

SECTION II: MAUI COUNTY TODAY

Traditionally the work to prepare a General Plan begins with the gathering and analysis of large amounts of data and information drawn from both original research and secondary sources. This research is important because it provides an objective measure of trends and enables policy makers, planners, and citizens to compare and contrast local conditions with those in other places and to project trends into the future.

Among the studies completed and reviewed as part of the General Plan update are the following:

- 2030 Socio-Economic Forecast, June 2006 (Department of Planning);
- Land Use Forecast, November 2006 (PlanPacific, Inc.);
- Historic Resources Inventory and Mapping Study, June 2006 (Chris Hart & Partners, Inc.);
- Scenic Resources Inventory and Mapping Study, June 2006 (Chris Hart & Partners, Inc.);
- WalkStory PlanStory: A Report on the Responses of Participants, December 2006 (Fern Tiger Associates);
- Maui Island Housing Issue Paper, December 2006 (John M. Knox & Associates, Inc.);
and
- Public Facilities Assessment Update, March 2007 (R.M. Towill Corporation).

These and other relevant technical studies are available on the Planning Department's website, in addition to being in the department's files. This section provides a snapshot of current conditions within the County, generally defines existing conditions and trends, and, most important, draws some broad conclusions about the implications these conditions and trends will have on the future of the County. These issues will be investigated with greater specificity in the subsequent Island and Community Plans. However, the information in this section establishes a common ground or beginning point for setting goals, objectives, policies, and implementing actions on a countywide basis.

A. NATURAL AND CULTURAL RESOURCES

Maui County is famous for its exceptional natural and cultural resources. From the upland forests to the thriving coral reefs, the islands of Maui County include many displays of the rare and amazing natural world. Deeply intertwined with the natural environment are traditional Hawaiian practices, revered places, and evidence of each island's unique history. All of these elements combine to make Maui County the place it is today. This chapter is intended to highlight and document the components of the natural and cultural environment that make Maui County special.



Hana Highway, Maui, Hawai'i.

1. CLIMATE AND TOPOGRAPHY

Among the 50 states, Hawai`i is the only state that lies within the tropics and is surrounded by an ocean. These features significantly affect the climate, as does the topographic diversity of the islands. The majority of the islands' land mass lies within 5 miles of the coast, and yet a significant proportion of the islands are 2,000 feet above sea level or higher.¹



*Haleakala, Maui, Hawai`i.
(Photo courtesy of Dick Mayer.)*

Maui County has an incredible diversity of climatic conditions.

Rainfall tends to be greatest on the windward sides of the islands, which exhibit more consistently mild temperatures. The leeward sides of the islands tend to be dryer and experience higher temperatures during the day. The reduction or increase of vegetation at higher elevations can significantly impact the amount of precipitation throughout the islands. For example, when fog is able to condense on trees and other vegetation, it can increase total annual precipitation by as much as 30 percent.²

The higher the elevation, the cooler the temperatures, with the peak of Maui's Haleakala, at 10,023 feet above sea level, frequently dipping below freezing. The persistent tradewinds flow from east to west, providing a natural system of ventilation and circulation a majority of the time and keeping the climate pleasant in otherwise uncomfortably high temperatures. Sometimes, the islands experience Kona winds, and the ventilation pattern reverses direction. Often this reverses the conditions in windward and leeward locations. It also impacts ocean conditions and ocean-based recreation. All of these conditions combine to create climatic conditions of great diversity.

2. NATURAL HAZARDS

For generations, society has taken for granted that climate was unchanging, and was something mankind could not control. Now it is known that human behavior has a dramatic impact upon both the micro-climate and global climate. In particular, the present level of greenhouse-gas emissions increases the intensity of storms, alters precipitation patterns, raises global temperatures, increases the acidity of ocean waters (killing coral reefs), and raises the sea level. It has been estimated that if greenhouse-gas emissions are not reduced soon, the climate in Hawai`i and throughout the world will be very different for the next generation, bringing an increased likelihood of natural disasters and climatic events.³

Carbon dioxide emissions impact the planet's climate.

¹ Western Regional Climatic Center (2004). *Climate of Hawai`i*.

² Meher-Homji, V.M. (1991). *Climatic Change; Probable Impact of Deforestation on Hydrological Processes* (Stanford University).

³ United States Environmental Protection Agency (2006). *Our Changing Planet*.

Maui County has been impacted by a multitude of natural hazards. Short-term disasters include earthquakes, tsunamis, hurricanes, flashfloods, rockslides, and wildfires. Long-term problems such as erosion and drought⁴ have affected all of the islands over time. Sometimes these forces of nature have impacted the islands in small ways with little lasting effect. Other events have devastated the islands, leaving loss of life and property and economic decline in their wake. Generally, these hazards are outside of human control, but through appropriate planning, their impacts can be minimized.

Natural hazards are outside of human control, but their impacts may be planned for and minimized.

The University of Hawai`i Coastal Geology Group has predicted that the sea level will rise throughout the coming generations. Conservative estimates suggest the sea level may rise up to 1 meter by 2100. Projected sea-level rise over the next 20 years would increase at an exponential rate and would impact all coastlines, most severely affecting Ma`alaea, North Kihei, Lahaina, Ka`anapali, Kahului, and Kaunakakai. Prudent planning will consider projected sea-level rise as a variable in planning for each island.

3. ECOLOGICAL COMMUNITIES AND NATIVE SPECIES

Maui County contains unique climatic and geological conditions, with ecological communities within the islands that are unique to Hawai`i and species that do not exist anywhere else in the world. Some critical habitat areas have been identified in an attempt to protect threatened and endangered species.

Hawai`i's ecological communities are unique.

The State Department of Land and Natural Resources published a report entitled "Hawai`i's Comprehensive Wildlife Conservation Strategy" in 2005. That report identifies the following threats:

- Birds and invertebrates – loss, fragmentation, and degradation of habitat
- Native vegetation – logging, agriculture, grazing, military use, fire, and urban and residential development
- Freshwater flora and fauna – stream diversion, nonpoint source pollution, sedimentation, and stormwater runoff
- Coral – pollution and excessive sedimentation from development
- Anchialine ponds and tide pools – filling and trampling ponds, disturbing algae

The greatest threat to native and endemic species of Hawai`i is invasive species. Because of their evolutionary history, Hawai`i's native plants and animals are particularly susceptible to the threats posed by the introduction and spread of invasive species and pathogens. The introduction of invasive species causes environmental and economic harm. Non-native species may out-compete native species or may directly harm native species through predation or infection. Non-native species may also threaten native species through interbreeding and hybridization, leading to the loss of the native species as a unique species.

⁴ Department of Defense, Civil Defense Agency, State of Hawai`i (2000). *Multi-Hazard Mitigation Planning*.

It is important to protect the few remaining pristine areas and provide recovery areas to restore ecosystems to full functioning. In order to be effective, these areas should be undisturbed by human development and encroachment and be sufficiently connected to other protected areas.

4. WATERSHEDS

A watershed may be defined as a collection of land surfaces draining to the same body of water, which is usually a stream in Maui County. Smaller watersheds combine to form larger watersheds. Virtually all watersheds have been modified or degraded by development, often resulting in the deterioration of water quality, damage to plant and animal communities, erosion, and other environmental wounds. This reduction in the quality of ecosystem components may have significant economic and social implications as well.



Wailua Falls, Kipahulu, Maui, Hawai`i.

Many of the streams and watercourses on the islands of Maui County have been diverted, and some no longer have any water flow that reaches the ocean. Almost all of the upper reaches of the County's watersheds are in conservation areas protected from development. However, land and water closer to the shoreline are increasingly impacted by human development.

