

Mori, Ashley

From: Morrison, Bethany
Sent: Friday, November 01, 2019 9:35 AM
To: General Plan
Subject: FW: General Plan Comments
Attachments: Notes and Questions on General Plan.pdf

Ashley, please intake.

Thank you,
Bethany

From: [REDACTED]
Sent: Thursday, October 31, 2019 4:56 PM
To: [REDACTED]; Morrison, Bethany <Bethany.Morrison@hawaiiicounty.gov>
Subject: Re: General Plan Comments

Aloha Bethany! Mahalo nui for the awesome meeting yesterday, I loved your ideas and guidance, much appreciated. Unfortunately I'm on the road and don't have my notes/comments from that, will get them in this evening but here is this for now, my notes, comments and questions so far on the entire GP, sending to the GP email as well... :)

[REDACTED]

On Wednesday, October 30, 2019, 3:07:09 PM HST, Morrison, Bethany <bethany.morrison@hawaiiicounty.gov> wrote:

Aloha [REDACTED]

Thank you again for making time to provide your input on this important opportunity we have with the General Plan update. I did some digging and found the Resolution heard last week by City and County of Honolulu. Enjoy!

https://honolulu.granicus.com/MetaViewer.php?view_id=3&event_id=543&meta_id=111547

A hui hou,

Bethany

129232

From: [REDACTED]
Sent: Wednesday, October 30, 2019 11:29 AM
To: [REDACTED]; Morrison, Bethany <Bethany.Morrison@hawaiiicounty.gov>
Subject: Re: General Plan Comments

Thank you, we're on our way, see you at 12:30!

[REDACTED]

On Wednesday, October 30, 2019, 8:52:23 AM HST, Morrison, Bethany <bethany.morrison@hawaiicounty.gov> wrote:

Thank you for letting me know and I'm sorry to hear about your father in law. My afternoon is open so if you want to meet later in the day, that would be fine too.

Bethany

From: [REDACTED]
Sent: Wednesday, October 30, 2019 8:19 AM
To: Morrison, Bethany <Bethany.Morrison@hawaiicounty.gov>; [REDACTED]
Subject: Re: General Plan Comments

Aloha! I'm writing as my father in law hasn't been feeling well lately and took a turn for the worse last night, I'm going up to see him now but there's a chance I won't be able to make our meeting at 12:30, hoping to know more shortly but just in case letting you know early on I may need to reschedule. Will call or email shortly.

Mahalo and have a great day!

[REDACTED]

On Tuesday, October 29, 2019, 2:19:48 PM HST, [REDACTED] > wrote:

Perfect, thank you!

See you then,

[REDACTED]

[REDACTED]

On Tuesday, October 29, 2019, 12:33:44 PM HST, Morrison, Bethany <bethany.morrison@hawaiicounty.gov> wrote:

Sure, how does 12:30-2pm sound? It would be in or Planning Department conference room in Hilo. Let me know.
Thank you,
Bethany

From: [REDACTED]
Sent: Tuesday, October 29, 2019 11:46 AM
To: Morrison, Bethany <Bethany.Morrison@hawaiicounty.gov>
Cc: Gloor, Leana <Leana.Gloor@hawaiicounty.gov>; [REDACTED]
Subject: Re: General Plan Comments

Aloha! Wonderful, could we do Wednesday, perhaps anytime between 9am and 2pm? Thank you!

[REDACTED]

On Monday, October 28, 2019, 4:29:11 PM HST, Morrison, Bethany <bethany.morrison@hawaiicounty.gov> wrote:

Aloha [REDACTED]

LeAna forwarded me your request. I was the primary drafter of the climate change strategies and would be happy to meet with you about any thoughts you would like to share. I have some general availability tomorrow after lunch, anytime on Wednesday, or Thursday after lunch. Let me know if any of those times work for you.

There are a few things that I would like to offer that help to frame the draft GP, which might help with your review and comments.

The purpose of the GP is to set the broad vision and policy statements for our long range development. We have to be careful about being too specific in the implementation action details, such as spelling out code amendments or specific budget items that will require additional County Council approvals. This is especially true for a topic like climate change that is evolving.

I would encourage you to read through other sections in the draft plan that address resilience, which we are trying to address comprehensively to help us with a variety of challenges that we face. I've listed some of those objectives and the sections of the plan that they can be found in.

- Increase food security (Economic)
- Reduce water use (Infrastructure)
- Maximize Waste reduction, resource reuse and recycling (Infrastructure)
- Reduce vehicle miles travelled (infrastructure)
- Lead the State in reaching its goal of 100% renewable energy (Economic)
- Increase forest and woodland cover (Natural Resource)
- Reduce clearing and grading of forested areas (Land Use)
- Increase residential density within Urban areas (Land Use)

Also, it is important to keep in mind that the County has several on-going initiatives by different departments working to address various components of climate change. We want the GP to help support these and other efforts.

- Mass Transit Agency is pursuing grant funding to pilot zero emission buses (ZEBs)
- Planning Director represents the County on the State Climate Change Mitigation and Adaptation Commission
 - Support legislation to establish a carbon fee program
 - Urge counties to incorporate the 3.2 ft. sea level rise exposure area (SLR-XA) into their general and development plans.
- Updating County Multi-Hazard Mitigation Plan in 2020
- Resolution 322-19 (Draft 2)
 - Declaring a Hawaii County climate emergency
 - Requesting regional collaboration
- Climate Action Plan (Research and Development)
 - Complete a greenhouse gas (GHG) inventory that will be used to establish County GHG targets, develop mitigation strategies, and monitor County GHG emissions over time.
 - Develop and implement a Climate Action Plan aligned with the County's GHG targets.
 - Partner with [Hawai'i Energy](#) to maximize energy efficiency and cost savings in County facilities.
 - Collaborate to advance the electrification of transportation as a member of [Drive Electric Hawai'i](#) and the [Sustainable Transportation Coalition of Hawai'i](#).
 - Intervene in related dockets of the Public Utilities Commission (PUC), like Integrated Grid Planning, Electrification of Transportation, and Performance-Based Ratemaking.
 - Represent the County on the state [Greenhouse Gas Sequestration Task Force](#), which is exploring economic opportunities in carbon markets.

Thank you,

Bethany Morrison
Planner, Long Range Planning Division
County of Hawaii
Planning Department
101 Pauahi Street, Suite 3
Hilo, Hawaii 96720
Fax (808) 961-8742
Phone (808) 961-8138
Bethany.Morrison@hawaiicounty.gov

From: [REDACTED]
Sent: Monday, October 28, 2019 1:02 PM
To: Gloor, Leana <Leana.Gloor@hawaiicounty.gov>; Cook, Eric <Eric.Cook@hawaiicounty.gov>; [REDACTED]
Subject: General Plan Comments

Aloha!

I'm with 350.org Hawaii Island and would like to meet with regards to Climate updates for the General Plan, would it be possible to meet before the public comment period expires this week? I have some suggestions I would like to connect/get your advice on, let me know what is possible!

Mahalo,

[REDACTED]

General Plan 2040

August 2019 Draft

DRAFT

TABLE OF CONTENTS

How to Read this Preliminary General Plan Draft	1
Introduction.....	2
Trends and Forecasts	5
Sustainability Framework.....	12
Section 1: Natural Resource Planning.....	15
Goals	15
Protecting Native Habitats & Wildlife	15
Protecting Coastal Resources	20
<i>Coastal Habitat</i>	20
<i>Wetland Habitat</i>	22
Managing Streams and Watersheds	23
Managing Geologic Resources.....	25
Ensuring Air & Noise Quality.....	26
<i>Air Quality</i>	26
<i>Noise Quality</i>	26
Mitigating & Adapting to Hazards & Climate Change	27
<i>Hazards</i>	27
<i>Climate Change</i>	34
Section 2: Infrastructure Planning.....	37
Goals	37
Managing Water System Resources.....	38
<i>Drinking Water Conservation</i>	38
<i>Drinking Water Quality</i>	40
<i>Drinking Water Prioritization</i>	41
<i>Storm Water Management</i>	43
<i>Recycled Water Expansion</i>	44
<i>Wastewater & Environmental Quality Prioritization</i>	45
Increasing Resource Recovery & Reducing Waste	48

Improving Transportation Systems	52
<i>Transportation Planning & Financing</i>	52
<i>Transportation Safety</i>	55
<i>Roadway Design</i>	57
<i>Multimodal Transportation & Connectivity</i>	60
<i>Bridges</i>	62
<i>Mass Transit</i>	62
<i>Airports & Harbors</i>	65
Expanding Telecommunication Access	66
Strengthening Energy Diversity & Conservation	70
Section 3: Economic & Opportunity Planning	75
Goals	75
Focusing on Economic Diversity & Innovation	75
Prioritizing Agriculture & Food Security	78
Developing A Place-Based Visitor Industry	83
Providing Equitable and Safe Housing Options For All	84
Section 4: Community Placemaking	89
Goals	89
Maintaining Education Facilities as Anchor Institutions	90
Keeping Our Communities Healthy & Safe	92
<i>Police Services</i>	92
<i>Fire and Emergency Services</i>	94
<i>Health & Social Services</i>	95
Promoting Active Living Through Recreation, Trails, & Public Access	97
<i>Recreational Facilities & Programs</i>	97
<i>Public Access & Trails</i>	102
Preserving Our Cultural & Historic Legacies	108
<i>Native Hawaiian Values & Practices</i>	108
<i>Multi-Cultural Heritage</i>	110
<i>Historic Preservation</i>	110

Protecting Scenic Resources	114
Section 5: Land Use Planning	119
Goals	119
Ensuring Land Use Compatibility	119
<i>Urban</i>	122
<i>Rural</i>	129
<i>Industrial</i>	131
<i>Resort</i>	133
<i>Agricultural</i>	137
<i>Conservation & Open</i>	141
Protecting the Special Management Area	143
Protecting Mauka Forests	145
Land Use Planning Tools	146
<i>Designating Special Places</i>	146
<i>Preservation Tools</i>	148
<i>Special Permits</i>	149
Future Land Use Maps	150
Land Use Regulations	153
Master Plan Standards	154
Section 6: Implementation Priorities & Actions	157
Goals	157
Budgeting for Implementation	157
Budgeting for Implementation	160
<i>Capital Improvement Program</i>	160
Evaluation and Monitoring	161
Glossary	163

Table of Figures

Table 1: Land Use Planning & Implementation System	3
Table 2: Urban Clusters, County of Hawaii, 1990-2015	7
Table 4: Town and Village Center Standards	124

DRAFT

HOW TO READ THIS PRELIMINARY GENERAL PLAN DRAFT

This draft is the first draft of General Plan 2040. The purpose of the draft is to elicit feedback from the general public as well as various agencies and organizations. During the months of August and September, input from County agencies, the public, and other relevant stakeholders will continue to be gathered and compiled to inform any necessary research, consultation, or revisions to the draft General Plan prior to submission to the Planning Commission and the County Council. Since further edits are anticipated, this draft document has not been formatted as a final document. Once revisions are incorporated, the document will be formatted to include the graphic components such as synergistic links between policies, pictures, tables and maps.

