAL BEAUTY (STANDARDS)

The following standards provide guidelines for designating sites and vistas of extraordinary natural beauty that shall be protected.

- a) Distinctive and identifiable landforms distinguished as landmarks, e.g. Mauna Kea, Waipio Valley.
- b) Coastline areas of striking contrast, e.g. Laupahoehoe Point.
- c) Vistas of distinctive features.
- d) Natural or native vegetation attractive to a particular area.
- e) Areas that are harmoniously developed and enhanced by man to appear natural.

PUBLIC FACILITIES

Education

- a) Encourage the expansion of the public school and library facilities as needs arise.
- b) Encourage continual improvements to existing educational facilities.
- c) Encourage the installation of walkways to and around schools and street crossing facilities for pedestrian safety.

- d) Encourage the development of State and private higher educational facilities in West Hawai'i.
- e) Support the development of an intermediate or middle school in Waikoloa.
- f) Encourage the Hawai'i State Library System to establish a public library in Waikoloa.
- g) Encourage the State Department of Education to explore the feasibility of establishing a high school in the South Kohala district.

Protective Services

- a) Service facilities shall be improved to meet needs.
- b) Government Services -- Expand/improve facilities as necessary.
- c) A civic center site shall be reserved at Waikoloa.

Health and Sanitation

- a) A solid waste transfer site or alternative means of refuse collection should be established for Waikoloa.

PUBLIC UTILITIES

Water

- a) Seek alternative sources of water for the Lālāmilo system.
- b) Improve and replace inadequate distribution mains and steel tanks.
- c) Continue to seek additional groundwater sources for the Waimea System.

Electricity

- a) There shall be minimal obstruction of scenic views and vistas by electrical facilities.
- b) Facilities such as substations shall mitigate and minimize any aesthetic impacts to surrounding properties and scenic vistas.

Gas

- a) County ordinances shall reflect appropriate safety standards for gas facilities.

Sewer

- a) Construct a Waimea sewerage system to provide sewer service and wastewater treatment facilities with an ultimate treatment capacity adequate for foreseeable growth. Consider water reclamation or subsurface type disposal.
- b) Construct a sewerage system in the Puako beach lot area to service flows by utilizing existing resort wastewater treatment facilities as a means of wastewater disposal.

RECREATION

- a) Encourage the full implementation of the Hapuna Beach State Park Master Plan including Wailea Bay Area.
- b) Improve picnic and camping facilities at Samuel M. Spencer Beach Park.
- c) Acquire and develop additional public shoreline recreation areas.
- d) Encourage the establishment of neighborhood parks.
- e) Ensure public use of and access to beach areas.
- f) Develop parking areas for Waimea Park.
- g) Develop additional recreational facilities in Waimea, including an approximate 30-acre regional park on land to be donated by Parker Ranch.
- h) Encourage the expansion of outdoor recreational areas around Waimea School.
- i) Develop recreational facilities in Waikoloa, including an enclosed community center/sports complex.
- j) Develop trail systems linking residential areas to Waimea's urban center.
- k) Support the passive use of Church Row Park.
- l) Encourage development of Waimea Trails & Greenways and Waimea Nature Park (Ulu La'au).

TRANSPORTATION

Roadways

- a) Improve existing homestead roads.
- b) Encourage the construction of a Waimea by-pass road from Mud Lane to Māmalahoa Highway on the Kona side of Waimea.
- c) Encourage the construction of connector roads from the Waimea Bypass Road to the Māmalahoa Highway.
- d) Encourage the construction of a new Waimea to Kawaihae road from Māmalahoa Highway to the Queen Ka'ahumanu Highway.
- e) Encourage the widening of Queen Ka'ahumanu Highway as the need arises.
- f) Support the installation of suitable bikeways and/or jogging paths.
- g) To relieve traffic congestion through Waimea town, implement construction of a) Parker Ranch's connector road from Kamamalu Street to Māmalahoa Highway; and b) the County's extension of this road, between Māmalahoa Highway and Kawaihae Road in the vicinity of the Waimea solid waste transfer station.

- h) Construct, at a minimum, one other paved two-lane access road out of the Ke Kumu Housing area onto Paniolo Drive.
- i) Extend Paniolo Drive in Waikoloa north to intersect with the Kawaihae Road and the proposed Waimea-Kawaihae Road, and build a road connecting the northern end of Paniolo Drive to the Queen Ka'ahumanu Highway to provide alternate access to Waikoloa Village.
- j) Provide traffic signals at the Waikoloa Road-Paniolo Drive intersection.

Transportation Terminals: Airports & Harbors

- a) The State Department of Transportation should continue to provide improvements to terminal and runway facilities at the Waimea-Kohala airport.
- b) The State Department of Transportation should continue to improve harbor facilities at Kawaihae to meet increased shipping activities and cruise ship passenger arrivals.
- c) Continue to support the Department of Land and Natural Resources in its plans to develop a small boat harbor at Kawaihae.

LAND USE

Agriculture

- a) Protect important agricultural lands from urban encroachment.
- b) Encourage buffer zones or compatible uses between important agricultural land and adjacent uses of land.

Commercial Development

- a) The establishment of Waimea as a regional commercial center for northern Hawai'i shall be encouraged.
- b) Establish controls to insure orderly development and minimize speculation of commercially zoned lands.
- c) Continue the concentration of commercial uses in Waimea, Kawaihae, Waikoloa Village, and in the resort areas. Do not allow strip or spot commercial development on highways outside of these primary commercial areas.

Industrial

- a) Encourage the development of a regional industrial park at Kawaihae and centralize limited industrial activities in Waimea.
- b) Industrial development should be in harmony with surrounding uses and the environment.
- c) Identify sites suitable for future industrial activities as the need arises.

Multiple Residential

- a) Basic infrastructure shall be provided to those areas zoned for higher density use.

- b) Appropriately zoned lands shall be allocated as the need arises.

Single-Family Residential

- a) Encourage the development of appropriately located and serviced State-owned, Hawaiian Home Lands and privately-held lands for houselots.

Resort

- a) Adequate access, sewer, water systems, and other basic amenities shall be provided in all areas where higher density uses are allowed.

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APPENDIX E: Referenced County Codes in the South Kohala CDP

Referenced County Codes in CDP Chapter 3 Sub-policy 1.2

Section 23-62. Tentative approval of preliminary plat.

- (a) Within forty-five days after submission of the preliminary plat, the director shall review the plan and may give tentative approval of the preliminary plat as submitted or as modified or may disapprove the preliminary plat, stating the reasons for disapproval in writing or shall defer action pending further review. Approval of the preliminary plat shall indicate the director's directive to prepare detailed drawings on the plat submitted, provided there is no substantial change in the plan of subdivision as shown on the preliminary plat and there is full compliance with all requirements of this chapter. The action of the director with reference to any attached documents describing any conditions shall be noted on two copies of the preliminary plat. One copy shall be returned to the subdivider and the other retained by the director. At such time the director shall stamp the above two preliminary plats:

"Subdivider authorized to prepare detailed drawings on plat as submitted including corrections noted."

"Recordation with the Bureau of Conveyances, State of Hawai'i, not authorized until approved for record at a later date."