Sediment-laden runoff is a problem in areas where urbanization or ranching has denuded the landscape.

In urbanized areas where the natural landscape is paved or covered with impervious surfaces, rainwater is not able to percolate into the ground and be absorbed by plants or collect into a stream. Increased impervious surfaces (such as roofs and roads) prevent infiltration of precipitation into the soil. This increases the volume and erosive force of runoff.⁵ Furthermore, impervious surfaces do not filter the water like a natural watershed might, which means that any trash, oil, fertilizer, and other debris in the path of a watershed may also get released into streams, waterways, and the ocean. More and more, the islands of Maui County are experiencing sediment-laden stormwater runoff into the ocean, which is coating the delicate coral reefs. This is of particular concern on Moloka`i, where ranching has significantly reduced the vegetation that would normally assist in transpiration and infiltration of rainwater.

The ahupua`a system of watershed management takes into account all resources from the forest lands to the coral reefs. Lands, forestry, and water for agriculture, housing, stream habitat, and reef systems were allocated by the ruling chief to subordinate members. Throughout the world, watershed restoration is becoming a more common practice as communities realize the benefits of natural watersheds.

⁵ Boutillier, S., Duane, T. (2006). *Land Use Planning to Promote Marine Conservation* (University of California, Berkeley).

At the local and state levels, many communities are now requiring that development and infrastructure plans include vegetation in proportion to impervious surfaces, along with storm chamber systems that slowly release stormwater into the soil, mimicking a natural watershed.

5. AGRICULTURAL LANDS

Maui's agricultural lands have been valuable resources.

Maui County is blessed with vast acreage of high-quality agricultural lands. Like other unique natural resources, rich and productive agricultural land is difficult to reclaim once it is impacted by development. The value of agricultural land is evaluated through a description of the area's soil attributes. The State Department of Agriculture has developed a classification system that analyzes soil productivity, water retention, erosion, chemical makeup, and factors favorable for root growth. Under the Agricultural Lands of Importance to the State of Hawai'i (ALISH) system, there are three classifications:

1. Prime – land that has the best physical, chemical, and climatic properties for crop production.
2. Unique – land that is best suited for special or high-value crops such as watercress, coffee, or taro.
3. Other – land that may not be the most productive, but is convenient for agricultural purposes because of its location, access to water, or other factors.



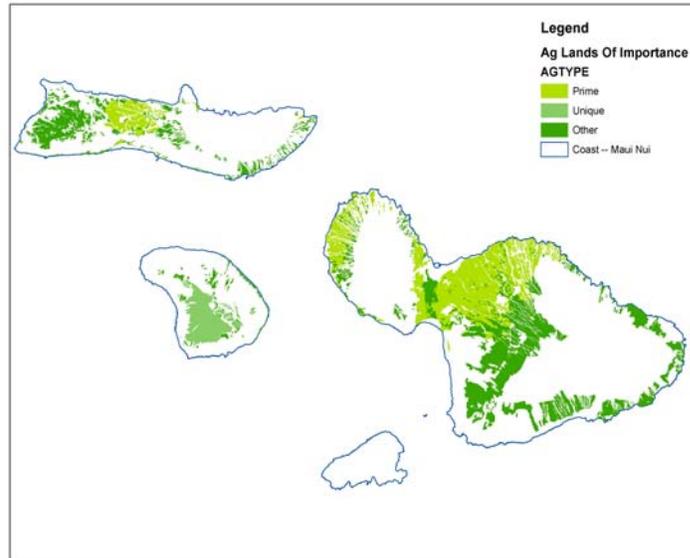
Kula, Maui, Hawai'i. (Photo courtesy of Dick Maver.)

Together, these types of agricultural lands form the important agricultural lands of the County. From the early Hawaiian societies to the modern plantation industries, the important agricultural lands of the County have been utilized and understood as being among Maui County's most valuable resources. Protecting important agricultural lands is a major goal of this Plan.

There are 79,392 acres of Prime agricultural land, 17,186 acres of Unique agricultural land, and 113,232 acres of Other important agricultural lands in Maui County as determined by ALISH (see Figure 3).

Agricultural lands have the potential to move the islands of Maui County toward self-sufficiency. Food and energy production required for Maui County could take place entirely within the County, bolstering our economic security. Even today, the means exist to utilize bio-fuel to supplement energy generation through renewable technologies. Moreover, the vast open spaces and beautiful countryside that are the result of agricultural land use improve the quality of life for residents and visitors.

Figure 3: Important Agriculture Lands



Much of this land remains available for agricultural production. Diversifying the agricultural industry to improve food security and meet a higher percentage of Maui County’s resident-food needs is a priority for the upcoming planning period.

6. SCENIC RESOURCES

The scenic vistas of Maui County are valuable resources that enrich our lives.

The islands of Maui County are world famous for their beautiful scenic resources. These resources are diverse and include developed and undeveloped sections of shoreline, tropical rainforests, rugged valleys, mountains with jagged peaks, vast open spaces, historic towns and settlements surrounded by productive agricultural land, and panoramic Pacific Ocean views. The beauty of these scenic resources enriches the quality of life for residents and serves as a primary visitor attraction.

Throughout the County, large-lot residential development and insensitively designed development in all land use sectors have dramatically impacted the County’s scenic resources. Scenic resources, like other valuable natural resources, define the islands and require management to protect them from being unnecessarily degraded or depleted. Lands rich in scenic-resource value are often the same lands that are in high demand for recreational, resort, and residential uses. Protection of valued scenic and natural resources is a priority during this planning period.

7. HISTORIC RESOURCES

Historic and cultural resources provide a connection to the past and establish a unique character for our communities.

Maui County’s historic sites, buildings, and structures help to define the character and historic significance of place. By taking measures to preserve these resources, Maui County can protect some of the elements that make it special. There are reminders of Maui



Keanae Congregational Church, built in 1860, Maui, Hawai‘i.

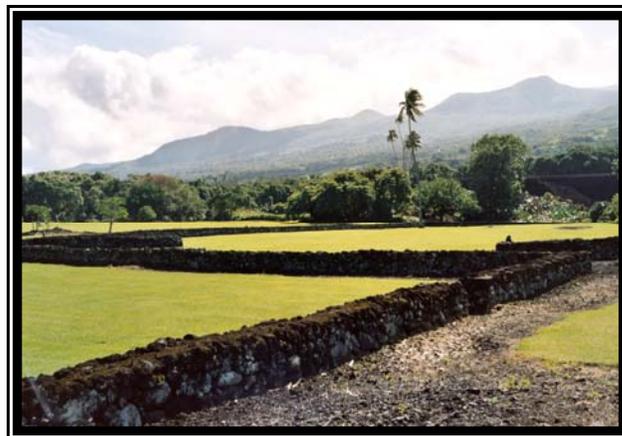
County’s past on each island. Ancient petroglyphs, heiau, and fishponds, and, more recently, civic buildings, churches, and country stores are designated as important landmarks and social assets. While they may not all be used in the manner they were originally intended, their presence within the islands’ landscape is invaluable in teaching us about our past.

8. CULTURAL RESOURCES

Deeply intertwined with the geographical environment of the islands are traditional Hawaiian practices. Prior to the arrival of Westerners and the idea of private land ownership, Hawaiians accessed and gathered the resources from the land and seas to fulfill their community responsibilities. Following the Great Mahele, many Hawaiians were denied access to previously available traditional resources.