The General Plan contains Goals and measurable Sustainability Objectives along with Policies and Actions to achieve these objectives.

The plan utilizes policies that are sometimes overarching and aspirational, while other policies are more specific and directive. Rationale has been provided in brackets [] following the policies that have the more specific, directive language.

The plan utilizes two types of actions; Actions necessary for the County to implement the policies, and Agency Actions to coordinate efforts with State, Federal, private, or community entities. These actions guide County efforts in implementing the General Plan but are not mandatory or self-implementing and may need further analysis or collaboration during application.

INTRODUCTION

PURPOSE OF THE GENERAL PLAN

The County of Hawaii's General Plan is the policy document for the long range comprehensive development of the island of Hawaii. The General Plan has a 20-30-year planning horizon. The General Plan also:

- Guides the pattern of future development in this County based on long-term goals;
- Identifies the visions, values, and priorities important to the people of this County;
- Provides the framework for regulatory decisions, Capital Improvement priorities, acquisition strategies, and other pertinent government programs within the County organization and coordinated with State and Federal programs.
- Improves the physical environment of the County as a setting for human activities; to make it more functional, beautiful, healthful, interesting, and efficient.
- Promotes and safeguards the public interest and the interest of the County as a whole.
- Facilitates the democratic determination of community policies concerning the utilization of its natural, man-made, and human resources.
- Effects political and technical coordination in community improvement and development.
- Injects long-range considerations into the determination of short-range actions and implementation.

With the adoption and ratification of the County Charter in 1969, the General Plan was instituted as the main County policy document. The Charter also states:

- (a) The Council shall enact zoning, subdivision, and other such ordinances, which shall contain the necessary provisions to carry out the purpose of the General Plan.
- (b) No public improvement, project, or subdivision, or zoning ordinance, shall be initiated or adopted unless the same conforms to and implements the General Plan.
- (c) Amendments to the General Plan may be initiated by the Council or the Planning Director.

The General Plan represents the first level and encompasses long-range goals, policies, standards, and courses of action for the entire County. The General Plan also provides the legal basis for all

the other elements of the County's planning structure. As such, the General Plan is the highest order, or "umbrella" plan. It establishes the boundaries within which the County must operate.

The planning system shall consist of a comprehensive Countywide General Plan, and include Community Development Plans, urban development plans, Special Area Plans, and agency functional plans as implementation mechanisms that carry out the goals, objective, policies or standards, and actions of the General Plan.

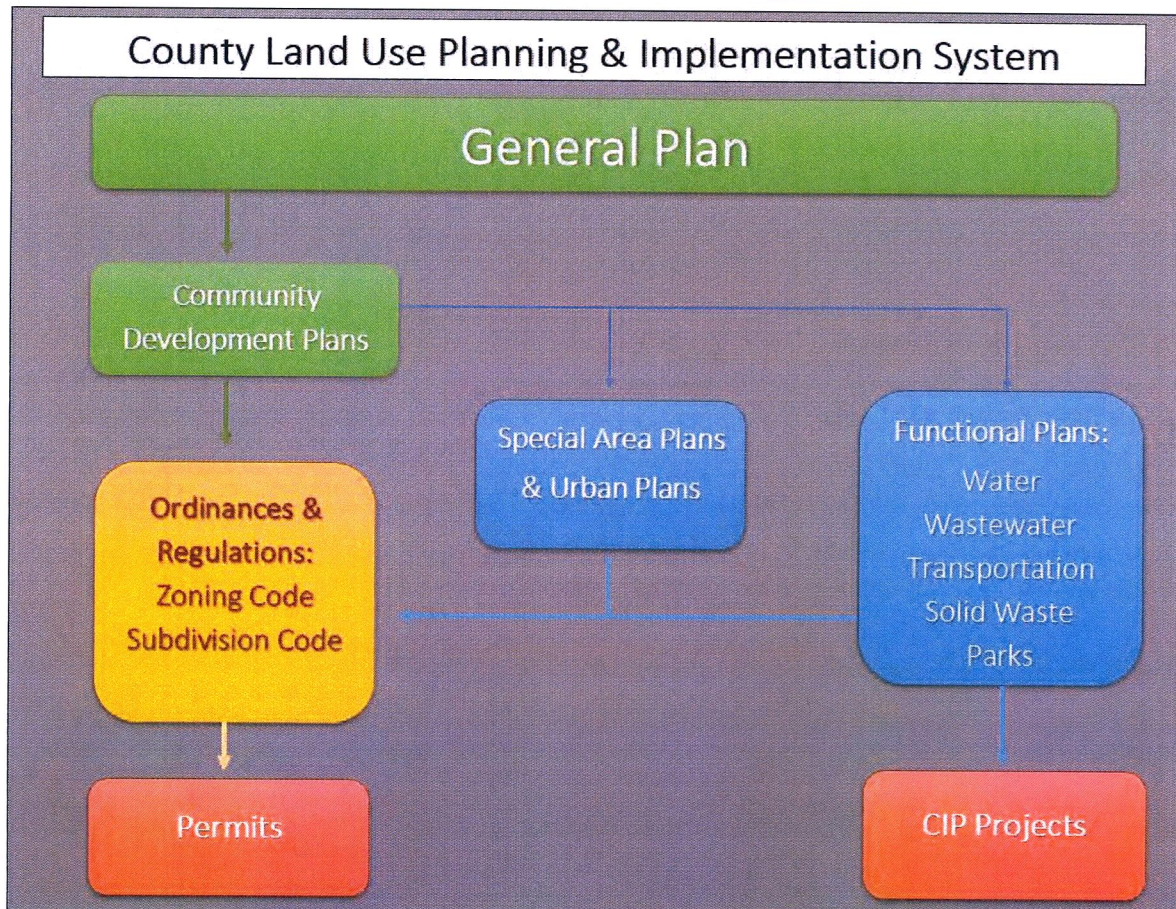


Table 1: Land Use Planning & Implementation System

The purpose of a Community Development Plan (CDP) is to further define the General Plan's goals, objectives, and policies in order to identify and implement, as needed, more specific goals, objectives, policies and strategies for community-based actions especially applicable to the planning area's unique characteristics. The CDPs are adopted by County ordinance and seek to address local and regional issues and opportunities related to cultural and natural resources,

watershed planning, directing, managing and regulating growth, and improving the coordination and delivery of government services and infrastructure.

Urban development plans are a means of implementing the policies and objectives of the General Plan and/or Community Development Plans within towns, villages, and other areas of existing urban development or within areas specifically intended for new or more intensified urban development. They comprise a minor portion of a larger, regional community planning area. They shall be consistent with and implement the visions, objectives and policies of the General Plan and applicable Community Development Plans. If there is a direct conflict between provisions of an urban development plan and those of an applicable Community Development Plan, or the General Plan, provisions of the latter, superior plan shall be controlling.

Special Area Plans provide the basis for regionally-scaled programs for the protection, restoration, or recreational and educational use of specific, natural and/or cultural-historic resources and features identified in the General Plan or an encompassing Community Development Plan as highly valued community natural assets.

Functional Plans address specific County agency needs, programs, or issues and may include organizational or management initiatives, facility or physical infrastructure development initiatives, initiatives for programs and services, or legislative proposals. The functional plans and programs of departments and agencies of the County shall conform to the General Plan. Thus, the provision of County facilities, infrastructure and services shall be in accord with the policies and objectives of the General Plan.

CONSISTENCY AMONG PLANS

Where the director has determined a conflict between any of the plans, the General Plan shall prevail over any Community Development Plan, and the General Plan and community developments plans shall prevail over any functional or Special Area Plan. The director shall initiate plan amendments to resolve any inconsistencies that arise.

CONSISTENCY WITH PLANS

After a General Plan, or element or portion thereof, has been adopted in conformity with the State Planning Act and the County Charter, all actions, programs, or projects and land use decisions, shall be consistent with such plan or element as adopted.

An action, program, or project is consistent with the General Plan if, considering all its aspects, it will further the objectives and policies of the General Plan and not obstruct their attainment. In determining whether any action relating to a proposed public improvement or development project is consistent with the General Plan or Community Development Plan, the responsible agency shall take into consideration the following factors:

1. Whether the public improvement or development project is consistent with the land use map or policies in the General Plan and applicable Community Development Plan.
2. Whether the public improvement or development project supports the implementation and priorities in the General Plan and the applicable Community Development Plan.
3. Whether the place and time at which the public improvement or development project is proposed to be undertaken is consistent with the planned location and sequence for constructing public facilities and infrastructure within the applicable planning area.
4. A land use decision shall be consistent with the General Plan if the land uses, densities or intensities, and other aspects of development permitted by such order, code or regulation are compatible with and further the objectives, policies, land uses, and densities or intensities in the General Plan and if it meets all other criteria enumerated by the General Plan.

TRENDS AND FORECASTS

The General Plan comprehensive review requires an understanding of demographic, economic, and real estate trends and forecasts that can be used to anticipate and plan for impacts on land use, infrastructure, and services. The Trends and Forecasts Report is intended to meet that need by providing both trends and forecasts for a set of variables relevant to the County of Hawai'i's General Plan review. The Report was prepared by Honolulu-based SMS Research & Marketing Services, Inc. (SMS).

Apart from the report, SMS provided data both at the County-wide level and by the following Forecast Analysis Zones (FAZs), which are groupings of census tracts based on the geographic location of population centers in Hawai'i County:

- Hilo (Hilo and Wainaku)
- North Hilo - Hāmākua Coast Villages (Pauka'a to Laupāhoehoe)
- Honoka'a-Pa'auilo
- North Kohala
- Waimea
- Waikoloa Area (Kawaihae-Puakō-Waikoloa-Waikoloa Resorts)
- North Kona
- South Kona
- Ka'ū
- Upper Puna (Volcano to Mountain View)
- Kea'au-Kurtistown
- Hawaiian Paradise Park-Orchidland

- Lower Puna.

Historic data are generally provided from 1990, and forecasts are provided to 2040, which is the year through which forecasts are provided by the state Department of Business, Economic Development, and Tourism (DBEDT).

In addition to informing the Trends and Forecasts Report, these data were used for the development of planning scenarios reflecting baseline conditions, build-out, growth capacity, growth trends, and alternatives to the trend.

SUMMARY OF KEY FINDINGS

Hawai'i County is rural. Only 60% of Hawai'i County's population is within its eight urban areas, and population density is low in both urban and rural areas.

The County is expected to grow by 50% by the year 2040. Visitors make up about 15% of the population, and during peak periods, 70% of the growth is from immigration. A disproportionate number of residents from 2025 and beyond will be seniors.

