

1 2 | MOLOKA`I'S FUTURE

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3 This chapter provides the community plan's vision and strategic framework that guide the key  
4 policies and actions needed to address the major issues that face the island in the next 20 years.  
5 The components of this strategic framework include:

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- 7 2.1 Moloka`i Vision Statement;
- 8 2.2 Population Growth;
- 9 2.3 Sustainability and Climate Change Adaptation.

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11 The Moloka`i ~~v~~ision ~~s~~Statement in Section 2.1 was carried over, retained from the 2001  
12 Community Plan and reviewed by the CPAC. ~~It~~ articulates the community's belief in who ~~and~~  
13 ~~what~~ it is, what it wants to become, and how to achieve that ~~vision~~ aspiration.

14

15 The population discussion in Section 2.2 presents a brief analysis of past and future population  
16 trends. The *Socio-Economic Forecast Report*<sup>1</sup>, produced by the County of Maui Planning  
17 Department is the primary source of data for this discussion.

18

19 Finally, in response to the State of Hawai`i's recent adoption of both guidelines and  
20 pPrinciples of Sustainability (HRS §226-108) and Climate Change Adaptation Priority Guidelines  
21 (HRS §226-109) into the Hawai`i Revised Statutes (HRS 226-109), Section 2.3 provides a brief  
22 discussion and outline of how climate change adaptation strategies and measures to develop a  
23 more sustainable island community are woven into the policies, goals, and actions of the Plan's  
24 chapters and implementation table.

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<sup>1</sup> County of Maui, Department of Planning. *Socio-Economic Forecast Report*. September 2014  
2 Moloka`i's Future Moloka`i Community Plan Planning Department DRAFT  
February 2015

1 **2.1 MOLOKA`I VISION STATEMENT**

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[PROPOSED REVISION IN SEPARATE ATTACHMENT]

Moloka`i is the last Hawaiian Island. We who live here choose not to be strangers in our own land. The values of *aloha `aina* and *malama `aina* (love and care for the land) guide our stewardship of Moloka`i's natural resources, which nourish our families both physically and spiritually. We live by our *kupuna's* (elders) historic legacy of *pule o`o* (powerful prayer). We honor our island's Hawaiian cultural heritage, no matter what our ethnicity, and that culture is practiced in our everyday lives. Our true wealth is measured by the extent of our generosity.

- We envision strong *`ohana* (families) who steadfastly preserve, protect and perpetuate these core Hawaiian values.
- We are a wise and caring community that takes pride in its resourcefulness, self-sufficiency and resiliency, and is firmly in charge of Moloka`i's resources and destiny.
- We envision a Moloka`i that leaves for its children a visible legacy: an island *momona* (abundant) with natural and cultural resources, people who *kokua* (help) and look after one another, and a community that strives to build an even better future on the *pa`a* (firm) foundation left to us by those whose *iwi* (bones) guard our land.

1 **2.2 POPULATION GROWTH**

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 3 ~~Population growth can have both positive and negative impacts on a community. It can~~  
 4 ~~exacerbate infrastructure-capacity deficiencies, place additional demands on natural resources,~~  
 5 ~~shift the cultural and social makeup of the population, and change the physical landscape.~~  
 6 ~~Population growth can also contribute to the quality of life of a community by stimulating the~~  
 7 ~~economy, growing the tax base, providing employment opportunities, and providing economies of~~  
 8 ~~scale. This Community Plan aims to address community needs and provide economic~~  
 9 ~~opportunities to retain Moloka`i's families, and ensure that future resident and visitor population~~  
 10 ~~growth does not compromise the island's natural resources, infrastructure, and services.~~

11  
 12 Population change on Moloka`i ~~is inevitable~~ in the coming decades. ~~will occur through~~ Natural  
 13 population growth (live births minus deaths), in-migration, and out-migration, ~~are responsible for~~  
 14 ~~population change over time and occur at different rates and for different reasons.~~ While the  
 15 island experienced a moderate population decline from 2000 to 2010, the population is forecasted  
 16 to moderately increase during the Community Plan's 20 year planning horizon, according to the  
 17 State of Hawai`i Department of Business, Economic Development and Tourism (DBEDT).