Natural, cultural, and historic resources should be viewed as valuable assets to protect for present and future generations.

The traditional practices of Native Hawaiians were primarily for subsistence, medicinal, religious, and cultural purposes. Examples of traditional subsistence



Pi’ilani Heiau, Hana, Maui, Hawai‘i.

practices include fishing, picking `opihi, collecting limu (seaweed), and collecting healing herbs. Plants and flowers were also picked for use in traditional Hawaiian ceremonies. The Environmental Council has observed: “Native Hawaiians performed these traditional customary practices out of a sense of

responsibility: to feed their families, cure the sick, nurture the land, and honor their ancestors. As stewards of this sacred land, we too have a responsibility to preserve, protect, and restore these cultural resources for future generations.⁶

⁶ Environmental Council, State of Hawai‘i (1997). *Guidelines for Assessing Cultural Impacts*.

Today, the in-migration of cultures from around the world has woven a rich tapestry of cultural heritage within Maui County. Each of these groups has brought their own customs, food, language, legends, and celebrations to share. Immigrant cultural influences and the underlying Polynesian values have transformed the culture into something as unique and special as the islands' rare ecology.

Summary

Hawaiian society was based on the view that there is a balance between land and ocean, with each part of the island, from the peak of the mountain to the deep blue of the ocean, being interdependent. This principle was exemplified in the Hawaiians' ahupua`a system, which established a legacy of mountain-to-sea interconnectedness. This cultural practice can be perpetuated through the modern principle of sustainability and ecosystem-based stewardship. As the planning process for the islands of Maui County progresses, natural and cultural resources should remain foremost in the minds of planners and the public as opportunities for protection and constraints on future development.

B. LAND USE AND DEVELOPMENT PATTERNS

Unlike most communities in the United States, the boundaries of Maui, Lana`i, and Moloka`i are finite and cannot be enlarged through annexation. In fact, because of sea level rise, it is probable that some of the County's land will not be accessible in the coming years. The coastlines, even as they change, will remain boundaries, and all land uses today and for future generations must be accommodated within these natural parameters. Therefore, it is of utmost importance to carefully consider choices regarding land use and the location of future development and how the County uses its limited resources.

1. LAND USE

Between Maui, Moloka`i, Lana`i, and Kaho`olawe there are approximately 750,900 acres of land to consider in land use decision making. A fair amount of the land on all of the islands is permanently designated as land within the State Conservation District; however, a large percentage of the land within other designations could be developed (see Table 1). This makes it extremely important to evaluate what type of development is appropriate and where it should be located through the General Plan process. The State of Hawai`i is unique in that both the State and the County regulate land uses for all properties.

In an island county, with limited land area, careful land use decision making is of utmost importance.



View from Waikapu, Maui, Hawai`i. (Photo courtesy of Dick Mayer.)

The State of Hawai`i has classified all land into one of four land use districts:

1. “U” - Urban District;
2. “A” - Agricultural District;
3. “C” - Conservation District; or
4. “R” - Rural District.

Approximately 54 percent of the land in Maui County is zoned for agriculture.

Table 1 illustrates the acreage of land in each land use category on the four islands, along with the statewide acreages for comparison. While not all areas designated in each of the categories have been developed as identified, the table provides a general idea of the distribution of land uses on each of the islands and illustrates how land use on the islands of Maui County compares to land use statewide.

Maui County has less land designated for conservation and more land designated for agriculture than the remainder of the State. More than two-thirds of the Island of Moloka`i is zoned for agriculture. Maui Island has the largest percentage of its land area designated for urban use within the County. The County of Maui has more land designated as rural than the other counties in Hawai`i.

Table 1: State Land Use Category Acreage for Maui County

State Land Use Category		Conservation		Agriculture		Rural		Urban	
Island	Total Acres	Acres	% of Total Land Area	Acres	% of Total Land Area	Acres	% of Total Land Area	Acres	% of Total Land Area
Maui	465,800	194,836	41.8%	245,777	52.8%	3,778	0.8%	21,409	4.6%
Kaho`olawe	28,800	28,800	100.0%	-	0.0%	-	0.0%	-	0.0%
Lana`i	90,500	38,197	42.2%	46,639	51.5%	2,407	2.7%	3,257	3.6%
Moloka`i	165,800	49,768	30.0%	111,627	67.3%	1,866	1.1%	2,539	1.5%
County Total	750,900	311,601	41.5%	404,043	53.8%	8,051	1.1%	27,205	3.6%
Statewide	4,112,388	1,973,973	48.0%	1,932,862	47.0%	10,058	0.2%	195,495	4.8%

State of Hawai`i Data Book 2002

2. SPRAWL

Urban sprawl is a phrase coined to describe the post-World War II phenomenon of consuming land, resources, and infrastructure at a faster rate than neighborhoods have been traditionally built. Sprawl segregates people by income level and relies upon automobile-scaled development and cheap fossil fuel. Sprawl occurs when rural and agricultural lands are developed into large-lot subdivisions or when new population or economic centers are built away from the existing infrastructure grid that still has available capacity.

Per capita, sprawl requires more taxpayer support and consumes more land, infrastructure, and natural resources than traditional development patterns.

Enabling urban sprawl can be wasteful and costly. It degrades once-quiet rural communities and devours scenic open spaces. It is responsible for the excessive loss of agricultural lands and natural wildlands. Large-lot, single-family subdivisions consume more land *per capita*, require more taxpayer support *per capita*, and function less efficiently than traditionally scaled neighborhoods. If all of the landscape was developed with a single residence for every 2.5 acres there would be no countryside to enjoy.

3. SMART GROWTH

Currently, best practices emerging in the national planning community deem “Smart Growth” as a good way to mitigate sprawl.



Lana'i City, Lana'i, Hawai'i.

Smart Growth is development that serves the economy, the community, and the environment. Smart growth is about being good stewards of our communities and of our rural lands, parks, and forests. It is about ensuring that the best of the past is preserved, while creating new communities that are attractive, vital, and enduring.⁷

In short, Smart Growth is based on development designed at a scale to be comfortable to a pedestrian, not an automobile. It is also based on appropriately varying development type and massing from the urban core to the rural edge. There are ten key principles of Smart Growth:

1. *Create a range of housing opportunities and choices;*
2. *Create walkable neighborhoods;*
3. *Encourage community and stakeholder collaboration;*
4. *Foster distinctive, attractive communities with a strong sense of place;*
5. *Make development decisions predictable, fair, and cost effective;*

⁷ Statement of Michael Leavitt, EPA Administrator (2005).

6. *Provide a mix of land uses;*
7. *Preserve open space, farmland, natural beauty, and critical environmental areas;*
8. *Provide a variety of transportation choices;*
9. *Strengthen and direct development towards existing communities; and*
10. *Take advantage of compact building design.*

Summary

As Maui County adopts subsequent amendments to the General Plan, it will be important to incorporate these key principles and research other land use tools that enhance quality of life.

C. SOCIAL PATTERNS AND HOUSING TRENDS

To understand the goals and aspirations of Maui County’s residents, it is important to understand who the people of Maui County are and what social issues impact their lives. This chapter focuses on the population, social patterns, and housing trends of Maui County.

1. POPULATION

Population change is among the most important means to measure growth.

Population change is among the most important means to measure growth and its likely impact on land uses in a community. Therefore, it is important to achieve an understanding of the County’s population trends to prepare a meaningful and realistic plan for the future.