Rates of job growth are expected to match population growth, but due to the economy's reliance on lower-paying service sector jobs, median incomes are likely to remain low. Moreover, roughly half the households find housing unaffordable, and many are struggling to make ends meet, often living in overcrowded conditions. Much of the affordable housing is not located in or near job centers, so commutes are getting longer.

Visitor units are clustered primarily in West Hawai'i, and steady growth is expected to continue, though the makeup of that growth (hotel vs. vacation rental) is unknown.

DEMOGRAPHIC KEY FINDINGS

Population Centers are both Rural and Urban

The Census Bureau identifies "urban areas" as densely developed territories adjacent to areas with low population density. The Census Bureau identifies the following "Urban Clusters (UCs)" of at least 2,500 and less than 50,000 people in the County of Hawai'i:

Urban Cluster	Population	% of Population	Population Density (Pop/Sq Mile)
Hilo	43,925	23%	1,791
Hōlualoa	28,850	15%	2,013
Captain Cook	4,175	2%	999
Hawaiian Paradise Park Area	20,503	11%	635
Waimea	6,960	4%	1,475
Waikoloa Village	4,089	2%	3,799
Kapaʻau	3,597	2%	888
Honokaʻa	2,667	1%	1,699

Table 2: Urban Clusters, County of Hawaii, 1990-2015

Population Density is Low

By the Census definition, the majority (60 percent) of the County's population has been classified as urban throughout the last 25 years, and no change is expected through 2040. In contrast, nationwide, 80.7 percent of the population lives in urban areas.

In both urban and rural areas, the County of Hawai'i has relatively low population density. It has an average of 1,300 people living in every square mile in urban areas and an average of 18 persons per square mile in rural areas. By contrast, urban Honolulu had over 5,500 persons per square mile in 2010.

Roughly 50% Growth by 2040

In 2013, there were 194,190 residents living in the County of Hawai'i. Over the next 25 years, the population growth rate is expected to decline from an average 1.7 percent per annum to about 1.4 percent per annum. In 2040, the County resident population is forecast to be approximately 296,322, which is a 53% increase since 2013.

The *de facto* population is the sum of the resident population and the average daily visitor census. The average daily visitor census was around 29,000 in 2013 and is expected to rise to approximately 36,000 by 2040, bringing the de facto population from about 221,000 to about 333,000 – a 51% increase.

Immigration Outpaces Resident Population Growth

During the last two decades, there has been an average of 2,218 births and 1,269 deaths per year in the County, resulting in a net increase of almost 950 people annually. Also contributing to population growth are the approximately 2,300 individuals, on average, who choose to move to Hawai'i County each year. In other words, about 70% of the growth on average is through immigration.

Senior Tsunami is Imminent

In 2013, about half the County's population was between the ages of 45 and 64. Another quarter was age 65 or older, and there were similar numbers of residents from birth to 44 years of age. By 2025, the large middle cohort will be retiring. As this subset of the population continues to age, it will present a variety of opportunities and challenges with regard to housing, economic development, and public services.

GROWTH AND DEVELOPMENT KEY FINDINGS

Housing is a Burden for more than 50% of Households

The housing guidelines from the federal Department of Housing and Urban Development suggest that households should devote no more than 30 percent of their income to pay monthly housing expenses; otherwise, a household is considered "shelter burdened" and may have difficulty affording necessities such as food, clothing, transportation and medical care.

In Hawai'i County, the percent of households that is shelter burdened has been steadily increasing since 2000. In 2000, 36.9 percent of owner households with a mortgage and 43.0 percent of all renter households were paying more than 30 percent of their income for housing. By 2010, this had increased to 48.0 percent and 51.2 percent, respectively, and by 2013 it had risen to 50.1 percent and 57.2 percent.

Nationally, 35.3 percent of households paid more than 30 percent of their income on housing in 2014. For the State of Hawai'i, the comparable figure is 42.8 percent, the third highest nationally.

Housing Remains Unaffordable

SMS considered housing affordable if its price (asking rent or sales price) is affordable to households with annual household incomes less than 80 percent of the Area Median Income (AMI) (\$41,177 in 2014), which includes the very low, low, and moderate income thresholds established by the federal Department of Housing and Urban Development each year. Between 2009 and 2013, roughly 56 percent of all housing units available to residents of Hawai'i County were classified as affordable.

Households Remain Overcrowded

A household is considered overcrowded when the ratio of household members to rooms in the housing unit exceeds 1.0. A household is classified as extremely overcrowded when that ratio exceeds 1.50. Crowding is considered to be a negative indicator of the health of a local housing market, a sign that the market is unable to supply the number and types of housing units needed.

Hawai'i has one of the highest overcrowding rates in the country, and at 5.6 percent of owner-occupied units, the level of overcrowding in Hawai'i County's owner-occupied units is the highest among all of Hawai'i's counties. The percentage of overcrowded renter-occupied units, however, is notably higher at 12.6 percent of rented units.

Affordable Housing can be Found Island Wide

The availability of affordable housing varies by region. Relative to the Countywide average, the rural communities – particularly Puna, Ka'ū, Honoka'a, Pa'auilo, and North Kohala – have largest percentages of housing that is affordable. At the same time, most of the County's total stock of affordable housing is in Puna (22.5%), Hilo (23.9%), and North Kona (22.5%).

Forecasted Growth Rates Vary by Community

The number of housing units in the County of Hawai'i in 2015 was estimated to be 87,310. Among those, approximately 80 percent were single-family dwellings, and the remainder were multi-family units. 64 percent of housing units were owner-occupied.

Growth rates have varied considerably by region, and that trend is expected to continue. Relative to the Countywide estimate of 59% growth in housing units from 2010 to 2040, Hilo (29%) and the North Hilo-Hāmākua Villages (36%) are expected to grow more slowly. Others are expected to grow more quickly: Waimea (60%), Ka'ū (93%), and Puna – Kea'au-Kurtistown (72%), Upper Puna (101%), and Hawaiian Paradise Park-Orchidland (171%).

These differences in growth rates are forecasted to result in shifts in the relative population centers. For example, half of the housing is currently in Hilo (24%) and North Kona (25%), while only about 13% is in Upper Puna and Hawaiian Paradise Park-Orchidland. But by 2040, only 42% of the units are forecasted to be in Hilo and North Kona, while 19% is estimated to be in Upper Puna and Hawaiian Paradise Park-Orchidland.

There is also variation among forecasted growth rates in non-residential square footage (i.e., commercial and industrial), but the variation is less extreme. Relative to the Countywide estimate of 34% non-residential growth from 2010 to 2040, the North Hilo-Hāmākua Villages (28%), Upper Puna (28%), and the South Kona Villages (29%) are expected to grow more slowly, and Ka'ū (43%) and Hawaiian Paradise Park-Orchidland (65%) are expected to grow more quickly (assuming the availability of appropriately-zoned land).

Visitor Unit Growth Steady, but Types are Shifting

The vast majority of visitor units are in the Waikoloa Area and North Kona. With the upward trend in visitor arrivals expected to increase through 2040, increasing demand for visitor units is likely. With this growth comes the challenge of planning for their impact on the local economy, especially with regard to accommodations. Hotel rooms account for the majority of the visitor

accommodation units in the County of Hawai'i (59.5%). A distant second and third are timeshare properties and Visitor Rental Units (VRUs), with 13 and 12 percent of the total visitor units, respectively.

One of the significant difficulties in keeping track of visitor accommodations units on Hawai'i Island is that the number of housing units being let to visitors as short term vacation rentals is unknown. Residential units used for this purpose were referred to as Transient Vacation Rentals (TVRs) in the Hawai'i Tourism Authority's annual Visitor Plant Inventory and their numbers are reported based on tax records. However, it is strongly suspected that significant numbers of homeowners rent all or parts of their units to visitors as short term rentals without registering their rental activity and without paying the required taxes.

There is no estimate for the number for those properties. A study commissioned by HTA in 2014 (Individually Advertised Units in Hawai'i, 2014) reported that there were 9,986 vacation rental units in the County of Hawai'i. That would bring the total of visitor accommodations units up from 10,666 to 13,969. The DBEDT 2040 forecast for the County of Hawai'i was 11,600 units.

ECONOMIC KEY FINDINGS

Poverty Persists

Household income rises and falls along with economic cycles. The median household income on Hawai'i Island has not yet recovered to its 2007 high.

The percentage of persons in poverty was 15.7 percent in 2000 and was on a downward trend, falling to a low of 13.1 percent in 2007. Since that time, the percentage in poverty has increased to a record high in 2013 of 18.3 percent for individuals. The official poverty rate nationwide was 14.8 percent, and statewide it was nearly 11 percent.

Self-Sufficiency is Out of Reach for Many

The poverty rate is a national measure and is hardly a living wage, especially in Hawai'i. The poverty line for a family of four in 2013 was \$23,834. The State Department of Business, Economic Development & Tourism publishes an annual Self-Sufficiency Income Standard. In 2014, Hawai'i County had the lowest self-sufficiency income requirements (\$58,874 for a family of four with a preschooler and one school-age child), but that income is well above the poverty line. A family of four needed to earn a combined hourly wage of \$27.88 (or \$13.94 each on average) to be economically self-sufficient. That was 92.2 % above the state minimum wage level and 114.6% above the federal poverty threshold for Hawai'i.

Job Growth Mirrors Population Growth

The average annual growth rate for jobs averaged 1.7 percent since 1990, mirroring population trends, and it is expected to remain at that level for the next several decades.

80% Employed in the Service Sector

The three primary economic sectors of the Hawai'i Island economy are the services producing sector, the goods producing sector (construction and manufacturing), and agriculture. The services producing sector (education, health, accommodation, entertainment, food, professional, financial, real estate, public, etc.) is by far the largest, representing over 80% of employment. The agriculture sector represents about 6% of employment.

More than two-thirds of workers are employed in one of five key industries: educational service, healthcare, and social assistance (~19%); arts, entertainment, recreation, accommodation, and food services (~18%); retail trade (~13%); professional, scientific, management, administrative, and waste management (~10%); and construction (~9%). Tourism drives the arts, entertainment, recreation, accommodation, and food services industries and much of the retail trade, representing ~25% of total employment.

Job and Population Centers Mismatch = Longer Commutes

Data varies by source and date, but in general, about 1/3 of jobs in Hawai'i County are in Hilo, another quarter in North Kona, 5-10% in the Waikoloa area, 5% in Waimea, and about 1-7% in each of the other population centers.

It is useful to compare these job centers with the County's population centers. Hilo and the Waikoloa area have a surplus of jobs relative to their population, reflecting the fact that residents commute there from other communities. At the other end of the spectrum, the Hawaiian Paradise Park-Orchidland area has a working population that far exceeds the number of nearby jobs.

These mismatches are reflected in the increase in the Census measure of "mean travel time to work" from 24.5 minutes in 2000 to 27.1 in 2013. The national average is 25.5 minutes, and the Hawai'i average is 26.0 minutes.