18  
 19 **A. HISTORIC TRENDS AND POPULATION FORECAST**

20  
 21 The *Socio-Economic Forecast*<sup>2</sup> is a planning tool based on projections developed DBEDT. The  
 22 population projections are based on trends and model assumptions that are absent of policy  
 23 changes or directives. ~~Because a long-term forecast identifies long-term trends and omits short-~~  
 24 ~~term variations, there will may be surprises along the way, even if a forecast turns out to be highly~~  
 25 ~~accurate. Ultimately, the~~ The population growth forecasts represent a likely future and provides a  
 26 ~~framework for development of potential growth scenarios as is a useful~~ starting point for  
 27 discussions about the island's future.

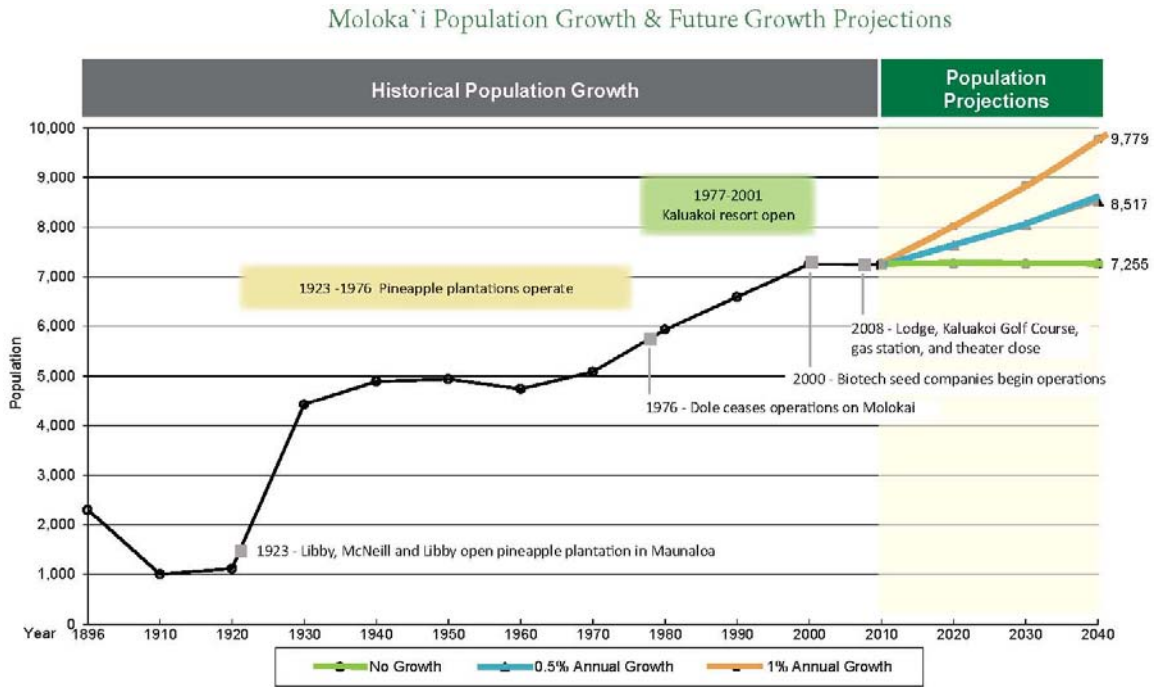
28  
 29 The 2010 Census counted 7,255 residents living on Moloka`i. The 2014 County of Maui *Socio-*  
 30 *Economic Forecast Report* forecasted that an additional ~~2,524-2,500~~ residents will ~~will~~ may live on  
 31 the island by the year 2040, for a total population of ~~around 9,779~~ 9,800 - a 1% annual increase in  
 32 resident population. Figure 2.1 depicts Moloka`i's historic population growth, identifies significant  
 33 economic events between 1896 and 2010 and shows population projections out to 2040 based  
 34 on three scenarios: 1) no growth, 2) a mid-range annual growth of ½%, and 3) a high annual  
 35 growth of 1%.

36  
 37 Figure 2.2 depicts the average daily visitor/ resident population trends from 1990 to 2035. In  
 38 1990, the ratio of tourists to residents was approximately 1 to 7. By 2010 the ratio dropped to  
 39 approximately 1 visitor for every ~~to~~ 12 residents, ~~and~~ this ratio is forecasted to remain relatively  
 40 unchanged ~~constant through to~~ 2035.