The original inhabitants of the islands, the Native Hawaiians, existed in large numbers throughout Maui County. It is estimated that there were 300 villages on Maui, 179 villages on Moloka`i, and 62 villages on Lana`i in 1853.⁸ The population of the Native Hawaiian dwindled over time, largely because of epidemics. Moreover, the immigration of Westerners and plantation workers from around the globe changed the demographic profile of Maui County dramatically. Today, Maui County is one of the most racially and ethnically diverse places in the United States.

A Socio-Economic Forecast generated by the County as part of the General Plan update estimates the 2005 resident and visitor population and projects the 2030 population of each island in the County in Table 2 below.

⁸ Coulter, John W. (1931). *Population and Utilization of Land and Sea in Hawai`i, 1853* (Bishop Museum Press, Honolulu).

Table 2: Resident and Visitor Population Estimates for 2005 and Forecasts for 2030

	2005 Estimated Resident Population	2005 Estimated Visitor Population	2005 Estimated Resident & Visitor Population	2030 Forecasted Resident Population	2030 Forecasted Visitor Population	2030 Forecasted Resident & Visitor Population
Maui	129,471	45,676	175,147	176,686	64,690	241,377
Moloka`i	7,127	909	8,036	7,963	1,279	9,243
Lana`i	3,452	1,224	4,676	4,649	1,733	6,382
County Total	140,050	47,809	187,859	189,298	67,702	257,002

The County’s resident population is expected to grow at nearly an identical rate as *de facto* population, with the resident population of the County of Maui reaching 189,298 by 2030 from 128,241 in 2000.

In evaluating Census data for the County from 1990, 2000, and 2005 estimates, some important conclusions can be drawn about demographic patterns of the islands:

- The population is aging. The Maui County median age increased from 33.5 to 36.8 years between 1990 and 2000.
- Households are becoming smaller. The County’s average household size declined from 2.99 persons per household in 1990 to 2.91 as of 2000. The national average household size increased from 2.46 in 1990 to 2.59 in 2000. However, the average household size for Native Hawaiians, Filipinos, and other Pacific Islanders remained at more than 4 persons in 2000. Moreover, the prevalence of grandparents and grandchildren living under the same roof is nearly twice as high in Hawai`i as it is nationally.⁹
- The number of Native Hawaiians and other Pacific Islanders in Maui County decreased from 13,730 in 2000 to 12,889 in 2005, suggesting that out-migration of each of the island’s native population is occurring.

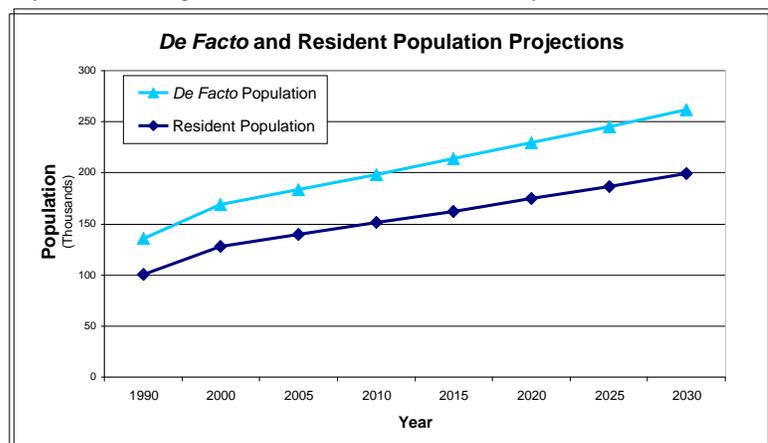


Figure 4

⁹ Department of Health, State of Hawai`i (2006). *Profile of Hawai`i's Older Adults and Their Caregivers*.

2. EDUCATIONAL ATTAINMENT

In today’s world, knowledge and intellectual capital are widely recognized as indicators of production potential, and therefore, can be tied to quality of life.

Education allows people to “lead lives of dignity and purpose; construct knowledge and put it toward humane ends; and participate as informed citizens in a democratic society.”

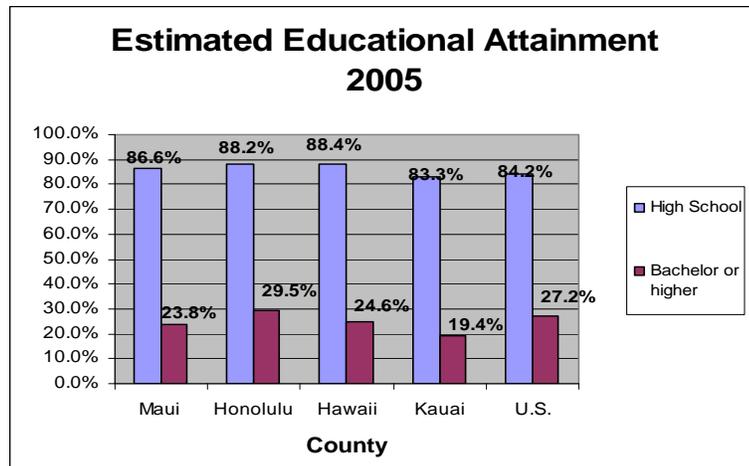


Figure 5

Obtaining an education also plays a significant role in “enabling individuals to lead lives of dignity and purpose; construct knowledge and put it toward humane ends; and participate as informed citizens in a democratic society.”¹⁰ During the Focus Maui Nui workshops, participants understood this philosophy and ranked education as a top priority.

The United States Census Bureau in 2005 estimated that of 92,823 people in the County who are 25 years and older, 86.6 percent have graduated high school and 23.8 percent have a bachelor’s degree or higher. While the high school graduation rate of Maui County is slightly higher than that of the remainder of the United States, the percentage of residents with higher-level degrees is lower. It is evident from the graph above that the islands with public four-year universities have a slightly higher level of educational attainment.

3. HEALTH

Health has been defined by the World Health Organization as “a state of complete physical, mental and social well-being.” Native Hawaiians took a similar approach to wellness, concluding that only when a person was healthy in all three of these areas, and spiritually, were they “right” or pono. Today some of the key health concerns of residents of Maui County include:

Providing the people of Maui County with opportunities for healthy lifestyles will require collaboration.

- The majority of Maui County residents have some type of health insurance, but the State Department of Health estimated in 2005 that 10,528 residents were uninsured (7.6 percent of the resident population).

¹⁰ Calvert-Henderson. (2000). *Quality of Life Indicators*.

- Obesity is a growing concern throughout the world, and while Hawai`i is considered to be one of the healthiest states in the nation, it is estimated that 51 percent of Maui County’s adults are overweight or obese.¹¹
- The State of Hawai`i’s children, including those in Maui County, have one of the highest rates of dental disease and cavities in the nation, and the State has the lowest proportion of residents with access to fluoridated drinking water.¹²
- Substance abuse is of particular concern as Maui County adults and children are more likely to become drug or alcohol dependent than other State residents.

During the Focus Maui Nui workshops, a key concern for many participants was substance abuse and its effect on the community. According to the State Department of Health, there is some reason for concern. In a statewide study on substance abuse, the estimated rate of adult dependence and abuse of drugs and/or alcohol is highest within Maui County.¹³

Table 3: Maui County Adults Challenged With Substance Abuse

Population (18 Years and Over)	Maui County (82,754)	
Treatment Need	No.	%
Needing Treatment for Alcohol Only	5,818	7.03%
Needing Treatment for Drugs Only	1,498	1.81%
Needing Treatment for Both Alcohol and Drugs	1,804	2.18%
Total Need Treatment for Alcohol and/or Drugs	9,120	11.02%

Substance abuse is a significant concern in Maui County.