Competitive Advantages Vary

In contrast to employment and occupation data, which are from the Census and therefore tie data to the physical location of the *resident*, jobs data are collected from employers and therefore tied to the physical location of the *employer*.¹ Hawai'i County has the greatest number of jobs in

¹ This explains the slight differences between employment and jobs data.

government (20.2%); retail (14.8%); business, professional, and other services (13.2%); health and social assistance (10.9%); dining (9.5%); and hotels (8.8%).

Because jobs data are geographically linked to the place of employment, they can be used to identify characteristics of job centers. A location quotient (LQ) quantifies how concentrated jobs are within a geographic area relative to a larger area. A high location quotient in a specific industry may translate into a competitive advantage in that industry for the local economy. The Trends and Forecasts Report considered the LQ of Hawai'i County vis-à-vis the State and each FAZ population center vis-à-vis the County.

Hawai'i County has a much higher concentration of agricultural jobs relative to the State as a whole – more than three times higher. Hawai'i County also employs about 1.5 times as many residents in utilities and in hotel professions as the rest of the State. On the other hand, professional services in Hawai'i County are underrepresented as compared to the rest of the State (LQ = 0.54). Employment in the finance and insurance industry has also been relatively low in Hawai'i County compared to the State (approximately two-thirds).

The competitive advantages of population centers relative to the County are provided below (LQ provided in parentheses). The urban centers are the seat of government and the center of professional, service, and retail trades. Agriculture, food processing, and related wholesale trade are centered in the most rural areas and Waimea. Tourism and related industries are centered on the leeward side and in North Kohala and Honoka'a. Interestingly, Lower Puna's economy is quite diversified despite its limited number of jobs, and the HPP-Orchidland area appears to be a small hub for the information industry.

SUSTAINABILITY FRAMEWORK

The General Plan's processes and strategies (objectives, policies and actions) are intended to respect the culture, character, beauty and history of the Island of Hawai'i while attempting to integrate balance between environmental stewardship, social and community equity and economic sufficiency in order to meet the needs of the present without compromising the ability of future generations of this island to meet their own needs. This sustainability framework has guided the development of the plan.

The General Plan endorses the goals of the Hawai'i 2050 Sustainability Plan. These goals give guidance and have been integrated throughout the goals of this General Plan. The Hawai'i 2050 Sustainability Plan goals are as follows:

1. Living sustainably is part of our daily practice in Hawaii.

2. Our natural resources are responsibly and respectfully used, replenished and preserved for future generations.
3. Our Kanaka Maoli and island cultures and values are thriving and perpetuated.
4. Our community is strong, healthy, vibrant and nurturing, providing safety nets for those in need.
5. Our diversified and globally competitive economy enables us to meaningfully live, work and play in Hawai'i.

DRAFT



Section 1: Natural Resource Planning

GOALS

1. Hawai'i will integrate traditional knowledge and practice with progressive planning strategies to maintain environmental quality at the highest standards, address a changing climate, protect natural resources, and restore ecosystem health for the benefit of present and future generations:

- a) The resources and environmental quality of our air, noise, geology, waterways, groundwater, forests, native habitats and wildlife, and coastal areas are protected and enhanced. The integrity of our ecosystem services is enhanced to foster the resilience of natural systems and to ensure their preservation and sustainable use for future generations.
- b) Proactive and adaptive land use and design standards will be used to protect life and property from hazards and a program of mitigation and post-disaster redevelopment will be maintained to increase public safety, reduce damages, and ensure resilient public investments.
- c) Climate impacts are addressed in the built environment by efficient public investment in green development, increasing renewable energy production, reducing greenhouse gas emissions, fossil fuels, energy consumption, and waste, and by educating the community in **adapting for** climate change.
mitigating and

PROTECTING NATIVE HABITATS & WILDLIFE

SUSTAINABILITY OBJECTIVE

Increase native habitat restoration on County owned or managed land.

POLICY

1. Priority habitat restoration sites shall be identified as those disturbed areas whose restoration will result in the greatest habitat benefit. **and climate mitigation**

2. Maintain a program for acquiring and maintaining native habitat to implement the recommendations in the Hawai'i State Wildlife Action Plan (SWAP).
[Rationale: Based on identified gaps in implementing recommendations from the DLNR SWAP of 2015.]
3. As part of any permit application to the County Planning Department, the following natural and cultural resources shall be considered sensitive and therefore shall be inventoried with identified mitigation measures:
 - a) Critical habitat areas as identified by the U.S. Fish & Wildlife or County General Plan;
 - b) Predominantly native ecosystems, which may not be considered endangered but are valued because of their nearly pristine condition;
 - c) Anchialine ponds;
 - d) High-level groundwater recharge areas; **carbon sinks**
 - e) Historic trails; and
 - f) Archaeological and historic sites subject to protection under HRS Chapter 6E

[Rationale: Based on identified gaps in identification and mitigation for sensitive areas. See also Kona CDP ENV 1.5]
4. Development shall not disturb the following:
 - a) Anchialine pools;
 - b) Freshwater wetlands;
 - c) Shoreline setback area; **exceptional carbon sinks**
 - d) Plant species listed by the US Fish and Wildlife Service as threatened and endangered
 - e) Exceptional trees;

[Rationale: Based on identified gaps in protecting natural resources from development impacts.]
5. Hawai'i County shall discourage developments and limit clearing of vegetation within Habitat Overlays.
[Rationale: Based on identified gaps in protecting natural resources and native habitats. See also General Plan Policies 8.3 (a, j).]
6. Establish Habitat Overlay Districts for:
 - a) Natural areas including old and new growth upland native vegetated areas with minimal existing development and/or infrastructure.
 - b) Vacant land which can be restored to connect upland native habitat patches and reduce further fragmentation of upland native habitat. **along with carbon sequestration**

- c) Lands required to provide an undeveloped buffer between natural areas and development to reduce secondary impacts; roadways, depending on size may form a boundary that removes the need for the buffer or reduces its depth.
- d) Lands designated for acquisition by public agencies for conservation and natural resource protection.
- e) Known or potential locations of threatened and endangered species and species of greatest conservation need.
- f) Lands designated as conservation on the SLU, Future Land Use maps or Zoning maps or within a buffer/restoration area as appropriate.
- g) Identified wetlands

[Rationale: Based on identified gaps in protecting natural resources and native habitats. See the General Plan 8.2 Goals and Policies 8.3 (a-x).]

7. Hawai'i County shall require clustering of any developments within Habitat Overlay Districts to avoid sensitive areas.

[Rationale: Based on identified gaps in protecting natural resources and native habitats from development. See also Hāmākua CDP Policy 8.]

8. Maintain and restore native habitat including marine, wetland, shoreline, and native upland systems on County owned or managed lands.

[Rationale: Based on identified gaps in protecting natural resources and native habitats]

9. Manage land uses to protect nesting areas and any bird species federally or state listed as endangered, threatened, or a species of special concern.

[Rationale: Based on guidance from SWAP 2015.]

10. Assess and prioritize County-owned areas for restoration in consultation with State, Federal, and private entities.

[Rationale: Based on identified gaps in restoring natural resources and native habitats]

11. Protect and provide for restoration of significant natural and cultural features and ecologically sensitive lands, including but not limited to mountain areas, shoreline and coastal communities/areas, wetlands, fishponds, forests, natural gulches, riparian areas, streams and drainage ways.

12. Partner with the Big Island Invasive Species Committee (BIISC) and the University Hawai'i to develop a program for identification and protection of plant species of special status. Include plants designated as threatened and endangered by the US Fish and Wildlife Service and plants significant for cultural practitioners.

13. Partner with State and Federal agencies to support seedbanks of native and endemic plant species, especially species that are threatened or endangered. along with agricultural seed

14. Partner with the State Land Use Commission to establish a conservation buffer to accommodate shifting native habitats impacted by climate change, particularly wetlands and high-elevation forests.
[Rationale: University of Hawai'i at Mānoa Sea Grant College Program. June 2014 Climate Change Impacts in Hawai'i - A summary of climate change and its impacts to Hawai'i's ecosystems and communities.]
15. Incentivize the planting of threatened and endangered endemic plants species within their native ranges and during development activities.
16. Incentivize the removal of invasive species during development activities.
17. Partner with State, Federal, and private entities to support programs designed to avoid the introduction and establishment of invasive species and the control and eradication of invasive species; particularly that serve as disease vectors.
18. Partner with State, Federal, and private entities to support protection of native wildlife and habitat.
19. Support the implementation of a Habitat Conservation Plan (HCP) for Protected Species on Hawai'i Island.

ACTION

- 1.1 Coordinate a program to actively control invasive wildlife on County-owned property, particularly invasive species that serve as disease vectors. and reestablish native wildlife
- 1.2 Coordinate a program to remove invasive vegetation from County-owned or managed lands. and reestablish native vegetation including food and resource plants
- 1.3 Partner with State and Federal agencies to implement the State of Hawai'i Aquatic Invasive Species (AIS) Management Plan, and coordinate with the Hawai'i Invasive Species Council, the Coordinating Group on Alien Pest Species (CGAPS) and the Big Island Invasive Species Committee to eradicate invasive species on County-owned or managed lands.
- 1.4 Create a County nursery to maintain a stock of native species to be used in County landscaping. and critically useful non natives such as foodplants

SUSTAINABILITY OBJECTIVE

Increase percentage of forest and woodland cover.

POLICY

20. Prioritize urban tree inventories for primary urban areas such as Downtown Hilo, Waimea, and Kailua-Kona.
[Rationale: Based on U.S. Forest Service Urban Tree Canopy (UTC) Assessment, the U.S. Climate Resilience Toolkit, and City and County of Honolulu Urban Reforestation Master Plan 2006.]
including maximum carbon sequestration considerations
21. Include reforestation elements in Community Development Plans, Special Area Plans, and community conservation projects.
[Rationale: Based on recommendations from the U.S. Climate Resilience Toolkit and the City and County of Honolulu Urban Reforestation Master Plan 2006. See also General Plan Policy 8.3 (x)]
22. Explore the feasibility of adopting a No Net Loss of Forest policy. **proforestation and afforestation policy and fruit tree / food plants where applicable**
23. Encourage the planting of native trees, shrubs, and grasses in appropriate areas to increase forest buffer functions, forest diversity, and to reduce storm water runoff. **native, fruit tree, medicinals and materials**
24. Continue to promote and support programs for community reforestation.

ACTION

- 1.5 Invest in public grounds by tree planting, buffer conservation, and habitat restoration.
- 1.6 Conduct and maintain an urban forest inventory of all trees on County lands.
- 1.7 Establish a street tree planting program to include:
 - a) street tree planting typologies scaled with street typologies
 - b) design guidelines
 - c) maintenance plan
- 1.8 Prepare Forest Health Assessments and implement Forest Management Plans for large County-owned forested properties.
- 1.9 Develop & adopt a comprehensive and integrated Landscape and Tree Ordinance in the Hawai'i County Code and Ensure Consistency with Other Codes (Zoning & Subdivision, Roads, etc.)