- (b) If no action (approval, disapproval, modification, or deferral) is taken by the director within forty-five days after submission of the preliminary plat, or such longer period as may have been agreed upon in writing, the preliminary plat shall be deemed approved. The approval shall be on condition that the subdivider construct roads to the standards required by this chapter, a water system to the standards of the department of water supply, drainage meeting with the approval of the department of public works under section 23-92, that sewage disposal shall conform with section 23-85, if applicable, and the requirements of the department of health, and that the lot sizes and dimensions must be adjusted to conform to the zoning code on the final plat. The subdivider shall comply with the provisions of this chapter in order to receive final subdivision approval.
- (c) The director shall disapprove a preliminary plat or a subdivision map where the subdivider has failed to comply with the provisions of chapter 25, zoning code.
- (d) The subdivider shall complete all requirements specified as conditions for approval of the preliminary plat (tentative approval) within three years of said approval. An extension of not more than two years may be granted by the director upon timely written request of the subdivider. At the end of said three year period or its approved extension, unless all said conditions are completed, the approval of the preliminary plat shall expire and shall be of no further force or effect, or shall be subject to the technical review of the applicable agencies for compliance with current Code and rule requirements. This subsection shall be applied to all subdivision applications which have received tentative subdivision approval and which have not completed subdivision improvements, provided the three year period, and extension, if applicable, shall be taken from December 4, 1992 and not from the date of preliminary plat (tentative) approval.
- (e) The director's deferral of a subdivision for further review under subsection (a) constitutes an acceptance of the contents of the preliminary plat as submitted, and the director's issuance of tentative and final subdivision approval is valid despite the failure of the preliminary plat to include all of the information specified in sections 23-63 to 23-66, provided that there has been

actual compliance with the substantive requirements of this chapter and chapter 25, zoning code. The director may require the subdivider to submit supplementary information prior to tentative or final approval and may condition tentative or final approval on the submission of such information and on the performance of conditions attached to the tentative approval. (1975 C.C., c. 9, art. 2, secs. 3.07 and 5.11; Am. 1992, Ord. No. 92-138, sec. 6; Am. 2006, Ord. No. 06-104, sec. 5.)

Section 23-131. Tentative approval.

The director shall grant tentative approval to a preliminary map for a condominium property regime in the same manner as tentative approval of a preliminary plat, with conditions consistent with those that would be imposed for a preliminary subdivision plat. (2002, Ord. No. 02-111, sec. 2.)

Section 25-2-46. Concurrency requirements.

(a) Purpose. In addition to requirements otherwise imposed, this section creates concurrency standards for roads and water supply in change of zone actions.

(b) Applicability. This section applies to any application for change of zoning district, or for an extension of time to perform a condition of zoning, received by the planning department after the effective date of this ordinance.

(c) Definitions. As used in this section:

“Acceptable level of service” means that the level of service of a transportation facility at the a.m. and p.m. peak hour is “D” or better.

“Approved development” means development for which zoning has been granted by the County.

“Critical road area” means a geographical area where any of the transportation facilities serving the area have been determined by the council to be worse than the acceptable level of service.

“Immediate vicinity of a project” means the area in which transportation facilities will be required to mitigate impacts caused primarily by the project.

“Level of service, or LOS” means a qualitative measure describing operational conditions within a traffic stream, and shall be determined using the procedures in the latest edition of the Highway Capacity Manual, Transportation Research Board.

“Mitigation” means specific actions to reduce traffic congestion. Mitigation is of two types:

“Local mitigation” which consists of improvements to roads and intersections that are in the immediate vicinity of a project, including channelization of intersections, turn lanes into a project and similar improvements.

“Area mitigation” consists of improvements which increase the capacity of an arterial or other major road, such as additional lanes, in the general region containing the project, or construction of a new arterial or collector road in the general area containing the project, or improvements to public transportation such as buses or park and ride facilities, sufficient to offset the traffic demand generated by the project.

“Occupancy” means (1) the issuance of a certificate of occupancy for a commercial, multifamily, industrial building, hotel or other structure requiring a certificate of occupancy; (2) the issuance of a building permit for residential buildings that do not require a certificate of occupancy; or (3) final subdivision approval for subdivisions where dwellings are allowed, but dwellings are not being constructed before sale of any lot.

“Project area” means the area in which the project is expected to have an impact on the level of service of transportation facilities.

“Reasonable assumptions” means the percentage of full build-out that is expected to occur during the twenty-year period after the date of the application, as determined by the planning director.

“Transportation facilities” means State and County highways, roads, and public transportation facilities.

“Worse than the acceptable level of service” means that the level of service at the a.m. or p.m. peak is “E” or “F”.

(d) Traffic impact analysis report required.

(1) A traffic impact analysis report (TIAR), prepared or updated within six months before the submission of the application, shall be included with the application for any change of zone that can generate fifty or more peak hour trips. The determination of peak hour trips shall be based on the Institute of Transportation Engineers, “Trip Generation Handbook”, or any other nationally recognized source. When the number of trips depends upon the exact future uses of the site, and those are unknown at the time of rezoning (for example, the types of commercial uses), the determination shall be based upon a typical mix of uses found in that zoning type in the community. The TIAR shall be certified as having been conducted in accordance with best practices by a professional engineer licensed in the State of Hawai‘i.

(2) The TIAR shall assess impacts to transportation facilities in the immediate vicinity and general area of the project, and to the transportation facilities serving the project area.

(3) The TIAR shall include projections for future growth in traffic, for a minimum of five, ten, and twenty years, and shall include other approved or proposed development that is expected to impact the project area, with reasonable assumptions about the build-out of such development.

(4) The TIAR shall present an assessment of the impacts of the project on LOS and an evaluation of alternative plans for mitigating those impacts. The evaluation shall include budgetary cost estimates for the capital and operating costs of promising alternative plans.

(e) Mitigation required.

(1) If the LOS for any transportation facility in the project area is (A) currently worse than the acceptable level of service, or (B) projected to become worse than the acceptable level of service during the five year period of the TIAR, any rezoning of the property, if approved, shall contain conditions that require mitigation of adverse traffic effects before occupancy of the project is permitted, or that occupancy be delayed until the level of service has reached the acceptable level and is no longer projected to be worse than the acceptable level.

(2) Where the LOS deficiency is due to roadway or intersection deficiencies in the immediate vicinity of the project, the conditions of zoning shall require local mitigation.

Where the deficiency in LOS is due to insufficient capacity in the transportation facilities serving the project area, the conditions of zoning shall require area mitigation.

(3) If there is more than one way to mitigate an adverse effect, the director shall present to the council the pros and cons of the alternatives.

(f) Mitigation requirements will be deemed satisfied when:

(1) A public agency has committed funds for area mitigation that will remove the LOS deficiency. In the case of the State, commitment of funds means that the governor has released funds to complete the improvement. In the case of the County, commitment of funds means that the council has appropriated funds to complete the improvement; or

(2) The private developer's commitment to implement mitigation has been secured by bond or equivalent security, or mandatory participation in an improvement district, community facilities district, or other equivalent means of guaranteeing performance.