2 County of Maui, Department of Planning. *Socio-Economic Forecast Report*. September 2014

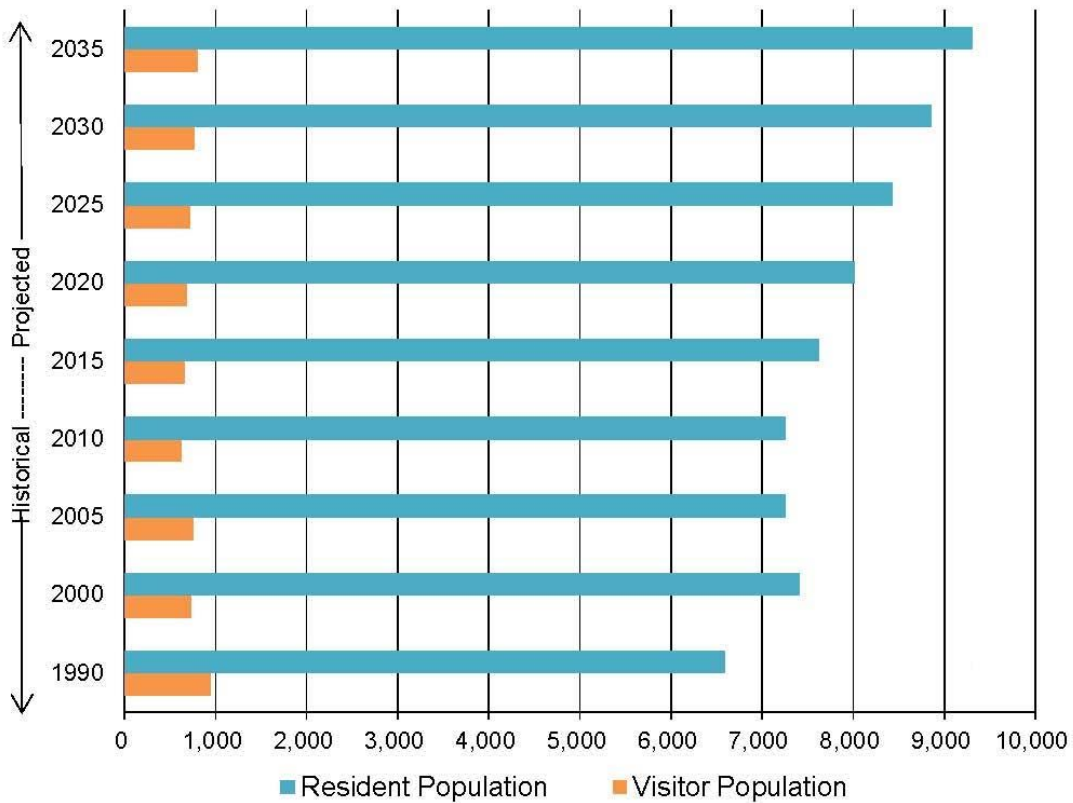
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Figure 2. 1 Moloka'i Resident Population 1896 - 2040



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Figure 2. 2 Moloka'i Average Daily Visitor/Resident Population 1990 2035