PROTECTING COASTAL RESOURCES

Coastal Habitat

SUSTAINABILITY OBJECTIVE

Measure coastal habitat to track potential habitat gains/losses and study the effectiveness of mitigation measures.

POLICY

25. Implement education programs and actions to prohibit the destruction of, and work toward the recovery of, monk seals, whales, and marine turtles, as well as their natural habitats.

[Rationale: Based on research and identified gaps in providing education and comprehensive strategies to protect or restore marine habitats.]

26. Priority shoreline acquisition shall include sites with:

- a) Documented nesting sites for designated endangered or threatened species;
- b) Public recreation uses without adverse impacts on sensitive natural resources.

[Rationale: Based on General Plan 2005 Section 4: Environmental Quality, Goals; Section 8 Natural Resource and Shoreline Goals, Policies 8.3 (a), (c), (i); Standard 8.4(a)]

27. Maintain shoreline setback policies pertaining to permitted uses, siting of structures, disturbances, removal of invasive vegetation, and restoration of native vegetation in shoreline areas.

[Rationale: Based on General Plan Policy 8.3(d); Coastal Zone Management Act/ Shoreline Protection Act, and the Special Management Area]

28. Evaluate the minimum shoreline setbacks currently in use in Hawai'i County in coordination with CDP recommendations. Setbacks shall be developed to accomplish the following:

- a) Protect natural shoreline vegetation;
- b) Protect marine turtle nesting beaches/areas;
- c) Protect water quality;
- d) Protect structures from the effects of long-term sea level rise;
- e) Protect beaches and shorelines from erosion; and
- f) Allow redevelopment of existing waterfront commercial structures consistent with the existing community character and preserve overwater views.

[Rationale: Based on General Plan Policy 8.3(d); Coastal Zone Management Act/ Shoreline Protection Act, and the Special Management Area. See Kona CDP LU-1.5b; Policy ENV-2.1; Ka'ū CDP Policies 28, 30; Hāmākua CDP Policy 18, 39, and 40]

29. No new bulkheads, seawalls or other hardened vertical shoreline structures shall be permitted on unaltered shorelines. and in general without permit review including public input

[Rationale: Based on existing policy HRS Ch. 205A-2 and the Shoreline Hardening Policy and Environmental Assessment Guidelines 1998. It is widely recognized that shoreline hardening leads to increased erosion and further prevents coastal ecosystems from adapting to sea level migration]

30. Maintain a program for acquiring undisturbed shoreline resource areas.
[Rationale: Based on Charter Section 10-15 PONC; General Plan 2005 12.3 (k)]
31. Regularly coordinate with Federal, State, regional and research agencies and organizations responsible for monitoring impacts to coral reefs.
32. In coordination with relevant agencies, the County will contribute to and participate in the development and implementation of marine zoning plan(s), Marine Managed Areas (MMA's) or other appropriate tool(s) which incorporate resilience-based concepts to provide maximum protection for all reef types and associated habitats.
33. Support the acquisition of undisturbed shoreline resource areas for conservation.
34. Support actions consistent with the State of Hawai'i Ocean Resources Management Plan.

ACTION

- 1.10 Implement education programs and actions to prohibit the destruction of, and work toward the recovery of, monk seals, whales, and marine turtles, as well as their natural habitats.

PROTECTING COASTAL RESOURCES

Wetland Habitat

SUSTAINABILITY OBJECTIVE

Increase protections and restoration of wetland habitats.

POLICY

35. Priority wetland restoration sites shall be those disturbed wetlands having the greatest functional value as determined through quantitative wetland assessment.
[Rationale: Based on identified gaps in identifying and assessing wetlands; General Plan 2005 5.3(n); and Clean Water Act Section 404.]
36. No fill or structures shall be permitted in wetlands.
[Rationale: Based on Section 404 Clean Water Act and Army Corps of Engineers guidance.]
37. Require minimum wetland setbacks of 50 feet to be maintained as an open space buffer for development occurring adjacent to all types of wetlands.
[Rationale: Based on Section 404 Clean Water Act and Army Corps of Engineers guidance.]
38. Maintain a program for acquiring and/or restoring high quality wetlands and anchialine pools.
[Rationale: Based on Charter Section 10-15 PONC; General Plan 2005 12.3 (k); and Section 404 Clean Water Act.]
39. Develop and implement regulations to reduce disturbances to wetlands and mitigate impacts of development to wetlands.

ACTION

- 1.11 Develop an Anchialine Pools Management Program.
- 1.12 Develop a Wetlands Evaluation Procedure (HIWEP) to determine the functional capacity of wetlands and a Uniform Mitigation Assessment Method (UMAM) to determine mitigation requirements for impacts to wetlands.
- 1.13 Identify potential wetland (fishpond- anchialine pools, shore ponds- salt & inland ponds brackish or fresh) restoration sites and identify high quality wetland

(fishpond & anchialine) sites for possible future acquisition by the County, State and/or private non-profit conservation organizations.

MANAGING STREAMS AND WATERSHEDS

SUSTAINABILITY OBJECTIVE

Reduce impaired inland and marine waters.

POLICY

40. The environmental quality of the island's surface waters, riparian areas, streams, and associated resources shall be maintained and, wherever possible, improved or restored.
[Rationale: Based on General Plan 4.2 (b); 4.3]
41. Lands necessary for the protection of watersheds, water sources and water supplies shall be protected and conserved.
[Rationale: Based on General Plan 8.3 (j) and 8.4 (d).]
42. Hawai'i County shall require that, to the greatest extent practicable, development activity, such as land clearing, grading and filling will not disturb natural drainage patterns.
[Rationale: Based on General Plan 4.3 (l); 5.3 (n), (p), and 8.2 (f), and consultation with DPW engineering staff.]
43. Limit clearing and impervious surfaces for developments located in identified priority watershed areas.
[Rationale: Based on General Plan 5.3 (n); 8.2(e and f), 8.3 (j).]
44. Continue to coordinate with State, Federal, and private entities to document pollutant loads for Hawai'i Island streams and coastal waters. and restrict
45. Practice watershed protection in furtherance of ahupua'a principles.
46. Participate in watershed partnerships to identify priority watershed areas and develop watershed management plans and projects.
47. Partner with State, Federal and with other Counties to address water management practices and engage in comprehensive watershed planning, including identifying priority watershed areas.

48. Explore the feasibility of incentive methods such as property tax dedications, conservation easements, or transfer of development rights to protect the defined zone of influence of existing or proposed public and private wells.
49. Collaborate with the Department of Health, the USDA Natural Resource Conservation Service, and the Soil and Water Conservation District to reduce runoff, maximize soil and water conservation, and protect and effectively manage watersheds and natural areas.
50. Encourage the County and the State to investigate and implement alternatives to the use of herbicides for weed control on public properties, and pesticide, or other poisons
51. Work to identify areas where nutrient pollution is having the greatest impact on overall water quality. and remediate
52. Support the DOH and DLNR in its effort to have an implemented conservation plan for all agricultural operations and a nutrient management plan for application of all animal and chemical nutrients.
53. Establish riparian protection areas around streams, ponds, perennial flowing natural springs, and all springs and reservoirs serving as water supplies.

ACTION

- 1.14 Develop and implement watershed management programs to reduce runoff pollutant concentrations and volumes from existing development:
 - a) Identify priority local and/or regional watershed pollutant reduction opportunities, e.g., improvements to existing urban runoff control structures;
 - b) Contain a schedule (CIP) for implementing appropriate controls;
 - c) Limit destruction of natural conveyance systems; and
 - d) Where appropriate, preserve, enhance, and establish buffers along surface waterbodies and their tributaries.
- 1.15 Amend code to include riparian protection areas. [Code]
- 1.16 Create incentives for landowners to retain and re-establish forest cover in upland watershed areas with emphasis on native forest species. and non invasive foodplants?
- 1.17 Develop a Water Quality Monitoring Program.
- 1.18 Identify and map lands necessary for the protection of watersheds, water sources and water supplies.

- 1.19 Conduct a feasibility study of incentive methods such as property tax dedications, conservation easements, or transfer of development rights to protect the defined zone of influence of existing or proposed wells.
- 1.20 Identify and evaluate water well protection zones to determine if land uses are impacting or have the potential to impact drinking water.
- 1.21 Conduct a study on the impacts from subdivision build-out based on predictions related to: native ecosystems; potential potable water well sites; and flooding due to loss of forest.

AGENCY ACTION

- 1.22 FUND: State Legislature: Fund stream maintenance.
- 1.23 State DLNR: Update Hawai'i Stream Assessment (HAS)

MANAGING GEOLOGIC RESOURCES

SUSTAINABILITY OBJECTIVE

Initiate an inventory of soil, mineral and unique geologic resources.

POLICY

- 54. All (geologic and mineral) resource extraction shall follow State and Federal safety and health regulations.
[Rationale: State and Federal regulations are mandatory for County to follow. Mining is a particularly hazardous industry that was listed as the most dangerous industry for workers until 2001- U.S. Bureau of Labor and Statistics.]
- 55. Protect caves, including lava tubes, and the unique cultural and natural resources inside them.
[Rationale: Based on existing HRS 6D Protection of Caves]

ACTION

- 1.24 Adopt revisions to the Hawai'i County Code (HCC) which establish health and safety standards for caves, including lava tubes.
- 1.25 Partner with state, federal, and cultural practitioners to develop criteria used to define significant caves needing further protection.

- 1.26 Prepare an inventory of active and abandoned resource extraction sites.
- 1.27 Partner with state, federal, and private entities to develop a plan for the reclamation and productive reuse of abandoned resource extraction sites.

ENSURING AIR & NOISE QUALITY

Air Quality

SUSTAINABILITY OBJECTIVE

Maintain air quality to adhere to standards set by the State and Federal Agencies.

POLICY

- 56. Continue to meet all air quality standards set by the State of Hawai'i and the U.S. Environmental Protection Agency (EPA), including noxious odors and industrial emissions [Rationale: Based on the Federal Clean Air Act, 42 USC Section 7401.]
- 57. Continue to enforce; maintain and expand as needed a "Dark Sky" Ordinance(s). [Rationale: Based on existing HCC Chapter 14, Article 9; HRS 226-13(4); HRS 262-4.5; HRS 201-8.5; 2011 Hawai'i Session Laws, and Act 287.]
- 58. Partner with State and Federal agencies in air quality hazard events (e.g. eruption events) to increase monitoring, public reporting, and mitigation recommendations.

ACTION

- 1.28 Review and consider revising protocols for air quality events in our emergency management system.

ENSURING AIR & NOISE QUALITY

Noise Quality

SUSTAINABILITY OBJECTIVE

Maintain noise quality to adhere to standards set by the State and Federal Agencies.