(g) A developer's area mitigation expenses shall be credited against any fair share or similar fee requirement for roads. A developer's local mitigation expenses shall be credited against any fair share or similar fee requirement for roads if the council determines that the mitigation substantially benefits the general public and was not necessary primarily for the benefit of the project. In general, roads that are necessary for access to or within a development or turn lanes for a private project shall not qualify for fair share credit.

(h) The following types of rezoning applications shall be required to submit a TIAR when required by this section, but shall not be required to perform area mitigation:

(1) Residential or other rezonings where the applicant commits, and the conditions of zoning require, that the project earn at least two times the number of affordable housing credits otherwise required under chapter 11, County affordable housing policy, provided further that the applicant shall be entitled to the full amount of "excess credits" under section 11-15, County affordable housing policy, based on the number of affordable housing credits normally required.

(2) Rezoning to CV, CN, MCX, PD, or ML where the council determines that the project will reduce regional traffic congestion by providing necessary commercial or light industrial opportunities to serve an area where there is a shortage of available space zoned for such uses, and substantial residential development has already been approved, provided that conditions of zoning shall ensure that any commercial development be of a scale consistent with the standards of a "neighborhood center" as described in the general plan.

(i) The restrictions on occupancy shall not apply to the construction of infrastructure such as water tanks, roads, sewage treatment plants, or other project elements that do not generate substantial traffic.

(j) The council may designate critical road areas by ordinance.

(k) In a critical road area, all rezonings shall be subject to local and area mitigation, except as stated in subsection (h).

(l) In order to determine whether a rezoning application meets the TIAR threshold of fifty or more peak hour trips, and to prevent applicants from going below the TIAR threshold by dividing a project into segments, the director shall review all development proposed on the same or adjacent properties, and shall include traffic that may be generated by any development application approved after the effective date of this ordinance, or by any other

pending development application, if it is on a portion of the same lot or tax map key parcel, or an adjoining lot or tax map key parcel, or in the immediate vicinity of the development.

- (m) A change of zone application shall not be granted unless: (1) the department of water supply has determined that it can meet the water requirements of the project and issue water commitments using its existing system; or (2) specific improvements to the existing public water system, or a private water system equivalent to the requirements of the department of water supply will be provided to meet the water needs of the project and conditions of zoning delay occupancy until the necessary improvements are actually constructed.
- (n) To facilitate the development of village centers in rural areas that are not currently served by a public water system, the council may waive the water supply requirements for rezonings for commercial or light industrial uses in areas that do not currently have a public water system, and where the department of water supply has no plans to build a public water system, and which are (1) designated as an "urban and rural center" or "industrial area" on table 14-5 of the general plan and (2) designated for urban use on the land use pattern allocation guide map of the general plan; provided that conditions of zoning shall require water supply consistent with public health and safety needs such as sanitation and fire-fighting.
- (o) Nothing in this section shall limit the ability of the council to impose reasonable roadway or water improvement requirements on changes of zone or to deny change of zone applications to the extent otherwise allowed by law.
(2007, Ord. No. 07-99, sec. 2.)

Section 25-2-75. Action on plan approval application.

- (a) The director may issue plan approval subject to conditions or changes in the proposal which, in the director's opinion, are necessary to carry out and further the purposes of this chapter and the considerations contained in section 25-2-76.
- (b) The director may only issue plan approval for a bed and breakfast establishment if the proposed use meets all of the conditions contained in sections 25-2-76 and 25-4-7, and if the operator of the bed and breakfast establishment provides all verification required under section 25-2-73.
- (c) The director may only issue plan approval for a telecommunication antenna or tower if the proposed use meets all of the conditions contained in sections 25-2-76 and 25-4-12, and if the applicant provides all verification required under section 25-2-74.
- (d) The director may only issue plan approval for a temporary model home or real estate office if the proposed use meets all of the conditions in section 25-2-76 and 25-4-8.
- (e) The director shall render a decision to either approve or deny a plan approval application within thirty days after acceptance of the application. If the director fails to render a decision within the thirty-day period, the application shall be considered approved without further certification by the director.
(1996, Ord. No. 96-160, sec. 2; ratified April 6, 1999)

Section 25-6-6. Actions by director on P.U.D. permit applications.

- (a) Except as provided in section 25-6-5, the director shall, within sixty days after acceptance of a P.U.D. permit application, deny the application or approve it subject to conditions.

- (b) The conditions imposed by the director shall bear a reasonable relationship to the P.U.D. permit issued, and to the approved uses, plans, and variances of district standards; provided, however, that no improvements or alterations off-site of the project shall be required as a condition of a P.U.D. permit. The conditions may include, but not be limited to the following:
 - (1) Commencement and completion time frame for the project;
 - (2) Boundary and density changes approved in the project;
 - (3) Uses that are prohibited or limited;
 - (4) Specifications for the minimum development standards;
 - (5) Specifications for street improvement and dedication;
 - (6) Utilities to be furnished; and
 - (7) The extent and limitations upon the variances permitted.
- (c) The director may, within the sixty-day period after acceptance of a P.U.D. permit application, grant a partial approval of the request where all plans and drawings have not been submitted with the original application. Provided, however, that no building permit shall be issued, nor shall any construction on the property commence until the drawings have been reviewed and approved by the director and full P.U.D. permit approval has been issued for the portion of development comprising the proposed construction.
- (d) When plans and drawings are submitted after a partial approval of a P.U.D. permit application has been issued under subsection (c) above with a request for further partial approval or full approval, the director shall review the drawings and shall either approve or deny the request within thirty days from the date that the drawings are filed by the applicant. In the event of a denial of such request, the applicant may resubmit a revised request for further partial or full P.U.D. permit approval of the application and in accordance with this subsection.
- (e) If the director fails to act upon a P.U.D. permit application within the prescribed sixty-day period as required by subsection (a) above, the application shall be considered as having been denied and the director shall immediately inform the applicant of such denial. If the director fails to act upon filed plans and drawings within the thirty-day period required by subsection (d) above, the plans shall be considered as having been approved and a full P.U.D. permit issued.
(1996, Ord. No. 96-160, sec. 2; ratified and amended April 6, 1999.)

Section 25-6-22. Application for C.P.D.

- (a) An application for a C.P.D. permit shall be on a form prescribed by the director and shall be accompanied by a filing and processing fee as set forth under chapter 23, the subdivision control code.
- (b) The procedure for processing an application for a C.P.D. permit shall be the same as that prescribed for a subdivision application under chapter 23, the subdivision control code.
- (c) The applicant shall post a sign for public notification on the property as provided by section 25-2-12.
(1996, Ord. No. 96-160, sec. 2; ratified April 6, 1999; Am. 2005, Ord. No. 05-136, sec. 7.)

Section 25-6-46. Review and approval of site plans.

- (a) After adoption of a project district enabling ordinance, the applicant shall submit to the director detailed site plans for the project district development. The site plans shall conform to the project district enabling ordinance and shall include the following:
 - (1) Plans for required infrastructure improvements;
 - (2) All items required for a plan approval application, as provided by section 25-2-72; and
 - (3) Any other information required by rules adopted by the director in accordance with chapter 91, Hawai'i Revised Statutes.