Creating healthy families and healthy people requires assessing more than just physical aches and pains; it is a comprehensive picture of wellness. Hawaiian culture emphasizes the treatment of mind, body, relationships, and spirit to achieve a truly healthy state of being. With adequate planning and collaboration, the County can make healthy lifestyles available to all Maui residents.

4. ISLAND HOUSING

Shelter is among the most basic of human needs. The affordability, quality, and location of housing—including the degree of crowding within the home and within the neighborhood—play an enormous role in the quality of life of Maui County’s residents. This section evaluates the observable trends in the housing market and the impacts of these trends on the County’s population.

¹¹ Department of Health, State of Hawai`i (2004). *Number and Percent Overweight (Including Obese) By County, Gender, Age, and Ethnicity – Adult Population of Hawai`i.*

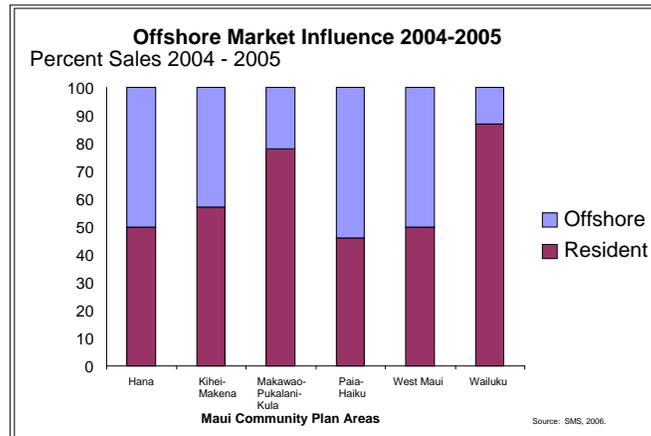
¹² Department of Health, State of Hawai`i (2004). *Hawaiian Islands Oral Health Task Force Action Plan.*

¹³ Department of Health, State of Hawai`i (1995). *Adult Household Survey of Substance Use and Treatment Needs.*

The affordability and quality of housing plays a large role in County residents' quality of life.

From 2000 to 2005, Maui County experienced a strong housing demand that was fueled by a strong local economy, low mortgage-interest rates, and Mainland interest in Maui County real estate as an investment alternative. The participation by off-island investors in Maui County's real estate market has had a profound impact on housing demand.

Figure 6



In 2004, 37 percent of all Maui Island housing sales were to buyers residing outside of Maui County. In the same year, more than 42 percent of sales in the Kihei-Makena Community Plan Area were to off-island buyers; in the West Maui Community Plan Area, the number of off-shore sales

Nearly a fifth of the housing units in the County are not inhabited by County residents.

increased to more than half of total sales. (Non-resident ownership was much lower, with only 20 percent of the island's residential property being owned by out-of-state residents).¹⁴

A majority of Maui County residents pay an unsustainably high proportion of their income towards housing.

This increased demand has raised the prices for available island housing throughout the County. The Census Bureau estimated in 2005 there were 62,178 residential housing units within the County. Of those, 28,476 units were owner-occupied, 19,917 units were renter-occupied, and 13,705 units were vacant. This high vacancy rate (22.1 percent) can likely be attributed to the large number of second homes with absentee owners. While the homes may be vacant the majority of the year, they are not available to include in the pool of housing for local residents.

Within the County, the median household income in 2005 was \$57,573, and the median housing value was \$573,400. The Census Bureau estimated that Maui County residents paid an average of \$24,204 per year in mortgage costs, consuming 42.04 percent of their income. The United States Department of Housing and Urban Development (HUD) reported:

The generally accepted definition of affordability is for a household to pay no more than 30 percent of its annual income on housing. Families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care.

¹⁴ Department of Planning, County of Maui, Hawai'i (2006). *2030 Socio-Economic Forecast*.



Home constructed circa 1930, Makawao, Maui, Hawai`i.

Because the median-income homeowner is far exceeding the standard annual allocation limit for housing, the majority of Maui County residents are paying an unsustainably high percentage of their income toward housing.

The challenge for first-time home buyers is especially great. Given the median income in 2005 and the estimated median housing value, the average annual housing cost to the first-time homebuyer family would be \$41,000.¹⁵ This translates to 71.6 percent of the median family's income—more than double the HUD-recommended standard expenditure.

As a comparison, the same 2005 Census estimates concluded that the median household income in the United States was \$46,242, and the median housing value was \$167,500. The Census concluded that existing homeowners across the nation were paying on average \$15,540 per year for their mortgage, or 33.6 percent of their income. New homeowners in the United States would pay approximately \$12,035 annually for a mortgage—only 26 percent of their income.

Affordable housing for low- and moderate-income households is in greatest demand.

This housing cost, along with higher costs for other goods (such as food and gasoline), may explain some of the out-migration. The Housing and Community Development Corporation of Hawai`i reported in its Consolidated Plan (2004):



Lana`i City, Lana`i, Hawai`i.

The largest categories of housing need are for units affordable to households earning below 50% and from 50-80% of the median income. These income groups exhibit the highest incidence of housing problems – cost burden, substandard units and overcrowding.

While difficult to track because of the necessarily transient behavior of the population, it is understood that homelessness and the difficulties associated with finding affordable, legal, and safe housing are growing problems throughout Hawai'i, and Maui County is no exception. Several service organizations throughout the County assist in providing emergency and transient housing. However, providing permanent housing for the chronically homeless is a challenge that Maui County and many communities throughout the nation are facing. Maui County is better equipped to accommodate housing shortages than many regions because it is common and socially acceptable for residents to live with extended family and foster children or hanai relatives.

Summary

Through awareness and adequate planning, Maui County can work to expand opportunities for education, to assist island residents in achieving healthy lifestyles, and to improve access to affordable housing.

D. JOBS AND ECONOMY

Prior to statehood, Hawai'i's economy was driven by plantation agriculture (sugar and pineapple) and military spending. Since Hawai'i's incorporation into the United States, tourism has become the leading industry in the State. This shift toward a service-based economy brought with it impacts to employment, income, and economic development.

1. EMPLOYMENT

There are more wage earners per household in Hawai'i than in most other states.

The rates of growth in resident population, housing, and jobs are higher than the rate of growth for visitors. This means the Maui County economy has diversified and is less driven by tourism than in the past.¹⁶ However, overall, the State's economy remains service oriented. Construction, manufacturing, and agriculture account for less than 10 percent of wages and salaries. For many years, Hawai'i had among the lowest rates of unemployment in the United States. The County as a whole reported a 3.1-percent unemployment rate for 2006; the State rate was 2.5 percent (lowest in the nation), while the national rate was 4.6 percent. According to the United States Bureau of Labor Statistics, the County's unemployment rate had risen to 9.7 percent as of September 2009, close to the national rate of 9.8 percent.

Currently, there are large employment centers in Wailuku-Kahului, Lahaina-Ka'anapali, and Kihei. Nearly all of the residents of Lana'i are employed within Lana'i City; however, Moloka'i has no large centralized place of employment. These centers determine commuting patterns and will be important to evaluate for infrastructure, transportation, and service needs throughout the planning horizon.



Kapalua Resort, Kapalua, Maui, Hawai`i.

Hawai`i's employees have a strong history of participation in unions. Plantation workers began organizing themselves and striking in the early 1900s to protest wages and working conditions. In 1946, movement toward unionization was solidified during the Great Sugar Strike. Today, employees

from a wide variety of employment sectors are unionized, including construction, agriculture, hotel, government, and shipping. The International Longshore and Warehouse Union maintains that about half of all its members are employed in Hawai`i. This tradition of employee organization has arguably had both positive and negative impacts on the local economy. While unionization has likely led to better working conditions, pay, and benefits for Maui County's employees, there may have been corresponding increases in the costs of goods and services for both residents and visitors.