POLICY

59. Continue to meet all noise quality standards set by the State of Hawai'i and the U.S. Environmental Protection Agency (EPA).
[Rationale: Based on the Federal Clean Air Act, 42 USC Section 7401, which includes noise quality as part of air quality.]
60. During site plan approval, require appropriate buffers or other noise abatement measures for land uses with potential noise impacts in the vicinity of residential or commercial areas.
[Rationale: Based on the Clean Air Act, and the Quiet Communities Act and General Plan 4.3 (f)]
61. Partner with State and Federal agencies to continue monitoring and mitigating aircraft noise.
62. Future land uses in the vicinity of industrial areas, including airports, should have an adequate open space buffer and/or be compatible with the anticipated aircraft noise exposure levels for that vicinity.

ACTION

- 1.29 Evaluate/implement code changes for noise abatement and/or mitigation in plan approval.

MITIGATING & ADAPTING TO HAZARDS & CLIMATE CHANGE

Hazards

SUSTAINABILITY OBJECTIVE

Risks are lowered using hazard mitigation strategies.

POLICY

63. Reduce developments in identified high risk hazard areas.
[Rationale: Based on General Plan Standards 14.5.4 (d); Standards 14.8.4 (c); 5.3 (a, b, q, r); and on recommendations from FEMA/Homeland Security's National Mitigation Framework 2nd Ed. June 2016.]

64. Prioritize drainage and flood studies for high risk urban areas within the Urban Growth Area.
[Rationale: Based on General Plan 5.3 Policies. There are gaps and outdated flood data around the island and recent flooding events were particularly damaging and life-threatening in urban areas.]
65. Drainage standards shall incorporate cumulative upslope development patterns.
[Rationale: Based on gap noted in MHMP 2015 update: Current drainage standards, which are based on 10-year storms, need to be reevaluated to better account for cumulative upslope development.]
66. Hawai'i County shall review and evaluate floor elevation requirements, as necessary, for all new construction in vulnerable areas.
[Rationale: Due to sea level rise projections, building code elevation requirements should be reassessed and amended in vulnerable areas. See also General Plan 14.5.4(d).]
67. Require the consolidation of contiguous parcels that do not conform to current code (non-conforming) in high risk hazard areas.
[Rationale: Based on General Plan Standards 14.5.4 (d); Standards 14.8.4 (c); 5.3 (a, b, q, r); and on recommendations from FEMA/Homeland Security's National Mitigation Framework 2nd Ed. June 2016.]
68. Hawai'i County building code shall be updated to maintain consistency with the Hawai'i State Building Code no later than two years after adoption of the Hawai'i State Building Codes.
[Rationale: Based on recommendation from MHMP 2015 update; HRS 107-28; the last Hawai'i County building codes from HAR State Building Code were adopted in 2009.]
69. Coastal High Hazard Area is the area including tsunami inundation, sea level rise and special flood hazard areas. The Coastal High Hazard Area shall be shown on the Future Land Use Map.
[Rationale: Based on the need to integrate the various hazard modeling tools to provide cohesive and clear hazard area guidance. See also General Plan 5.3 (b).]
70. The "Drainage Master Plan" shall be revised and updated to include the new studies and to provide a watershed perspective in managing floods using both structural and non-structural methods.
[Rationale: This is based on recommendations from the General Plan 5.3 (c), Hāmākua CDP Policy 95, and the Kona CDP Action ENV 1.7]
71. Discourage ^{public or private development in as well as} infrastructure investments in high risk hazard areas and incentivize infrastructure expenditures outside high risk hazard areas.

72. Incorporate hazard mitigation strategies into policies and planning decisions and use the most conservative models in defining hazard areas.
73. Partner with State, Federal, and private entities to improve urban flood prediction by developing real-time field-monitoring systems.
74. Evaluate ownership and/or maintenance responsibility for flood corridors that serve regional multiple benefits.
75. Utilize Hawai'i Wildfire Management Organization (HWMO), Wildfire Community Hazard Assessment/ Hazard Mapping and Wildland/Urban Risk Assessment in its process of determining Fire Hazards and Risk to guide appropriate areas for development.
76. Implement best management practices for wildfire control and reclamation.
77. Natural resources that provide buffers from hazards are protected and conserved, including aquifers, watersheds, streams, coastal waters, forest and coastal ecosystems, lava tubes, and rare and endangered native species and habitats.

ACTION

- 1.30 Adopt natural hazard overlay zones and set appropriate conditions for land use, siting, and design within high risk zones. [Code]
- 1.31 Identify redevelopment opportunities within or adjacent to Urban Growth Areas but outside of high risk hazard areas.
- 1.32 Update existing, or map new potential hazard areas for consideration in long term planning decisions.
- 1.33 Map nuisance flooding with NOAA model to include the following:
 - a) 6 years and within planning horizon
 - b) Base policy guidance on nuisance flooding
 - c) Model is exportable based on existing tide gauge data/spreadsheets
- 1.34 Seek funding and support continued scientific research relating to hazards (e.g. research on erosion rates, slumping rates, slope stability studies, sea-level rise rates, tsunami inundation mapping and coastal stream flood mapping, etc.).
- 1.35 Amend Chapter 25 of the Zoning Code to establish building setbacks for inland cliffs. Recommended factors to consider for establishing setbacks include:
 - a) Slopes greater than 40%;
 - b) Cliff height and geology type;
 - c) Cliff identification and mapping strategies. [Code]

- 1.36 Update the building code to cost-effectively resist hazards, including wind standards and green building criteria for new residential and commercial development.
- 1.37 Establish guidelines for Adopt-a-Corridor Program for flood corridors.
- 1.38 Amend Charter to revise land acquisition and preservation regulations and criteria (PONC) to include lands impacted by climate change or those with beneficial attributes for climate adaptation and mitigation. ???? Remove this section all together

AGENCY ACTION

- 1.39 State: Research Shoreline Dynamics
- 1.40 FEMA: Conduct Studies to Help Refine Flood Zone Maps
- 1.41 NOAA: Incorporate urban flood prediction into Hawai'i Flash Flood Response Tool

SUSTAINABILITY OBJECTIVE

Pre-disaster and post-disaster plans increase resilience.

POLICY

- 78. Ensure emergency response plans are adequate for each community.
[Rationale: Based on identified gaps for rural communities; Ka'ū CDP Policy 118, Hāmākua CDP Policy 92]
- 79. Ensure emergency evacuation routes are adequate for each community vulnerable to hazard.
[Rationale: Based on a combination of Puna CDP 4.3.1.a, Hāmākua CDP 1.8.1 Objective 7, Ka'ū CDP 1.5.1 Objective 8.]
- 80. In coordination with State agencies, maintain shelter capacity and condition records to ensure that evacuation shelters are adequate for each community.
[Rationale: Based on General Plan 10.3.2 (I) and the Multi-Hazard Mitigation Plan.]
- 81. Hawai'i County shall ensure warning siren coverage is adequate for each community.
[Rationale: Based on acknowledged gaps between concurrency requirements for siren and other development approvals, such as subdivision, SMA, PUD]
- 82. Prioritize hazard mitigation projects in the Capital Improvements Program.
[Rationale: Based on General Plan 10.3.2 policies and identified challenges with prioritizing proactive mitigation projects in the CIP process].

powered by clean
renewable energy?
include water catchment?

83. All emergency response critical facilities and communication systems shall be designed and maintained to be resilient and remain operational during hazard events.
[Rationale: Based on recommendations from the 2015 Multi-hazard Mitigation Plan]
84. All emergency facilities shall be located outside the 100-year flood-prone areas.
85. Hawai'i County shall continue to participate in the National Flood Insurance Program (NFIP) Community Rating System (CRS) to the maximum extent possible and shall seek to improve its current CRS Class rating (to maximum extent feasible to reduce insurance costs).
[Rationale: Participating in CRS is known to increase community resilience. Increasing our CRS rating makes communities more hazard resilient. See also General Plan 5.3 (c).]
86. Require hazard disclosures in all real estate conveyance transactions. **and permitting processes?**
[Rationale: Based on General Plan 5.5.1.2 (d), 5.5.8.2 (e); 5.5.9.2 (d), and identified gaps in hazard disclosure reporting.]
87. Guidelines for development contained in the **Post-Disaster Redevelopment Plan** shall be incorporated within the General Plan by plan amendment after a natural disaster.
[Rationale: Based on identified gaps between planning efforts and the need for the General Plan to be dynamic to reflect changing events and circumstances.]
where is this plan and how can the public provide input?
88. Address and monitor known hazards along transportation routes.
[Rationale: Based on consultations with Civil Defense and a combination of Puna CDP 4.3.1.a, Hāmākua CDP 1.8.1 Objective 7, Ka'ū CDP 1.5.1 Objective 8.]
89. Encourage the development and implementation of Community Wildfire Protection Plans and Firewise Community Certification for communities with high wildfire risk.
90. Increase public education related to hazard zones, including evacuation routes and procedures for visitor accommodations.
91. Develop the capacity for hazard preparedness of **communities,** non-governmental organizations, businesses, and neighborhood groups. **including self sufficiency strategies such as clean alternative energy**
92. Partner with the State to assess and plan for alternative routes and possible relocation of coastal roads. **microgrids, water and localized public food sources**
93. County public expenditures within identified hazard areas should be limited to the restoration or enhancement of natural resources and parklands, expenditures required to serve existing development such as the maintenance or repair of existing infrastructure, and expenditures necessary for public health and safety. **with time x period including a cost benefit analysis and public input**

ACTION

- 1.42 Develop and maintain a Post-Disaster Redevelopment Plan which specifies the following:
- a) Roles and responsibilities;
 - b) Procedures for implementing programs for immediate repair, replacement, and cleanup;
 - c) Long-term rebuilding and redevelopment;
 - d) Procedures for the identification of damaged infrastructure and consideration of alternatives to its repair or replacement in the CHHA;
 - e) Evaluation of climate impacts.
- 1.43 Prepare Post-Disaster Reconstruction Guidelines and Protocols.
- 1.44 Prepare and Implement Wildfire Protection and Prevention Plans.
- 1.45 Develop Community-Specific Hazard Mitigation Plans.
- 1.46 Develop a standard for requiring an emergency response plan for larger developments.
- 1.47 Amend Hawai'i County Code Chapter 14 to require emergency and hazard information to be prominently displayed in all transient accommodations. This information should include information regarding the monthly Civil Defense siren tests, evacuation routes, and directive to reach appropriate services and agencies.
[Code] Yes!! And an Environmental Impact fee for visitors, tax incentive for low carbon (local) goods
- 1.48 Assess the feasibility of hazard mitigation strategies such as impact fees, TDR, tax incentive, evacuation rate-based build-out, portable housing, zoning and overlay zones, acquisition during updates to the Multi-Hazard Mitigation Plan.
- 1.49 Adopt a Land Acquisition program for purchase of hazard-prone locations with potential lease back options. No. Our county/public should not pay for this, perhaps that is a State or federal issue, can you please explain why this would be considered?
- 1.50 Define and map critical facilities, necessary for community disaster response and recovery that are too important to fail and protect them
- 1.51 Establish, map, and maintain alternative and emergency evacuation routes in each high-risk hazard area.
- 1.52 Amend the Subdivision Code to require warning sirens for 25 or more lots (consistent with concurrency requirements) as part of Subdivision improvements.
[Code] and self sufficient
- 1.53 Conduct a Safe Growth Audit as part of comprehensive review of General Plan or Community Development Plans.