- (b) Within sixty days after acceptance of the site plans, the director shall either deny or approve the plans.
- (c) The director may approve site plans for a project district only if the applicant has complied with all of the conditions contained in the project district enabling ordinance and the site plans conform to the standards contained in the project district enabling ordinance. The director may approve the site plans subject to conditions, or the director may approve the site plans subject to certain changes when, in the director's opinion, such conditions or changes are necessary to carry out the purposes of the project district, this chapter and the considerations contained in section 25-6-47.
- (d) If the director fails to render a decision on the site plans within the prescribed period, the site plans shall be considered approved without further certification by the director.
(1996, Ord. No. 96-160, sec. 2; ratified April 6, 1999.)

Section 25-6-56. Review and approval of site plans.

- (a) After adoption of an agricultural project district enabling ordinance, the applicant shall submit to the director detailed site plans for the agricultural project district development. The site plans shall conform to the agricultural project district enabling ordinance and shall include the following:
 - (1) Plans for required infrastructure improvements;
 - (2) All items required for a plan approval application, as provided by section 25-2-72; and
 - (3) Any other information required by rules adopted by the director in accordance with chapter 91, Hawai'i Revised Statutes.
- (b) Within sixty days after acceptance of the site plans, the director shall either deny or approve the plans.
- (c) The director may approve site plans for an agricultural project district only if the applicant has complied with all of the conditions contained in the agricultural project district enabling ordinance and the site plans conform to the standards contained in the agricultural project district enabling ordinance. The director may approve the site plans subject to conditions, or the director may approve the site plans subject to certain changes in the proposed site plans when, in the director's opinion, such conditions or changes are necessary to carry out the purposes of the agricultural project district, this chapter and the considerations contained in section 25-6-57.
- (d) If the director fails to render a decision on the site plans within the prescribed period, the site plans shall be considered approved without further certification by the director.
(1996, Ord. No. 96-160, sec. 2; ratified April 6, 1999.)

Referenced County Codes in CDP Chapter 3 Sub-policy 1.3

HCC 8-2(8) Definition of “parks and playground”

- (8) “Parks and playgrounds” means areas and facilities used for active or passive recreational pursuits.

HCC 8-4(a)(1) Exemptions to Chapter 8 of the Hawai’i County Code relating to “Dedication of Land”

This article shall not apply to:

- (1) Subdivision of land in any district where the ratio of acres of public parks and playgrounds within the district and not federally owned, to the resident population within the district is greater than the minimum ratio of five acres of land for parks and playground purposes for each one thousand persons;

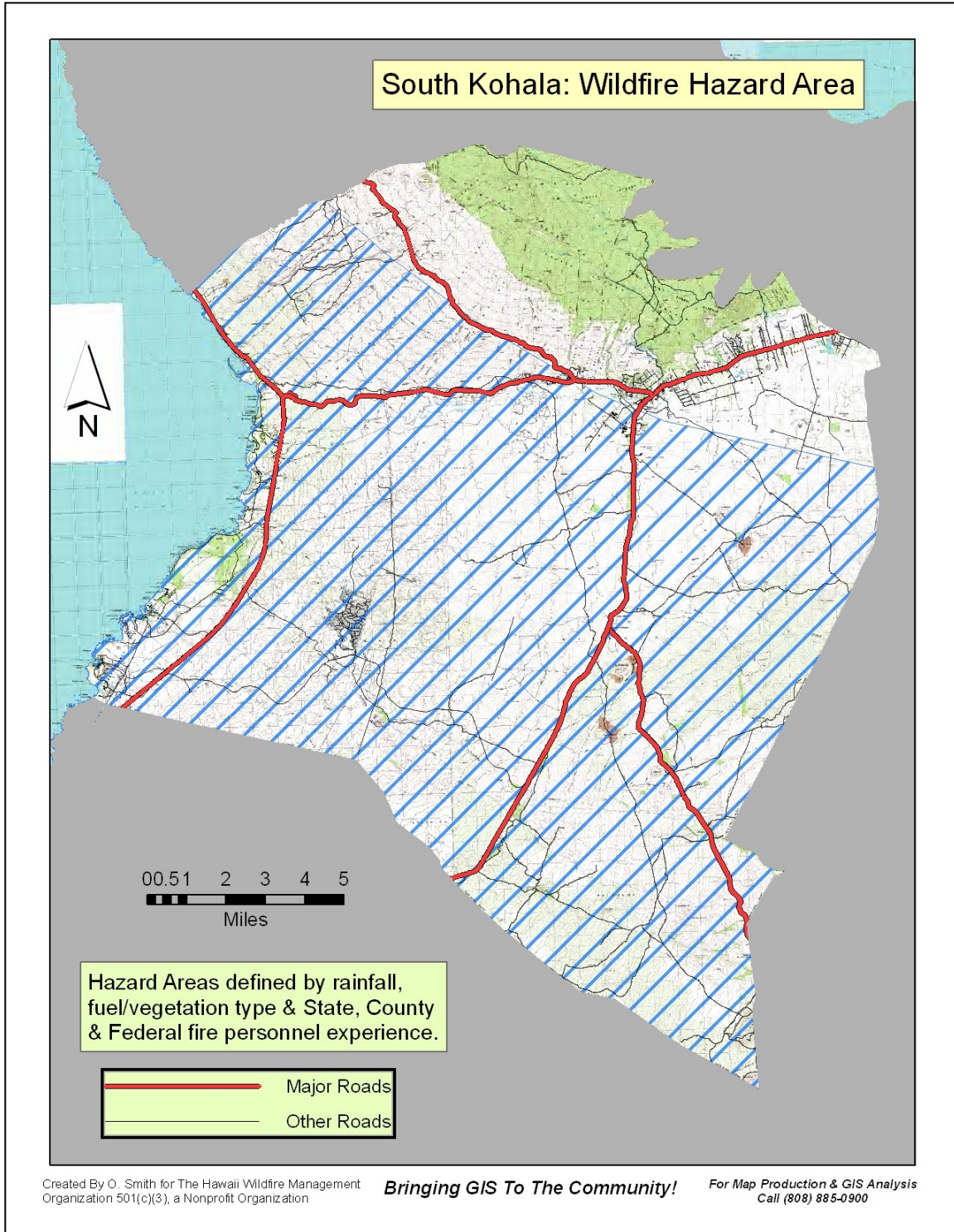
Referenced County Codes in CDP Chapter 3 Sub-policy 5.3

HCC 23-85 Sewage disposal systems

- (a) In a subdivision to be laid out after December 21, 1966 sewer lines shall be installed where the subdivision is within three hundred lineal feet of the existing sewer system. These lines shall conform to the minimum requirements of the department of public works.
- (b) In subdivisions where sewer connections cannot be made to an existing sewer system under the requirements of this chapter, the subdivider shall meet the minimum requirements of the State Health Department relating to sewage disposal. (1975 C.C., c. 9, art. 2, sec. 5.02.)