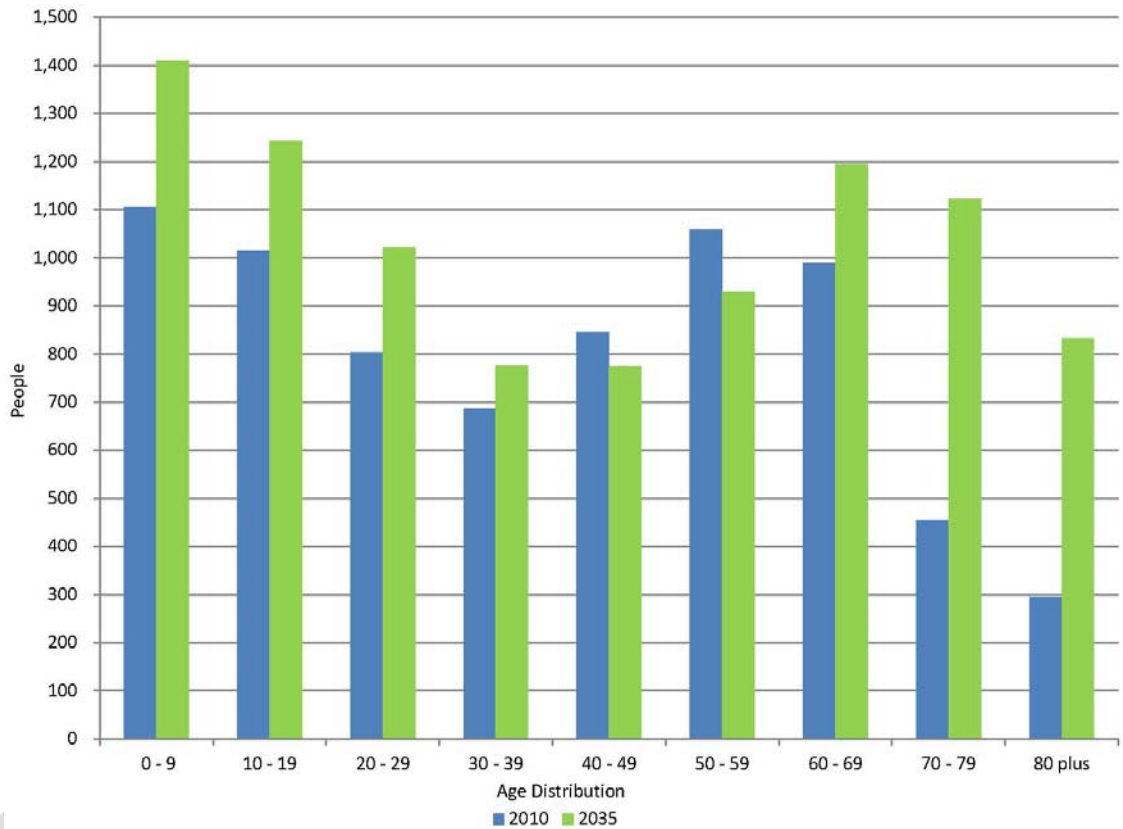


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1 Figure 2.3 portrays Moloka`i's age distribution in 2010 and 2035 and it is clearly evident that the  
 2 island's population is aging. The 70 plus age group is forecasted to grow from about 750 to  
 3 nearly 2,000, an increase of over 160% between 2010 and 2035. This demographic change has  
 4 significant impacts to public services as they relate to the elderly, including housing,  
 5 transportation, health care, and eldercare services. In addition to the challenge of providing more  
 6 senior services, the wage-earning population that typically supports children and seniors will be  
 7 proportionally smaller.

8  
 9 **Figure 2. 3 Moloka`i Island Age Distribution 2010 and 2035**

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12 The potential issues and opportunities presented by population growth will be addressed  
 13 throughout the various chapters of the Community Plan.

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1 **2.3 SUSTAINABILITY AND CLIMATE CHANGE ADAPTATION**

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3  
4 One intent of this community plan update is to help establish a sustainable and resilient future for  
5 Moloka`i. This section provides an introduction and brief guide to how sustainability and climate  
6 change adaptation are woven into the fabric of the plan through a variety of policies and actions.

7  
8 **A. SUSTAINABILITY**

9  
10 Sustainability has become a fundamental concept within comprehensive and community planning  
11 over the past decade. It refers to the ability to address the needs of the present without  
12 compromising the ability of the future to meet their own needs. It requires a need to consider the  
13 long term environmental, social, cultural and economic costs of present day actions.  
14 Sustainability is a process, rather than an end-state. In this process, a community function within  
15 a system where environmental, economic, and social systems are linked and balanced.

16  
17 Sustainability is a particularly important concept in a region as fragile and remote as the  
18 Hawai`ian Islands. In 2011, the Hawai`i State legislature ~~enacted into law State Bill 283, which~~  
19 ~~established sustainability as a state priority by incorporating adopting the Hawai`i 2050 p~~  
20 ~~gGuidelines and Pprinciples to promote Sustainability (HRS §226-108) into Chapter 226 Hawaii~~  
21 ~~Revised Statutes (HRS), the Hawai`i State Planning Act. The u~~  
22 ~~Updates to the County of Maui's~~  
23 ~~General Plan will integrate theis concept of sustainability and these~~  
24 ~~guiding principles in Hawai`i~~  
25 ~~2050. —(sSee Appendix 2.1 Definition of Sustainability in Hawai`i and Appendix 2.2 Guiding~~  
26 ~~Principles of Sustainability).~~