- 1.54 Create/improve secondary access roads for those communities with only one means of ingress/egress.
- 1.55 Install emergency phones along roadways in isolated areas of lower cellular connectivity.
- 1.56 Adopt incentives, such as tax deductions, to encourage retrofitting of existing structures for resilience against earthquake, hurricane, tsunamis, and floods.
and self sufficiency
support community financing of cooperative private energy systems for the community

AGENCY ACTION

- 1.57 Hawai'i Health Services: Harden Honoka'a Hospital
- 1.58 State Department of Transportation: Mitigate Rockfalls and Road Closures
- 1.59 State DOT: Address and monitor known hazards along transportation routes
- 1.60 State DOT: Key nodes shall be designed or retrofitted as needed, to withstand seismic effects.
- 1.61 State DOT: Study and address port vulnerability related to the liquefaction risk
- 1.62 BIISC: Albezia management plan is needed.
- 1.63 State: Establish guidelines for emergency shelters, including analysis of climate change impacts on sheltering need, and administer a state retrofit program to harden public facilities to serve as hurricane evacuation shelters.
- 1.64 State DOE: Harden public facilities to serve as hurricane evacuation shelters.
- 1.65 State HEMA: Develop a warning siren standard based on the audible range of the sirens
- 1.66 Community: Build CERT Teams and self sufficiency
- 1.67 Department of Defense, Pōhakuloa Training Area (PTA): Build Firebreaks & Remove Unexploded Ordnance
- 1.68 Army Corps of Engineers: Remove Unexploded Ordnance
- 1.69 State of Hawai'i, Governor: Release Waipi'o Disaster Funds
- 1.70 Telecom: Provide Emergency Phones
- 1.71 State: Require Hazard Disclosure during Real Estate Transactions

MITIGATING & ADAPTING TO HAZARDS & CLIMATE CHANGE

Climate Change

SUSTAINABILITY OBJECTIVE

Partner with community stewardship groups, local stakeholders and intergovernmental agencies to reduce island-wide greenhouse gas emissions (GHGEs) by at least 80 percent from 2005 levels by 2050.

POLICY

94. Prioritize energy efficient designs, energy efficient systems, and waste reduction/reuse at County facilities.
[Rationale: Based on identified need for the County as an entity, and as a major employer and energy consumer to lead by example in reducing waste and conserving energy. Also see General Plan 3.3 (a & k); Hāmākua CDP Policy 110.]
95. Include the useful life of the infrastructure and the cost savings related to reduced energy needs in Capital Improvement Projects.
96. Partner with County, State, and private entities to develop comprehensive and coordinated strategies promoting energy and water conservation to strive for climate change resilience.
97. Consider values of natural areas for sequestering carbon and providing climate adaptation and mitigation strategies in evaluating public investments, including acquisition, siting, and design.
98. Evaluate the need and opportunities to reduce vehicle miles traveled (VMT), such as offering a range of transportation choices in new development or redevelopment projects; incentivizing connectivity between differing modes of transportation to increase modal split and linking residential and employment center land uses to reduce the need for single vehicle trips.
99. Support the development of carbon-emission standards and an incentive program aimed at achieving County carbon-emission goals.

ACTION

- 1.72 Adopt policies and strategies across all County departments to reduce GHGEs and become more resilient to the impacts of climate change, including establishing

video conferencing capabilities to allow residents and employees to participate in meetings without having to drive long distances; evaluating the feasibility for continued installation of renewable energy systems on County owned facilities; and increasing the use of alternatively fueled vehicles. [Code]

SUSTAINABILITY OBJECTIVE

Reduce vulnerability to sea level rise (SLR) for all vulnerable communities and infrastructure.

POLICY

please update for most current scientific data (2-3m by end of century more likely)

100. Implement a minimum sea level rise assumption of 3.2 feet for budgetary, land use, and other decision-making processes.

[Rationale: Hawai'i Climate Change Mitigation and Adaptation Commission. 2017. Hawai'i Sea Level Rise Vulnerability and Adaptation Report.]

Yes! How do we make that process more timely? Ie: 2017 State SLR needs to be revised

101. Use accurate and up-to-date scientific predictions and observations related to climate change impacts to guide adaptation policy and future land use decisions.

102. Support local and regional climate change modeling and monitoring programs. This may include but is not be limited to the programs designed to monitor:

- a) Surface water quality (including temperature);
- b) Sea level rise;
- c) Hydrologic and geologic conditions;
- d) Groundwater quality and levels;
- e) Precipitation and groundwater changes.

103. Evaluate Capital Improvement Projects for resiliency, including but not limited to, sea level rise, flood and storm surge, and assure that the project's useful life and service expectations can be met in the face of projected climate change impacts.

104. Coordinate with appropriate agencies to monitor impacts which may be specific to Hawai'i County due to its unique exposure to climate change and sea level rise impacts.

105. Partner with communities to develop adaptation strategies (protection, accommodation, managed retreat, and preservation) for vulnerable areas including conducting vulnerability assessments and assessing land use and land availability.

ACTION

- 1.73 Conduct detailed vulnerability mapping of existing and planned infrastructure.

(This page intentionally left blank)

1. Conduct assessments of the vulnerability of agriculture to climate change and identify:
 - implications for food security and livelihoods from projected changes in production, population and urbanisation
 - prioritise agricultural adaptations to minimise threats and maximise opportunities.
2. Implement priority adaptations based on:
 - projected food needs of rural and urban populations
 - natural and human capital for producing agricultural and fisheries products
 - existing production methods and capacity, including traditional knowledge, and maximum carbon sequestration
 - projected effects of climate change on food systems
 - previous research that can be used to help improve resilience of food systems.
3. Strengthen food systems research and development for the region by:
 - creating effective partnerships between county, state, university and extension agencies, farmers' networks, non-governmental organisations and scientific institutions to improve capacity to carry out research and implementation of effective agricultural strategies
 - implementing innovative approaches to overcome constraints to sharing knowledge and implementation with farmers and fishing communities such as social media and events
 - providing farmers and fishing communities with climate guidance and support for their investments and activities in carbon sequestering agricultural methods
 - seed repository for emergencies/lost crops, permaculture, shared clean energy tools (tractors, trucks, etc)



Section 2: Infrastructure Planning

GOALS

2. Hawai'i will use progressive planning strategies to ensure communities are adequately served by safe and efficient infrastructure networks based on sound design principles that reflect a focus on environmental sustainability, social equity, and preserving community character. Infrastructure investment will be prioritized to implement land use goals. **self sufficiency**
- a) Each community is connected with multimodal options and a modernized transportation network that provides a system for safe, efficient, and comfortable movement of people and goods via well-maintained roads and integrative mass transit options.
 - b) Integrated water resource management is practiced at all levels to ensure that water is treated as a resource to be conserved and reused in sanitary, equitable, and sustainable ways. Water conservation, recharge, and reuse are addressed in policy and design to focus on the use of natural systems, or engineered systems that mimic natural systems, to ensure the highest quality of water is reserved for the most valuable end use. Adequate, efficient, and dependable public and private drinking water and wastewater services are available to each community.
 - c) A resource-based approach to waste management is fostered to ensure progression toward the County's zero-waste goals while ensuring adequate, safe, and sanitary disposal of waste materials.
 - d) **Telecommunications facilities continue to be developed or improved to provide opportunities for universal and reliable access at affordable levels of service.** **safe**
 - e) Energy production is progressively moving towards 100% renewable, and the County leads by example in promoting and developing **clean** energy efficient facilities and **and distributed microgrids** programs.
preference for democratic, publicly owned distribution utilities, community choice aggregation programs (Cooperatives) and other existing utilities that demonstrate a commitment to the public interest.

MANAGING WATER SYSTEM RESOURCES

Drinking Water Conservation

SUSTAINABILITY OBJECTIVE

Reduce water use by 130 gallons per day per person.

POLICY

Definition? Priority set for community self sufficiency, food production, island carrying capacity

106. Ensure the highest quality of water is reserved for the most valuable end use.

[Rationale: Based on Dept. of Water Supply's Water Use and Development Plan.]

107. The County shall require water conservation, recharge, and reuse measures for new large development projects in the North Kohala, South Kohala, and North Kona Districts.

[Rationale: This is adapted from a South Kohala CDP Policy 5.2.] *and other districts as needed*

108. The withdrawal rate from groundwater aquifers shall not exceed 80% of the sustainable yield, until regional studies determine lower sustainability thresholds.

[Rationale: This policy is proactively addressing the issue that 80% of the sustainable yield may need assessment by the Commission on Water Resources Management (DLNR).] *How often revised with predicted climate change recharge rates?*

109. New large developments with private water systems shall be required to follow the domestic use guidelines including appropriate limits on average daily demand.

[Rationale: According to the Department of Water Supply, domestic water use above 400GPD is considered excessive.] *including sustainability objective above*

110. Require developments seeking land use entitlements with private water systems to report monthly ground water use including quantity pumped, chloride (and/or conductivity) concentrations, temperature, and (pump off) water-level data.

[Rationale: The usage information on private public water systems is not complete, because not all wells are reporting to the Commission on Water Resources Management (CWRM)].

111. The County shall require verification of a long-term, reliable supply of water before applicable subdivisions are approved.

[Rationale: Based on the purpose of Maui's Water Availability Code, this will ensure future subdivisions will have a sustainable water source. This would require an assessment of water use over the life of the development.]

112. Work cooperatively with the State DLNR and communities to ensure the protection and availability of an adequate water supply in all aquifers to meet the needs of the population and anticipated growth of Hawai'i County. **and the needs of natural ecosystems**
[Rationale: Based on General Plan 11.2.2 (d and f).] **considering general projections for lower recharge rates due to climate change**
113. Evaluate and amend the fee schedule for water use to take into account high water use **priority/most valuable end use** and aquifer recharge projections. Use the funds generated to pay for conservation measures and infrastructure.
114. Evaluate developing a land use overlay for water conservation areas.
115. Support implementation of leak detection programs throughout the DWS water systems.
116. Improve County water conservation practices to lead by example.
117. Support the Commission on Water Resource Management's effort to improve monthly reporting on ground water use.