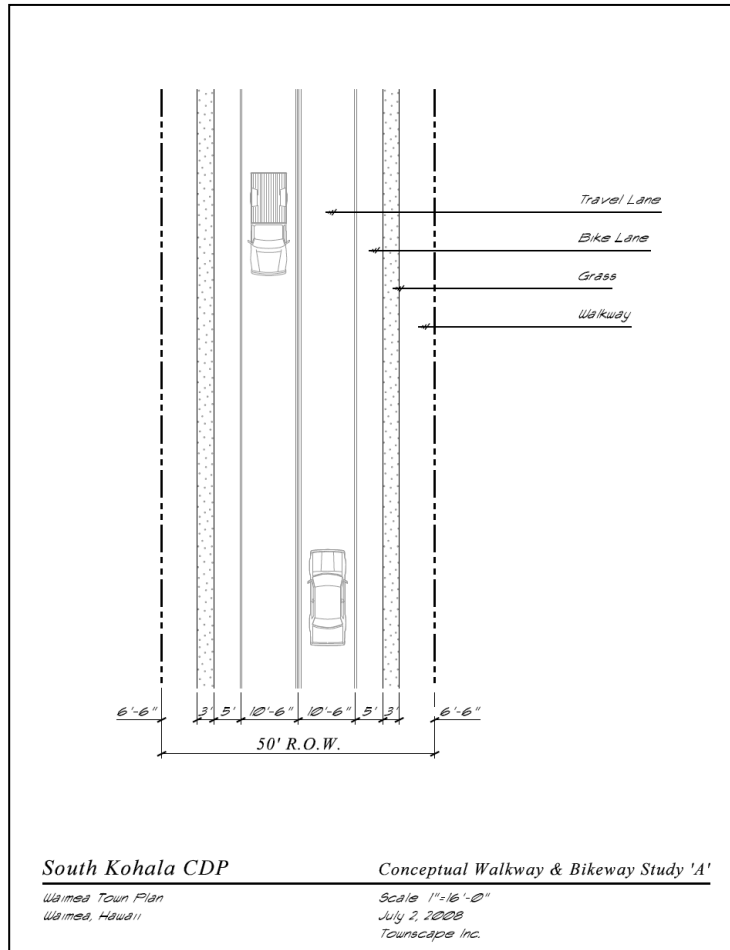
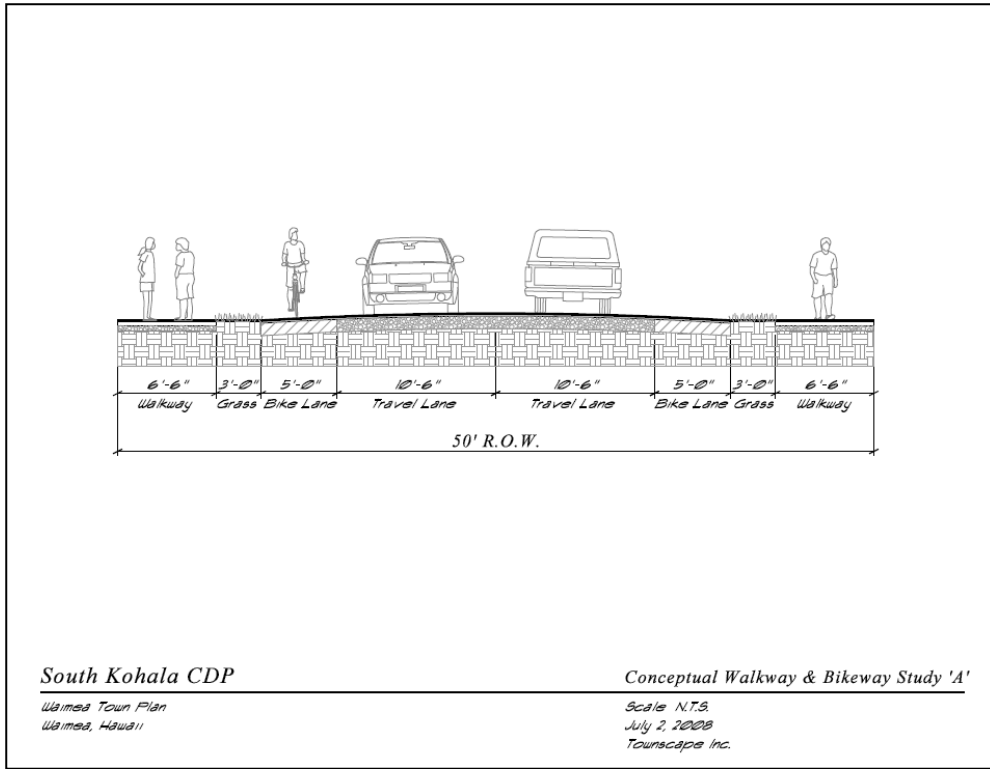
APPENDIX F: South Kohala Wildfire Hazard Map

Note: The areas in the district that are shaded by the diagonal blue lines on the map are areas considered to be wildfire hazard areas.