2. INCOME

The median household income of residents in Maui County was higher than the national average in 2005, but slightly lower than that of Honolulu residents. Interestingly, the *per capita* income of both Maui County and Honolulu residents is similar to the national median of *per capita* income, suggesting that there are more wage earners per household in Hawai`i homes than nationally.

Table 4: U.S. Census Income Estimates for 2005

	Maui County	Honolulu	Hawai`i State	U.S.
Median Household Income	\$ 57,573	\$ 60,485	\$ 58,112	\$ 46,242
Median <i>Per Capita</i> Income	\$ 27,121	\$ 25,781	\$ 25,326	\$ 5,035
Families Below Poverty Level	4.6%	7.3%	7.7%	10.2%
Individuals Below Poverty Level	6.5%	9.4%	9.8%	13.3%

The percentage of the population of Maui County living below the nationally defined poverty level is lower than the national average.¹⁷ However, the Federal determination of poverty does not reflect cost of living in Hawai`i. For a three-person household, the United States Department of Agriculture (USDA) determined the following categories of low- to moderate-income households in Maui County in 2006:

- Very Low Income: \$ 31,150
- Low Income: \$ 49,800
- Moderate Income: \$ 55,300

Based upon the HUD determination that 30 percent of annual income is a sustainable cost for housing, Table 5 indicates appropriate housing costs for a three-person household.

Table 5: Income and Sustainable Housing Costs for Low-Moderate Income in Maui County

Income Level	USDA Annual Income Thresholds for Maui County 2006	Income Available for Housing	Affordable Monthly Payment	Affordable Mortgage (Assuming no down payment & 7% interest rate)
Very Low Income	\$ 31,150.00	\$ 9,345	\$ 778.75	\$ 133,445.21
Low Income	\$ 49,800.00	\$ 14,940	\$1,245.00	\$ 213,340.97
Moderate Income	\$ 55,300.00	\$ 16,590	\$1,382.50	\$ 236,902.73

3. ECONOMIC DEVELOPMENT

Maui County will benefit by further diversifying its economy.

In the early 1980s, Maui County's economy was dependent on agriculture and tourism, both of which were vulnerable to forces beyond the community's control. In 1981, a symposium entitled Maui's Economic Future attracted the participation of Maui County's elected, business, and community leaders. The participants explored approaches the County could take to strengthen and diversify the economy. The consensus of those leaders was that Maui County's economic future would benefit by diversifying into emerging industries such as the high-technology arena. As a result, the Maui Economic Development Board (MEDB) was formed to assist the County of Maui in pursuing opportunities in high technology and other growing sectors.



Haleakala bicycle tour, Maui, Hawai'i. (Photo courtesy of Paul Gallagher.)

One of the many achievements of MEDB has been the development of the Maui Research and Technology Park (R&T Park) in Kihei. MEDB worked with key legislators to secure State funding for the Maui Research and Technology Center on land donated by the R&T Park developers.

Maui County is also moving toward diversification within the tourism industry, including the enhancement of niche tourism. Two rapidly expanding areas include ecotourism and wellness tourism.

Ecotourism emphasizes the interpretation of local ecosystems and culture and affords minimal visitation impact; commitment to local conservation issues; and direct benefits to local residents. Wellness tourism is travel for the purpose of enhancing balance and harmony, mentally, emotionally, physically, and spiritually, according to the Hawai'i Wellness Tourism Association.

Investments in agriculture, aquaculture, manufacturing, and energy production will improve the County's economic climate.

Niche tourism has enormous potential to change the face of the tourism industry in Maui County.

Maui County is extremely dependent upon off-shore sources for energy, food, construction materials, and common daily goods. The participants of Focus Maui Nui expressed a desire to retool the County's economy to enable Hawai'i to be more self-reliant. This would mean expanding agriculture, aquaculture, manufacturing, and renewable-energy sectors in the islands. By working toward self-sufficiency, Maui County's economy could diversify dramatically, thereby offering additional opportunities for employment and income. In addition, the offshore dollars that come into the County through the tourism industry could produce a multiplier effect, as the money earned in this industry would purchase locally grown and produced goods and local services.

E. TRANSPORTATION, UTILITIES, AND COMMUNITY FACILITIES

Transportation, utility, and community-facility systems allow communities to operate efficiently and serve the needs of the population. The placement and capacity of these systems can have a tremendous impact on the way land is developed. In addition, the quality of these systems and facilities has the potential to either improve or diminish the quality of life for residents.

1. UTILITIES

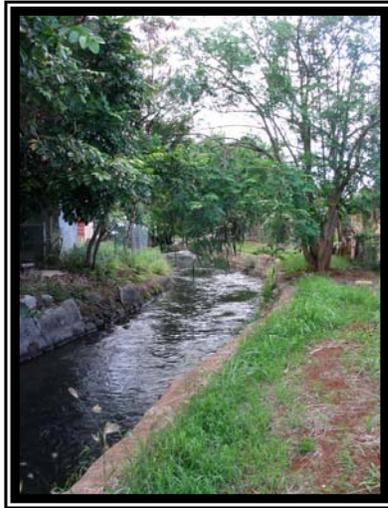
Because of high precipitation and geological conditions, the populated islands of Maui County possess vast underground reservoirs of fresh water.

a. Water

Water is the life-giving resource that sustains all biological systems. With Hawai'i the most isolated island archipelago on earth, a clean and reliable source of fresh water is vital. Water has played a major role in Maui County's past and present, and will continue to be a driving force in the County's future.

There are five major public water systems in Maui County: Central Maui, West Maui, Upcountry Maui, East Maui, and Moloka'i. Water sources consist of streams (surface water) and aquifers (groundwater). Maui County's perennial streams are predominantly on the windward slopes of the islands' watersheds. Streams are also influenced by periods of prolonged drought, resulting in minimal flow or even a dry stream bed. As a result of high precipitation and geology, the populated islands of Maui County possess vast underground reservoirs of fresh water called aquifers. Rainwater seeps through the highly permeable basalt of the volcanoes and is stored in aquifers, floating on the underlying saltwater. The majority of the water supplied by the County comes from groundwater. Groundwater is typically more abundant and reliable and less expensive to purify than surface water.

Wise management of water resources is vital to industry and to the quality of life of Maui County residents.



Ditch in Wailuku, Maui, Hawai`i.

Beginning in the 1870s, privately owned tunnels, ditches, flumes, and wells were constructed to divert water to irrigate sugar plantations, and many of these water-delivery systems remain private today. Generally, essential resources, such as water, are held in trust by public entities. Privately owned delivery systems for water continue to raise questions about water rights on Maui. In the past, some of the aquifers, from which potable water is drawn, have been damaged from overuse or contamination. The utilization of water has been and will likely continue to be a critical factor for development on Maui, Moloka`i, and Lana`i.

It is evident that within each of the Community Plan Areas there are very limited parameters for the sustainable yield of the water resources.

Access to fresh water will continue to be of paramount importance to Maui County's urban, agricultural, industrial, and Native Hawaiian users. Land use decision making must be closely tied to water availability. The wise management of freshwater resources is vital to the quality of life of Maui County's residents.

b. Wastewater

Wastewater consists of used water and waste from homes and workplaces, also known as sewage. It typically contains materials such as organic matter (human waste and food scraps), oil and grease, debris, and traces of heavy metals.