27  
28 **B. CLIMATE CHANGE ADAPTATION**

29 In 2012, the Hawai`i State legislature ~~enacted into law Act 286, which amended the Hawai`i State~~  
30 ~~Planning Act, Chapter 226 HRS, by adding adopted HRS §226-109~~  
31 ~~—(sSee Appendix 2.3 Climate Change Adaptation Priority Guidelines). The~~  
32 ~~guidelines are intended to prepare the state for climate change impacts to on numerous~~  
33 ~~components of the natural and built environments and on society. as b~~  
34 ~~Both near-term~~  
35 ~~implementation options and a long-term strategies should be considered for the State over the~~  
36 ~~long-term. Additionally, under the Hawai`i State Planning Act, priority guidelines shall take~~  
37 ~~precedence when addressing areas of concern such as County decision making, and~~  
38 ~~allocation~~  
39 ~~of resources, county general plans, and development plans as well as capital improvement~~  
40 ~~project appropriations and land use decision making.~~

41 Climate change will become increasingly serious before the middle of the 21st century, and will  
42 have profound impacts ~~on for societies all over the world, including for the Hawaiian Islands.~~  
43 ~~Climate change will profoundly affect~~ not only Hawai`i's natural environment but also its  
44 communities and economy. Major climate change effects expected for Hawai`i include: 1)  
45 warmer temperatures, 2) sea-level rise with resultant flooding, beach erosion, and damage to  
46 coastal property, 3) sea surface temperature increase and ocean acidification with negative

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1 impacts to coastal and marine ecosystems, 4) increased frequency and severity of storms, with  
2 increased vulnerability to storm damage, and 5) increased drought with variable effects on aquifer  
3 recharge, stream flows and freshwater resources. ~~These effects-outcomes~~ will adversely affect  
4 ~~communities and sectors throughout Hawai'i, areas~~ including the economy (agriculture, tourism,  
5 fisheries, and trade), the built environment ~~(infrastructure systems, housing, and recreation),~~  
6 historic and cultural resources, ~~infrastructure systems, and as well as~~ ecosystems and natural  
7 resources<sup>3</sup>. ~~Although The~~ limitations ~~of-in~~ downscaling climate models for local impacts ~~to~~  
8 ~~Molokai, as well as each of the other Hawaiian Islands and uncertainty in natural climate and~~  
9 ~~weather patterns~~ make long term predictions very complex. ~~C~~urrent observations - such as  
10 trends in declining rainfall and rising temperature and seas - can serve as indicators ~~of Hawaii's~~  
11 ~~and Molokai's future~~ and may help information communities as they begin to plan for climate  
12 change.

13 Climate change mitigation measures, such as lessening our dependence on fossil fuels ~~to,~~  
14 ~~reduc~~ing emissions, and changing the way we design and build communities, will need to be  
15 ~~taken-implemented~~ to ~~help~~ lessen the ~~effect-of~~ human impact on climate ~~in the future~~. Climate  
16 change adaptation ~~seeks-requires~~ strategies and actions to reduce the vulnerability of biological  
17 systems to climate change effects such as sea-level rise, increased severity of storms, and  
18 increased drought conditions and flooding. ~~Climate change adaptation requires strategies and~~  
19 ~~actions to reduce the adverse consequences of climate change, as well as to harness any~~  
20 ~~beneficial opportunities. While the precise timing and impact cannot be predicted, it is clear that~~  
21 ~~significant climate change adaptation and mitigation measures will be needed by mid-century.~~  
22 ~~The intensity of climate change impacts in Hawai'i can, to a significant degree, be mitigated.~~ By  
23 taking action now, it is possible to reduce potential damage in the future. Science-based coastal  
24 and climate hazard information must be compiled, understood and appropriately applied to  
25 specific planning areas in Moloka`i. Inventories must be developed and gaps in data identified to  
26 better understand how climate change will affect Moloka`i and how to minimize those impacts.