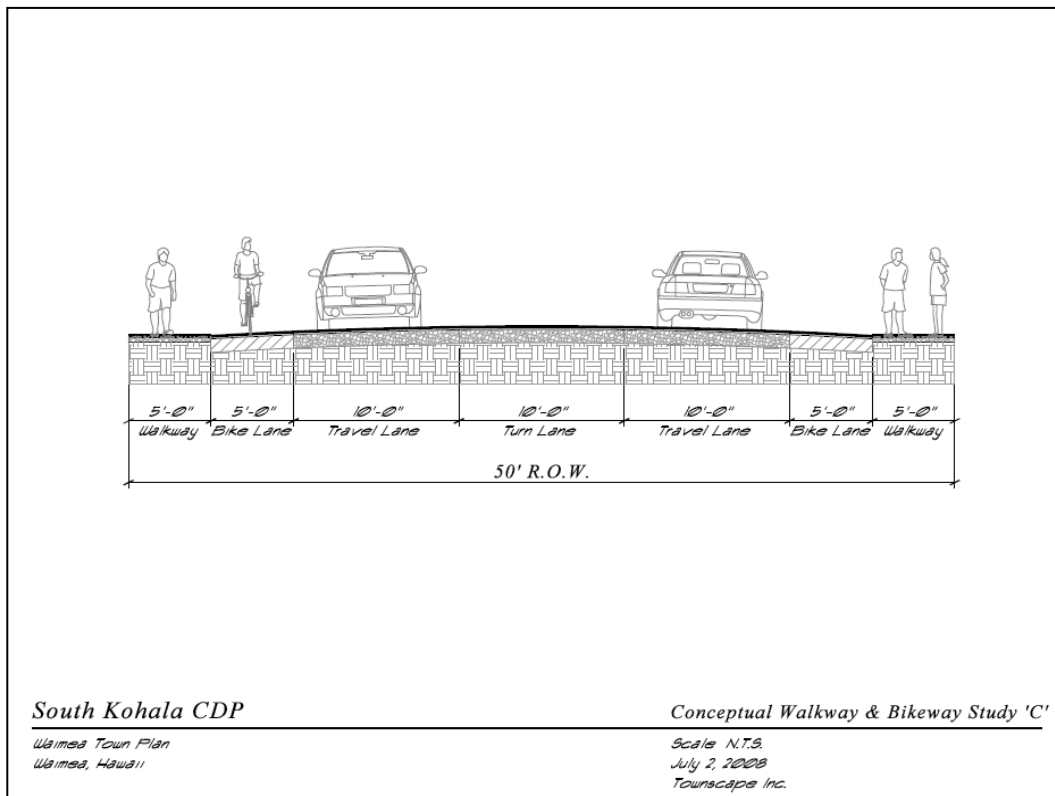
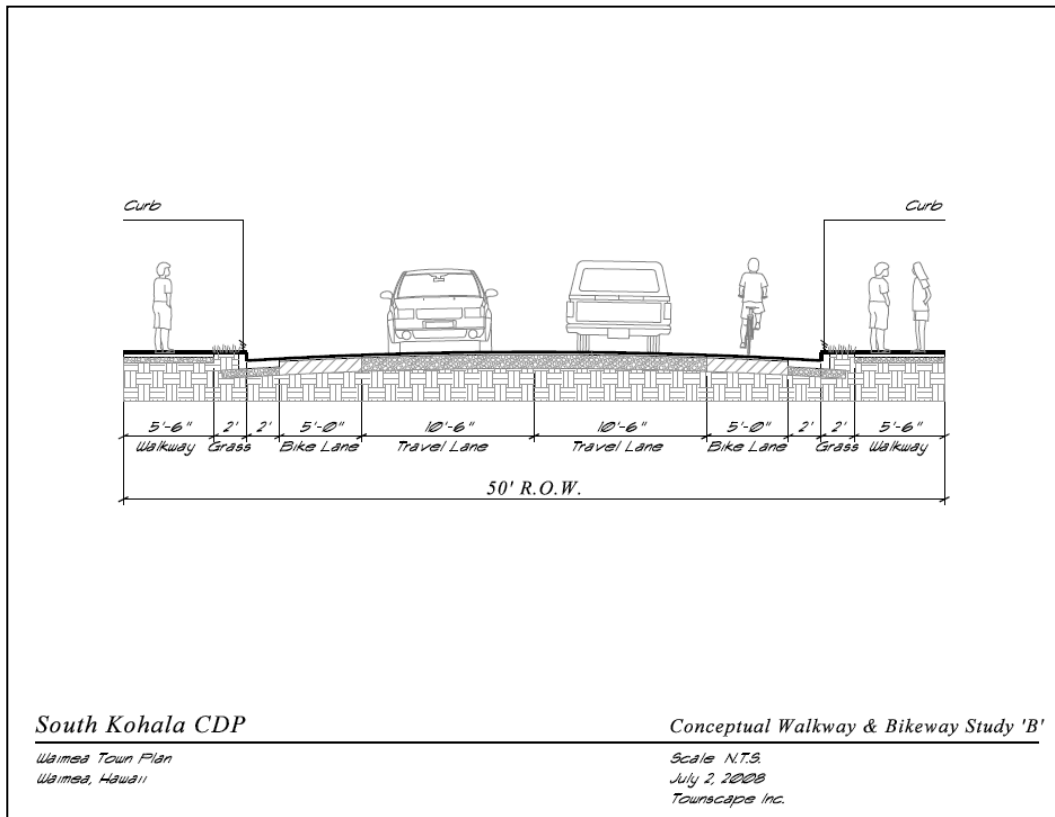


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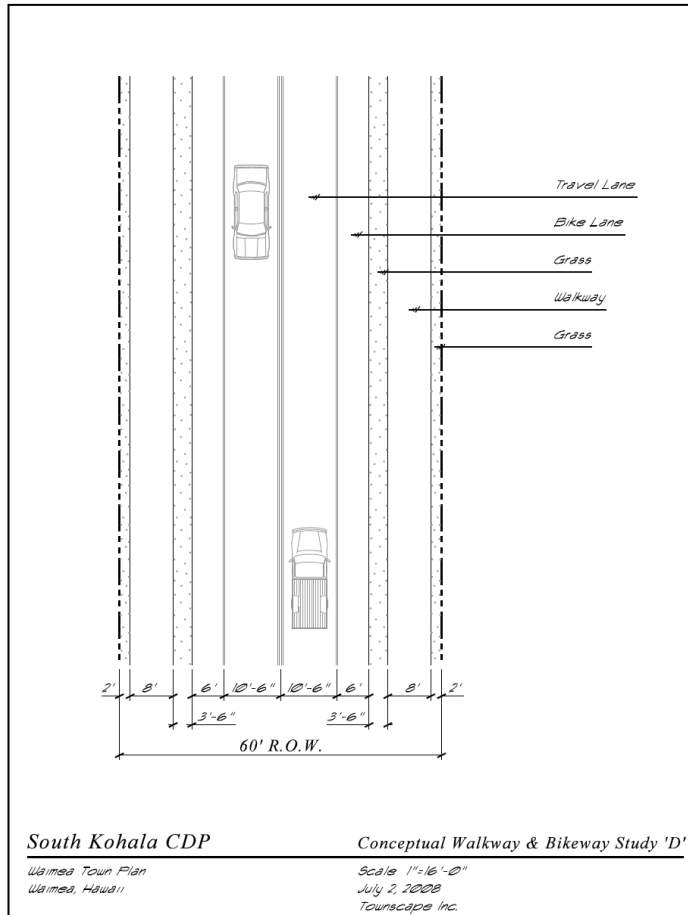
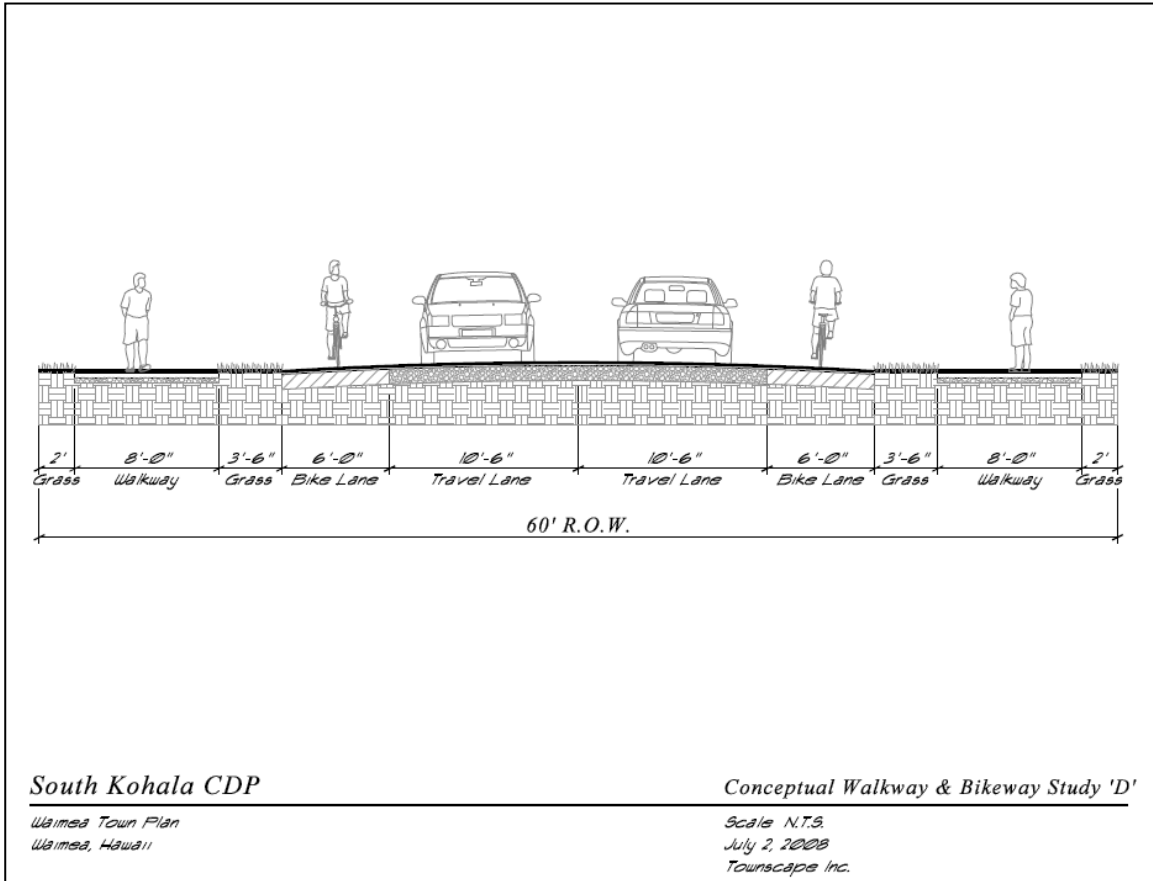
Appendix G: Walkway and Bikeway Diagrams for Waimea