Management of the wastewater stream is important because it protects the water supply from becoming contaminated and aids in water conservation by allowing reclaimed water to be used for non-potable water purposes. Improper disposal of wastewater has the potential to damage the drinking-water supply, coastal water quality, and other important environmental resources.

There are three wastewater-management systems operating on Maui and one each on Moloka`i and Lana`i. The majority of the rural and agriculturally developed areas of the County are served by individual cesspools and septic tanks.



Kahului Wastewater Plant, Kahului, Maui, Hawai`i.

The use of reclaimed wastewater for irrigation improves the efficiency of water use.

The use of reclaimed wastewater for irrigation is economically and environmentally beneficial. The State of Hawai`i defines R-1 water as the highest-quality recycled water; it has undergone filtration and disinfection to make it safe for use on lawns, golf courses, parks, and other areas used by people. R-2 recycled water has a slightly lower quality relative to R-1 recycled water and can only be used under restricted circumstances where human contact is minimized. R-1 is primarily used in West Maui, South Maui, and Lana`i. R-2 is used in Kahului and Moloka`i. The majority of the R-1 and R-2 water use is for irrigation. Hali`imaile and Kualapu`u have subdivision-collection systems that reclaim the wastewater for irrigation purposes, although Kualapu`u continues to struggle with brackish contamination of its water. The resort facilities on Lana`i operate and maintain their own wastewater-treatment facilities and utilize their own wastewater, as well as the wastewater from Lana`i City, for irrigation. This water-reclamation activity dramatically improves the efficiency of water use.

c. Telecommunications and Information Technology

Maui County offers the business world a wealth of telecommunications capacity. The islands of Hawai`i are the hub of a diversified network of transpacific cable systems (both fiber optic and analog), satellite communication systems, cellular and wireless facilities, and other telecommunication and information services. This telecommunications infrastructure makes it more cost effective and faster to communicate with major Asia-Pacific markets from Hawai`i than from the Mainland or from within Asia.

Improvements to the telecommunications and information technology infrastructure will serve to better position the County in its efforts to diversify its economy.

2. TRANSPORTATION

Convenient and safe access to commercial facilities and community amenities are paramount to quality of life.

The County’s transportation system is vital to the health of the economy, the islands’ communities, and the daily lives of County residents.

a. Roads

Road-system conditions, capacity, and current volumes vary tremendously throughout the County. There are particular places on Maui Island, such as Kahului and Lahaina, that act as pinch points for the circulation of traffic. There are other roads that are narrow, winding, and incredibly scenic; the capacity of these roads is relatively low, but the experience of traveling the roads in



Ka`ahumanu Avenue, Kahului, Maui, Hawai`i.

their current state is more valuable than increasing capacity.

The County is in the process of developing a transportation-improvement and -mitigation program for the Island of Maui. A traffic-demand forecasting model was prepared to be used as a dynamic and interactive tool for projecting future traffic demand within the County. This will assist in the application of impact fees upon future developments and for creating transportation models for the Islands of Moloka`i and Lana`i.

b. Non-Motorized Transportation

The presence or lack of pedestrian and bicycle facilities can have an enormous impact upon the quality of life for all residents, but most significantly impacts children, seniors, and those who are unable or choose not to drive. Walking is the least-expensive form of transportation, and it is important to keep in mind that all trips begin and end with walking regardless of the interim transportation mode.

Many of the traditional town centers—including Lana`i City, Kaunakakai, Pa`ia, Wailuku, and Lahaina—have sidewalk facilities around shops and offices. However, both new and old neighborhoods are significantly lacking in non-

Bicycle facilities and multi-use pathways provide excellent opportunities to increase residents' transportation alternatives.



Pedestrian life, Lana`i City, Lana`i, Hawai`i.

motorized facilities throughout the County. Even in areas where some of the densest residential development exists in the County, there are major gaps in the pedestrian network.

Bicycle facilities and multi-use pathways provide excellent opportunities to diversify residents' transportation alternatives, in addition to offering recreational options. Several areas on Maui

Island have incorporated bike lanes into roadway sections. However, in some cases, the bikeways are cut off or are designed too narrow to meet the Federal Highway Administration's requirements for bike lanes. Generally, when the State of Hawai`i or Maui County widens roads, the inclusion or improvement of bike lanes is considered. There are several multi-use paths recently constructed or under development within the County, including the Northshore Greenway from Pa`ia to Kahului Harbor and the Kihei-to-Kahului bikeway. Planning efforts such as the Upcountry Greenway Master Plan will bring the County closer to developing a truly multi-modal system of transportation.

c. Transit

Maui County's current public-transportation program is composed of multiple elements, each with a specific purpose, which are designed to function together as

a comprehensive service to meet the transit needs of residents and visitors on each island. Public transit is still in its infancy on Maui Island, but already some adjustments have been made to the system to improve efficiency and ridership. The County of Maui currently funds a public bus system that provides service in and between various Maui communities. Since the establishment of a public bus service in 2002, the total number of boardings has more than doubled.

This suggests that public transit has a positive future on Maui Island if the system is convenient and efficient. Now that a system is in place, future development and urban-redevelopment projects should incorporate the facilitation of the system into site plans.

d. Air Travel

Air travel made its debut to Maui after an emergency landing strip had been built at Ma`alaea in 1919. Commercial service from Honolulu was initiated in 1929, after the strip had been upgraded to an airfield and was provided by Inter-island Airways, Ltd. But interisland freight and passenger service remained largely provided by ship until 1952.



Interisland air travel

Today, Maui, Moloka`i, and Lana`i have commercial airports and receive passengers and cargo from around the world. Maui Island has a large airport in Kahului and two smaller airports in West Maui and East Maui, respectively. Lana`i's airport recently received improvements and some expansion, and improvements to the Kahului Airport are expected to occur over the planning horizon as well. The Airports Division of the State Department of Transportation indicates that the existing airport facilities on Moloka`i are generally adequate to meet foreseeable demand, and, therefore, there are no plans for significant improvements.

e. Water Travel

In 1939, the United States Navy moved its Pacific Fleet from San Diego, California, to Pearl Harbor on O`ahu. The alternate anchorage for the Pacific Fleet was located in the Au`au Channel, off of Lahaina, and called "Lahaina Roads". Mala Wharf in Lahaina quickly became the primary point of entry and was built to represent a grand promenade into paradise.

Today, there is a daily ferry service between Maui and Lana`i and between Maui and Moloka`i. These services are privately operated; however, they provide an essential connection between the islands serving both residents and visitors.

3. COMMUNITY FACILITIES

a. Schools

Hawai'i's statewide school system is unique compared to the rest of the nation.

Hawaii's unitary statewide school system is unique within the United States. The school system began more than 160 years ago when King Kamehameha III established a public school system. The State Department of Education (DOE) currently serves more than 181,000 students in 285 schools and is approximately the 10th-largest school system in the United States.

The DOE is responsible for the development, operation, and maintenance of all public schools in the State. The planning process for the DOE in regard to building new schools is incremental. The DOE takes into consideration County and State zoning applications and will work with a developer prior to an application being acted upon by governmental agencies. These types of projects tend to be large, and the DOE in coordination with the Planning Department begins early negotiations with the developers in order to get land set aside in the project for a new school. After this has been negotiated, it is then up to the State Legislature to approve funding to build and operate the new school.

The DOE primarily uses development data and historic-enrollment data to determine needs for new schools or expansion of existing schools. Population projections are used on a marginal basis. The educational system is operated under the mission of the Board of Education.