27 **C. WORKING TOGETHER TOWARDS A SUSTAINABLE AND RESILIENT MOLOKA`I**

28  
29 This is a pivotal moment in time for Moloka`i to face the intertwined challenges of sustainability  
30 and climate change. In recognizing the links between society, ~~the~~ environment, and ~~the~~ economy,  
31 sustainability acknowledges the ecological limits of natural systems and affirms that humanity's  
32 well-being is fundamentally dependent on the health of our environment. Moloka`i can become  
33 resilient ~~and,~~ ready for change, ~~through-by~~ strengthening ~~it'sits~~ society, ~~-and-its~~ natural and built  
34 environments, and ~~by~~ diversifying its economy. ~~The elements needed to achieve this are~~  
35 ~~identified in the individual chapters of the Community Plan.~~ How these elements work together is  
36 described below.

37  
38 **SOCIETY – MOLOKA`I'S PEOPLE AND CULTURE:** Caring for the people is a key component  
39 of ensuring a sustainable and resilient Moloka`i. This will involve providing educational  
40 opportunities for all ages and a full spectrum of social services. ~~Critical actions include expanding~~

<sup>3</sup> Climate Change Adaptation Priority Guidelines, Act 286

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~~primary, emergency and in-home care, hospice facilities and services, and services for families in crisis, as well as improving the quality of the schools and increasing college level education available on island.~~

It will also be important to foster community participation in stewardship of the natural environment and historical and cultural resources to build collaboration between different levels of government, large landowners, non-profit groups, private businesses and the community. Moloka`i's culture and sense of place will be honored by protecting historic and archaeological sites, cultural landscapes, and the natural and cultural resources upon which subsistence and traditional lifestyles depend.

Ensuring a resilient and sustainable society will also require providing a variety of affordable housing types for all stages and ages of life, ~~and Also critical will be~~ increasing food security through expanding production of locally grown food, supporting subsistence farming, hunting, fishing, and gathering, as well as introducing youth to agriculture through programs such as Future Farmers of America and 4H. [Lines 15-29 moved to lines 30--35] ~~Climate change adaptation – building on existing hazard mitigation principles plus new ways of designing communities and infrastructure – will also be necessary for the health and safety of the people and the environment. This will be achieved by actions such as relocating critical structures out of hazard prone areas, incremental adaptation of harbors, increasing water conservation and reuse, and managing aquifer recharge areas.~~

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**THE NATURAL AND BUILT ENVIRONMENT:** How the built environment is designed greatly influences the protection and sustainability of the natural environment as well as the sustainability of a society and culture. A well designed community is characterized by a compact and pedestrian oriented mix of land uses, multi-modal transportation networks, diversity of housing, strong sense of place and culture, and preservation of open space, agricultural land, and natural resources. Moloka`i will build upon its historic small town development patterns, integrate land use and transportation planning, and make development decisions predictable, fair and cost-effective to create sustainable communities into the future.

[Moved from lines 14-19] Climate change adaptation strategies such as building on existing hazard mitigation principles and developing new ways of designing communities and infrastructure will also be necessary for the health and safety of the people and the environment. This will be achieved by actions such as relocating critical structures out of hazard prone areas, incremental adaptation of harbors, increasing water conservation and reuse, and managing aquifer recharge areas.

Natural resources and landscape features such as native forests, valleys, wetlands, springs, dunes, and coral reefs will be protected, restored, and valued for the environmental services they provide and for their cultural importance. Feral ungulates and invasive species will be managed and principles of native Hawai`ian land management, including ahupua`a, will be integrated to help guide resource management. Green technology, sustainable building practices, and green infrastructure solutions will also be used.



1 **THE ECONOMY:** Fostering a robust and diversified economy is the third component to working  
2 toward a sustainable and resilient Moloka`i. This will require growing a culturally-appropriate  
3 tourism industry, supporting agriculture, encouraging new industries and entrepreneurs,  
4 expanding education and support services for small businesses, and providing necessary  
5 infrastructure, land, and affordable sea and air transportation options. Lowering energy costs by  
6 reducing dependence on fossil fuels ~~and increasing renewable energy~~ is also ~~a~~ key to providing  
7 ~~more~~~~stronger~~ economic opportunities and becoming more sustainable. This ~~will~~~~can~~ be achieved  
8 by increasing the ~~generation and~~ use of renewable energy sources ~~and~~, promoting the use of  
9 electric vehicles ~~and exploring options for bio-fuels, bio-diesel, and waste-to-energy technology~~.  
10 Water resources ~~will~~~~can~~ be used in a sustainable manner by recycling wastewater for irrigation  
11 and ~~exploring options for~~ re-use of household graywater.

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