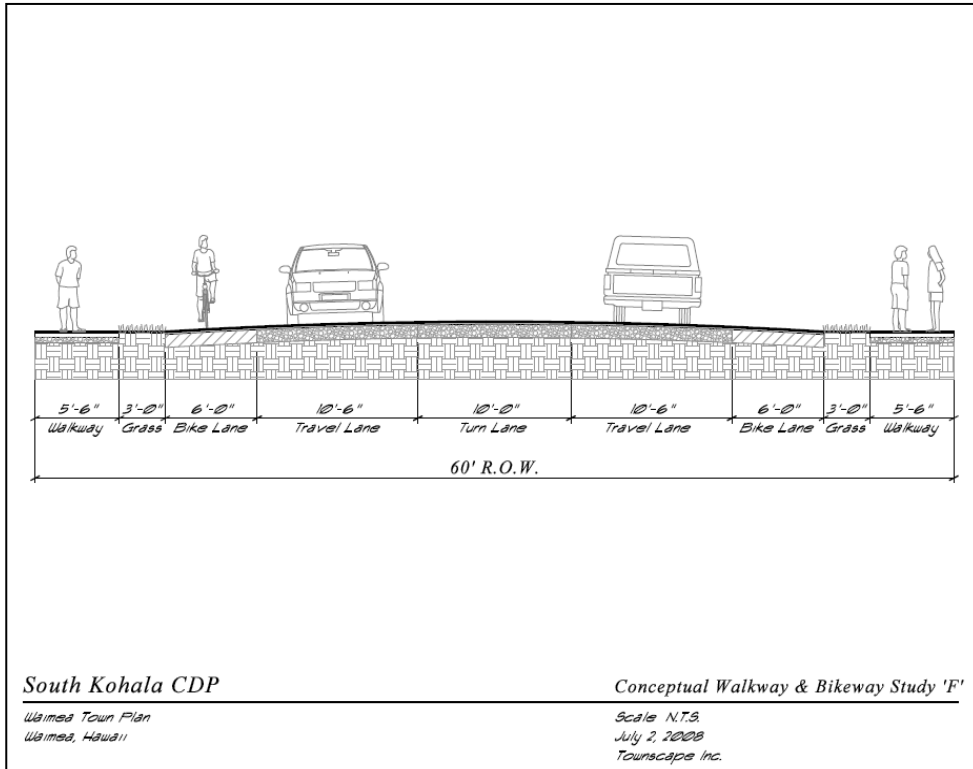
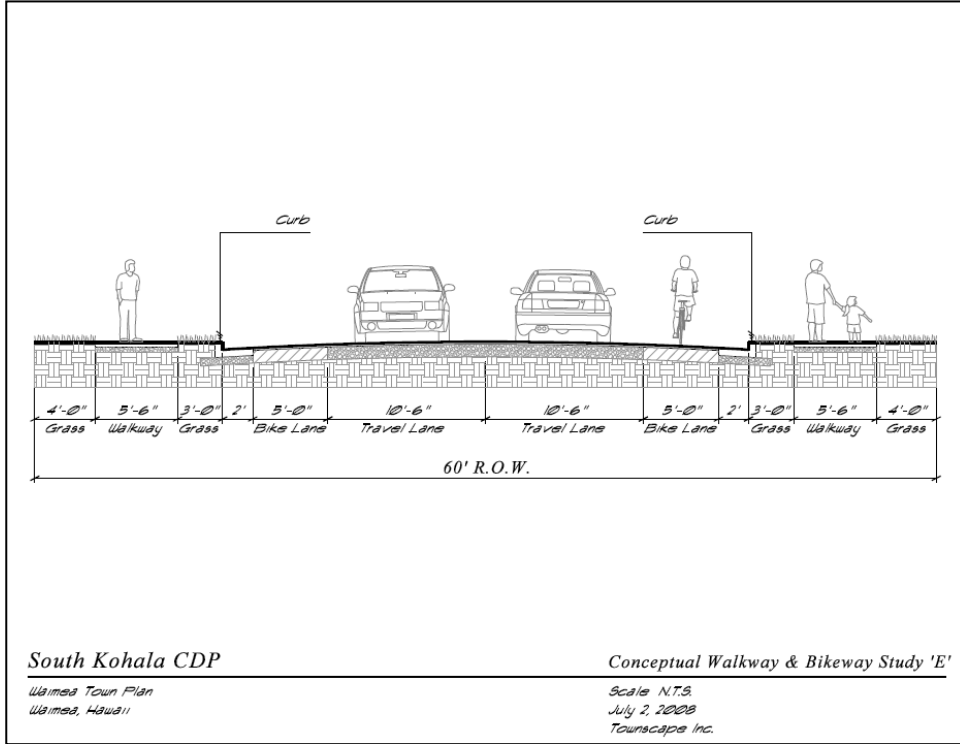
APPENDIX G: Walkway and Bikeway Diagrams for Waimea



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APPENDIX H: Suggested Recreational Trails, Bikeways, and Pedestrian-ways for South Kohala