Maui County has 34 publicly funded schools as noted below. Lahainaluna High School was the first school to be built in the State and is the oldest public school west of the Mississippi.



Makawao, Maui, Hawai'i.

The Department of Education uses development projections and historic-enrollment data to determine the need for new schools or expansion of existing schools.

- 21 Elementary Schools
- 6 Intermediate Schools
- 7 High Schools

In addition, there are 16 private elementary schools and 6 private intermediate/high school facilities within the County.

Currently, schools in Hawaii are in need of what some consider drastic help. The County can assist the State by working with developers to provide school sites.

b. Police and Fire

The Maui County Department of Police has six main stations throughout the County and more than a dozen substations. The main stations are:

- Central (Wailuku)
- Lahaina
- Hana
- Kihei
- Lana`i
- Moloka`i



Police Station, Wailuku, Maui, Hawai`i.

Currently, the greatest challenge for the Police Department is recruiting new officers. The Department of Fire and Public Safety is Maui County’s first responder to public-safety incidents and is often involved with land and water rescue. There are three fire stations on Moloka`i, one on Lana`i, and ten on Maui. A newly constructed Kaunakaka`i Fire Station is scheduled to replace the existing facility by 2010.

c. Parks and Recreation Facilities

The existing parks in the County of Maui are managed by three levels of government—County, State, and Federal—as well as private and semi-public organizations. These facilities are categorized into seven different types.



Eddie Tam Memorial Center, Makawao, Maui, Hawai`i. (Photo courtesy of Dick Mayer.).

i. Mini-Parks

Mini-parks are the basic unit of recreation. They provide passive park space for a sub-neighborhood area. These facilities are designed to meet the needs of all age groups, whether as a quiet place, green backdrop, “tot lot” designed for the play of small children, or central meeting place. The ideal size of a mini-park is about 1.5 acres, an area large enough to accommodate informal ball games.

Parks and public spaces make for more livable communities.

ii. Neighborhood Parks

Neighborhood parks are larger than mini-parks, but with many similar uses. With a moderate size of about 2 to 10 acres, the neighborhood park is able to accommodate many of the active recreational needs of a neighborhood by providing ball fields, informal play areas and sports courts, and similar active play areas. Incorporated around the active uses are opportunities for passive recreation (e.g., picnicking) and space for spectators. Some neighborhood parks are entirely dedicated to passive uses.

iii. Community or District Parks

Community or district parks complement all other parks within a community and provide for more diverse active recreation. The size of a community or district park is generally about 15 to 20 acres and may include indoor and outdoor facilities. Because it provides more facilities (both in number and type) than smaller park types, the community or district park is generally in greater demand by a larger population. Consequently, plans for community or district parks need to include adequate transportation arrangements.

iv. Regional Parks

Regional parks provide recreational activities that may not be available at community-level or smaller parks. Multi-purpose regional parks widen the diversity of recreational opportunities in the park system. Because of the size of their population base, regional parks should be no less than 40 acres, and are ideally 100 to 150 acres.

v. Special-Use Parks

These parks offer a variety of active and passive recreational uses, such as beaches, zoos, golf courses, preserves, and historic monuments. Special-use parks serve a regional or island-wide populace because their activities or points of interest are tied to a specific location. Space and facility standards for special-use parks are dependent on the nature of the resources or attractions they offer.

vi. Non-Motorized Transportation Facilities

Non-motorized transportation facilities are designed primarily for the use of pedestrians, bicyclists, or equestrians. They may be part of the highway (such as a shoulder), or they may be separated from highway traffic for exclusive non-motorized use (such as a bike path or sidewalk). They provide and enhance alternative modes of travel in place of automobile use between destinations. On-road bicycle routes and lanes, sidewalks, and multipurpose trails that link destinations are common examples of non-motorized transportation facilities.

vii. Planned Protected Areas

Planned protected areas contain natural resources or submerged waters with valued natural features or environmental characteristics that merit protection. The purpose of planned protected areas is to prioritize their conservation to achieve various recreational or environmental objectives.

Maui County has a mix of sub-regional, special-use, and regional-level parks. These comprise 821 acres of sub-regional parks and 334 acres of regional parks. These totals exclude State parks (e.g., Makena State Park), national parks (e.g., Haleakala National Park), and private parks. Private parks are not included because their usage is not regulated by the County of Maui. State and national parks are excluded because they serve uses beyond recreation (e.g., natural area preserves). If the acreage of private, State, and national parks were included in the computation of park land, it would skew the area of responsibility of the County of Maui, Department of Parks and Recreation.

Existing parks owned and operated by the County of Maui contain the following active-use facilities:

- 99 Sports Fields
- 47 Tennis Courts
- 38 Sports Courts
- 32 Tot Lots
- 17 Community Centers
- 17 Swimming Pools
- 9 Gyms
- 6 Skateboard Facilities
- 3 Gateball Facilities

In addition, the County has the following State Parks (by Community Plan Area):

Table 6: State Parks by Community Plan Area and Size

State Park	Community Plan Area	Size (acres)
Pua`a Kau	Hana	5.0
`Iao	Wailuku-Kahului	6.2
Kaumahina	Hana	7.8
Polipoli Springs	Makawao-Pukalani-Kula	10.0
Hale Ki`i Heiau	Wailuku-Kahului	10.2
Wainapanapa	Hana	122.1
Makena	Kihei-Makena	164.4
Pala`au	Moloka`i	233.7

Also, Haleakala National Park adds an additional 24,719 acres of land to the recreational lands inventory of the County.

Table 7 presents the relative area, in acres, for all parks currently owned and/or operated by the County of Maui. The table also shows whether the total number of acres available meets the appropriate park standard of 10 acres per 1,000 persons (aggregate) for sub-regional parks. The analysis is based on the region’s *de facto* population and assumes a usage potential and impact created by visitors. The data presented in Table 7 suggests that there is currently a deficit of approximately 1,100 acres in park space based on 2005 *de facto* population in every region except the Hana Community Plan Area.

Table 7: Summary of Existing Park Area

Community Plan Area	Existing Area Acres	De Facto Population 2005	Sub-Regional Park Area Needed	Surplus (Deficit) Acres)
Hana	28.7	2,233	22.3	6.4
Kihei-Makena	114.2	45,056	450.6	-336.4
Lana`i	15.4	4,587	45.9	-30.5
Makawao-Pukalani-Kula	118.40	23,195	232.0	-113.7
Moloka`i	72.97	7,826	78.3	-5.3
Pai`a-Ha`iku	109.7	12,256	122.6	-12.9
Wailuku-Kahului	185.6	47,706	477.1	-293.3
West Maui	124.8	44,701	447.0	-322.2
Total	769.7	187,560	1,875.6	-1,106.1

Note: Wailuku-Kahului does not include 334 acres of the Maui Central Park District and Waiehu Golf Course.

The County currently operates and maintains 21 Community Centers: one on Lana`i, three on Moloka`i, and 17 on Maui. These centers are available to the public for meetings, gatherings, or other events. Many of them host the County recreation-program activities.

The State Department of Land and Natural Resources manages approximately 1 million acres of land. This land can be divided into roughly three categories: those where the public is actively invited to recreate (e.g., State parks); those where the public is not actively invited, but where it is known that the public utilizes the land (e.g., forestry area reserves and unencumbered State land); and those where the public does not enter (e.g., inaccessible watershed areas). Through the Na Ala Hele trail and access system, the State makes many of its conservation lands available to residents and visitors. These trails invite the public to enjoy some of the most intimate and pristine places of the County. There are 16 trails on Maui, one on Moloka`i, and four on Lana`i.