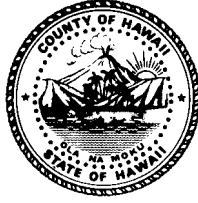
| No. | Name of Trails | Start / End | Description |
|-----|---|---|---|
| 1 | Waimea Trail and Greenway Phase I and II | Along Waikoloa Stream from vicinity of Lālāmilo field system to Church Row | Stream side trail |
| 2 | Expansion of Waimea Trail and Greenway Westward | Lālāmilo to Kohala Coast | Stream side trail with fingers to Paniolo Ave extension |
| 3 | Waimea Trail and Greenway expansion Eastward | Church Row to Mana Rd., possibly to Mud Lane | Trail through Pu'u Kapu hills connecting east side one lane subdivisions |
| 4 | Kapuni O Hawai'i trail | Kawaihae to Waikoloa | Mauka side of Queen Ka'ahumanu Highway paralleling utility easement. |
| 5 | Ala Kahakai National Historic Trail | See Map of Alternative C in Ala Kahakai National Historic Trail EIS (http://parkplanning.nps.gov/alka) | |
| 6 | Trails detailed in the Kohala Watershed Management Plan | See Trails and Public Recreational Use Area Maps (www.state.hi.us/dlnr/dofaw/wpp/KW_P_MgmtPlan_Dec07.mkp.2.pdf) | |
| 7 | Trails detailed in the Parker Ranch Equestrian Plan | See Parker Ranch 2020 Equestrian Plan | |
| 8 | Māmalahoa Highway Pathway | Waimea in vicinity of Waimea District Park 6.3 miles to South | Makai side of highway, paralleling DOT's alignment and utility pole line, also hooks up with old Māmalahoa road |
| 9 | Bike/Ped Network along existing and proposed roadways | Kawaihae, Māmalahoa; Lālāmilo and Parker Ranch Connector roads | Incorporate equestrian, walking an bicycle use as part of "Complete Street" concept |
| 10 | Waikoloa Emergency Access Road | Hulu St. to Queen Ka'ahumanu Highway | Non motorized transportation and recreational corridor |

APPENDIX H: Suggested Recreational Trails, Bikeways, and Pedestrian-ways for South Kohala

| No. | Name of Trails | Start / End | Description |
|-----|--|--|--|
| 11 | Kawaihae village pedestrian and bicycle network | Kawaihae Village area, along Akoni Pule Highway | Non-motorized transportation and recreational corridor |
| 12 | Puakō and Waikoloa village fire break roads | Waikoloa Village and Puakō | Use of fire breaks for recreational use |
| 13 | Walkways along second access to Queen Ka'ahumanu Highway | Waikoloa Village to Queen Ka'ahumanu Highway | Include walking and bicycling facilities along roadway |
| 14 | Trails described in Nino Walker's Paths in the Country Map | See www.waimeaplan.org | |

APPENDIX I: Hawai'i County Council Bill 297 re: CDP Action Committees:

COUNTY OF HAWAI'I



STATE OF HAWAI'I

ORDINANCE NO. _____
BILL NO. _____

AN ORDINANCE AMENDING CHAPTER 16, HAWAI'I COUNTY CODE 1983 (2005 EDITION, AS AMENDED), ESTABLISHING A FRAMEWORK FOR THE COMMUNITY DEVELOPMENT PLANS AND ESTABLISHING THE COMMUNITY DEVELOPMENT PLAN (CDP) ACTION COMMITTEE.

BE IT ORDAINED BY THE COUNCIL OF THE COUNTY OF HAWAI'I:

SECTION 1. Purpose. The purposes of this ordinance are: 1) to establish a framework to adopt and amend the Community Development Plans and 2) to establish the Community Development Plan (CDP) Action Committee that shall succeed each CDP Steering Committee upon adoption of a community development plan by the County Council.

SECTION 2. Chapter 16, Hawai'i County Code 1983 (2005 Edition, as amended), is amended by grouping the existing sections relating to the General Plan into an article to read as follows:

“Article 1. General Plan

Section 16-1. The County of Hawai'i general plan.

- (a) That certain planning code known and designated as “County of Hawai'i general plan,” as adopted on December 5, 1971, by the council of the County of Hawai'i, is hereby adopted by reference, subject to later amendments by ordinance, and may be cited as the “general plan.”*
- (b) A copy of the general plan and amendments shall be available for public inspection at the planning department.”

SECTION 3. Chapter 16, Hawai'i County Code 1983 (2005 Edition, as amended), is amended by adding a new article to read as follows:

“Article 2. Community Development Plans

Section 16-2. Adoption of community development plans. The community development plans listed below are adopted and incorporated by

reference. A copy of the plans and amendments shall be available for public inspection at the planning department.

Section 16-3. Review and amendment. A comprehensive review of the community development plans shall commence within ten (10) years from the date of adoption.”

SECTION 4. Chapter 16, Hawai'i County Code 1983 (2005 Edition, as amended), is amended by adding a new article called “CDP Action Committee” to read as follows:

“Article 3. CDP Action Committees

Section 16-4 CDP Action Committees.

- (a) A Community Development Plan (CDP) Action Committee shall succeed each CDP Steering Committee upon adoption of a community development plan.
- (b) The purpose of the CDP Action Committee is to be a proactive, community-based steward of the plan’s implementation and update.
- (c) The Planning Department shall administer the CDP Action Committees and be responsible for developing a selection process for committee members and establishing rules of procedure, as needed.

Section 16-5. Membership and tenure.

- (a) The CDP Action Committee shall consist of 9 (nine) members. All members shall have a primary residence in the area covered by the CDP. The members shall be appointed by the Mayor and approved by the County Council. Prior service as a member of a CDP steering committee shall not disqualify an individual from serving on the CDP Action Committee.
- (b) The members shall serve staggered terms of four years. Upon the initial appointment of the committee, three members shall serve for a term of two years, three members for a term of three years, and three members for a term of four years. When the term of a member expires, the member shall continue to serve until a successor is appointed. Members whose terms expire may not be reappointed for at least two years, however, members appointed for one year or less may be reappointed for an additional term without the passage of two years' time.
- (c) The membership should reflect a broad cross-section of the community. The community development plan may specify more detailed selection criteria consistent with this objective.
- (d) A chairperson shall be elected from its membership annually.

- (e) Except as provided in this section, the committee shall be governed by the County Charter, section 13-4.

Section 16-6. Duties and responsibilities of the CDP action committees.

The duties and responsibilities of the committee are:

- (1) Provide ongoing guidance and advocacy to advance implementation of the CDP goals, objectives, policies, and actions;
- (2) Broaden community awareness of the CDP and build partnerships, as appropriate, with governmental and community-based organizations to implement CDP policies and actions;
- (3) Take into consideration state-wide objectives and legislation for long-term and sustainable plans for the island as a whole;
- (4) Provide timely recommendations to the county on priorities relating to the county operational budget and the CIP budget and program;
- (5) Receive briefings, as requested, from the planning department on pending and approved permit applications involving property located within the planning area, and on other issues related to the CDP;
- (6) Receive briefings from other county agencies, as requested, on priority actions identified in the CDP, which briefings may be integrated and consolidated by the mayor's office or the planning department into a plan of action for the forthcoming year and a status report on the current year's plan of action;
- (7) Monitor the progress and effectiveness of the CDP including the need for CDP revisions based on emerging statewide plans, new technologies, innovative ideas, or changing conditions;
- (8) Review and make recommendations on interim amendments to the CDP;
- (9) Serve as the steering committee, as set forth in the General Plan, in any comprehensive update of the CDP;
- (10) Provide recommendations to amend the General Plan; and
- (11) Carry out other duties specified in the CDP and/or in agreement with the Planning Department."

SECTION 5. Material to be repealed is bracketed and stricken. New material is underscored. In printing this ordinance, the brackets, bracketed material, and underscoring need not be included.

SECTION 6. If any provision of this ordinance or the application thereof to any person or circumstance, is held invalid, such invalidity shall not affect other provisions or applications of the ordinance that can be given effect without the invalid provision or application, and to this end, the provisions of this ordinance are declared to be severable.