ACTION

- 2.1 Develop water conservation and stormwater management guidelines for commercial, industrial and residential properties.
- 2.2 Initiate regional studies that examine aquifer system area sustainable yields and water transfers in greater depth and on a broader scale.
- 2.3 In collaboration with National Oceanic and Atmospheric Administration (NOAA), conduct further research on localized rainfall modeling to accurately assess future precipitation trends.
- 2.4 Amend the County Code to require water use reporting. [Code]
- 2.5 Develop standards for landscape and irrigation design that emphasizes water use efficiency.
- 2.6 Amend plumbing code to require the use of low-flow devices. [Code]
- 2.7 Expand water conservation programs, primarily aimed at demand-side measures in order to reduce the average consumption per user **prioritization of most valuable end use**

AGENCY ACTION

- 2.8 CWRM: Regional studies should be initiated that examine aquifer system area sustainable yields and water transfers in greater depth and on a broader scale.
- 2.9 CWRM: In collaboration with NOAA, conduct further research on localized rainfall modeling to accurately assess future precipitation trends.

MANAGING WATER SYSTEM RESOURCES

Drinking Water Quality

SUSTAINABILITY OBJECTIVE

Achieve 100% of all public and private water systems meeting safe drinking water standards.

POLICY

118. All new water systems (public and private) shall meet the level of standards of DOH, DWS, Fire, and subdivision code.

[Rationale: Based on General Plan 11.2.2 (b and g) and the recognized gap between various departments codes relating to water systems.]

119. Improvements to County water systems to meet the standards of DOH, DWS, Fire, and subdivision code shall be prioritized to serve designated urban areas.

[Rationale: Based on General Plan 11.2.2 (a, e).] and food production needs for island self sufficiency?

120. Encourage all new catchment water systems to include purification systems.

ACTION

- 2.10 Develop a pilot study to explore a monitoring and certification program in areas with high private drinking water uses including catchment water systems and private wells.

- 2.11 Develop and adopt standards for individual water catchment units.

- a) Adopt an annual minimum rainfall requirement and amend Planning Department rules to be consistent
- b) Amend Planning Department Rule 22 to include all variances from Section 23-84 of the Subdivision Code.

AGENCY ACTION

- 2.12 State DOH: develop standards for water catchment and private wells

MANAGING WATER SYSTEM RESOURCES

Drinking Water Prioritization

SUSTAINABILITY OBJECTIVE

Increase public water service to all urban areas.

POLICY

121. Water system improvements, including exploratory wells, shall correlate with the County's desired land use development pattern. *and recommendations of State carbon farming/ GHG sequestration task force or general carbon drawdown*
[Rationale: Incorporates recommendation from the General Plan Infrastructure Assessment Study with existing GP Policy 11.2.2 (a).]
122. The County Water Board shall prioritize infill development and focus source development to serve designated Urban Growth Areas. *and food production needs for island self sufficiency?*
[Rationale: Based on General Plan 11.2.2 (a, e).]
123. Water demand projections shall include all demand, including non-potable use. *and climate change considerations*
[Rationale: Based on recognized gaps in water demand projections.]
124. The Department of Water Supply and the Planning Department shall coordinate *prioritize community resiliency and self sufficiency* priorities prior to the adoption of any new water development or land use plans. *and food production (ie: reservoirs) and ecosystem restoration?*
[Rationale: Based on General Plan 11.2.2 (a, e) and on identified previous collaboration gaps between the Planning Department and the Department of Water Supply.]
125. Prioritize replacement of surface potable water sources with groundwater potable water sources.
[Rationale: Based on Federal Safe Drinking water Act (SDWA) and General Plan 11.2.2 (k)]
126. All County potable water systems should have back-up standby sources.
127. Treat all water as a public resource in community design, and integrate designs for drinking water, storm water, and recreational water needs.
128. Support community financing of private potable water systems for communities that rely on catchment and private wells for drinking water.
129. Manage water, stormwater, and wastewater as the same natural resource and related utility.

ACTION

- 2.13 Investigate alternative financing options for expanding water systems to support infill growth consistent with the County's desired land use development pattern.
- 2.14 Adopt a standard for reviewing water variance applications. that includes climate change considerations
- 2.15 Develop, coordinate, and maintain a water resource program collaboratively managed by a working group of water resource and utility professionals that convenes regularly to address watershed, aquifer, and related resource issues comprehensively. climate
- 2.16 Amend Department of Water Supply rules to no longer issue “out of bounds” service, unless the required system improvements are provided.
- 2.17 Amend the County Water Board guidelines for issuing water commitments to consider:
 - a) Setting aside a certain reserve (e.g., 25%) of present capacity for infill development and to provide sufficient lead time to expand capacity;
 - b) Preferential facilities charges for infill development where existing facilities are underutilized;
 - c) Consistency with zoning and General Plan growth policies. and water availability predictions
- 2.18 Amend Hawai'i County Code to require new developments to connect to existing water systems; develop longer minimum distance thresholds requiring connections and develop incentives to ensure that subdivisions connect to nearby water distances at the desired density in accord with zoning and infrastructure services. [Code]
- 2.19 Amend Planning Department Rule 22 to increase the number of allowable lots with a water catchment variance, in consideration of zoning, the size of the existing lot, and other site-specific characteristics.

AGENCY ACTION

- 2.20 DHHL: install water systems to serve beneficiaries.
- 2.21 DHHL: expand water systems to serve beneficiaries on DHHL lands located within designated Urban Growth Areas

MANAGING WATER SYSTEM RESOURCES

Storm Water Management

SUSTAINABILITY OBJECTIVE

Increase use of Low Impact Development Practices.

POLICY

130. The County shall ensure sites are planned, designed, and developed to:

- a) Mitigate direct impacts of the land development process through the use of green infrastructure or low impact site planning techniques;
- b) Protect areas that provide important water quality benefits and/or are particularly susceptible to erosion and sediment loss; *biodiversity benefits, carbon sinks*
- c) Limit land disturbance activities such as clearing and grading, and cut and fill to reduce erosion and sediment loss; and
- d) Manage post-construction stormwater runoff rates, through the use of green infrastructure or low impact development stormwater management practices.

[Rationale: Based on existing HRS 226-11(2); 226-11(3); 226-11(4); 226-11(7); 226-11(8); 226-13(2); 226-13(3); 226-14(2); 226-108(2)]

131. The County shall ensure that golf course developments develop and implement grading and site preparation plans to: *including soil and nearby water testing and repoting*

- a) Develop nutrient management guidelines appropriate to Hawai'i for qualified superintendents to implement so that nutrients are applied at rates necessary to establish and maintain vegetation without causing leaching into ground and surface waters.
- b) Develop and implement an integrated pest management plan. Follow EPA guidelines for the proper storage and disposal of pesticides. *application*
- c) Develop and implement irrigation management practices to match the water needs of the turf.

[Rationale: Based on General Plan 4.3 (j), HRS 226-11(2); 226-11(3); 226-11(4); 226-11(7); 226-11(8); 226-13(2); 226-13(3); 226-14(2); 226-108(2)]

132. Hawai'i County shall minimize impervious areas on development sites and parking areas and promote the use of permeable surfaces and landscaped areas in project designs including:

- a) porous materials

- b) natural drainage,
- c) filtration pits,
- d) Infiltration trenches, vegetated bioswales, permeable pavers

[Rationale: Based on green infrastructure best practices and recommendations and the recognition that urban runoff can be greatly reduced, and infiltration maximized by installing rain gutters and directing them to permeable surfaces, and drywells or other retention structures to collect and store runoff for reuse.]

- 133. Incorporate green infrastructure or passive alternatives that maximize land preservation over impervious or active infrastructure.

ACTION

- 2.22 Develop incentives for new development/redevelopment to pursue certification for “green” site planning, construction, and post-construction practices.
- 2.23 Adopt Low Impact Development Practices to address small-scale stormwater management.
- 2.24 Adopt code amendments to require the use of recommended best management practices (BMPs), including incentives, in all new large developments as well as large commercial sites. [Code]
- 2.25 Prior to the County reaching Municipal Separate Storm Sewer System (Ms4) requirements, conduct a feasibility study to create a County Stormwater Utility under the Department of Water Supply.
- 2.26 Update the Department of Public Works Storm Drainage Standards (1970) to reflect current data and to incorporate strategies of green infrastructure and low impact development.

MANAGING WATER SYSTEM RESOURCES

Recycled Water Expansion

SUSTAINABILITY OBJECTIVE

Increase the use of non-potable water systems for irrigation.

POLICY

- 134. Require installation of non-potable water systems for large developments.
[Rationale: Based on water conservation best practices.]
- 135. Encourage and incentivize the collection of rainfall for non-potable use.
- 136. Facilitate greywater reuse systems through code amendments and through partnering with DOH for regulatory changes and incentives. [Code]

ACTION

- 2.27 Develop a water resource strategy for efficient agricultural and urban water use and reuse.
- 2.28 Install non-potable systems, such as reclaimed wastewater, brackish groundwater and untreated surface water in the proximity of priority Urban Growth Areas for non-potable water uses.
- 2.29 Conduct supply and demand studies to determine a Level of Service for non-potable water needs.
- 2.30 Amend the concurrency requirements to require installation of non-potable water systems for large developments. [Code]
- 2.31 Increase Water Reuse through code requirements for large developments and retrofitting existing systems.

MANAGING WATER SYSTEM RESOURCES

Wastewater & Environmental Quality Prioritization

SUSTAINABILITY OBJECTIVE

Reduce sewage spill events.

Achieve 100% of all priority area cesspools upgraded to a septic system or connected to a sewer system.

POLICY

- 137. **Hawai'i** County shall not allow municipal or private wastewater systems to negatively impact watershed quality or shoreline resources.

[Rationale: Based on Clean Water Act, Safe Drinking Water Act, and General Plan 4.4(a); 11.1.3(a); and 11.6.3(f)]

138. Ensure municipal wastewater systems serve designated Urban Growth Areas with the capacity to accommodate projected population growth.

[Rationale: Based on identified affordable housing development constraints, urban service gaps, and existing General Plan Policy 11.6.2 (a); the Sewerage Study for All Urban and Urbanizing Area of the County of Hawai'i (1970); and the Water Quality Management Plan for the County of Hawai'i (1980)] .

139. The Department of Environmental Management and the Planning Department shall coordinate priorities prior to the adoption of any new wastewater development or land use plans.

[Rationale: Based on General Plan Policy 11.6.2 (a) and identified previous collaboration gaps between the Planning Department and the Department of Environment Management.]

140. Prioritize developing a multipronged approach to wastewater infrastructure funding, including proactively seeking grant funding for wastewater system expansion, improvements, and new development.

[Rationale: Based on identified funding gaps and General Plan policy 11.6.2 (d).]

141. Enforce existing sewer hookup requirements.

[Rationale: Based on consultation with Department of Environmental Management and identified gaps in sewer hookup percentages in certain serviced areas, and lack of enforcement of existing Hawai'i County Code Section 21-5].

142. Ensure wastewater fees reflect actual costs for service, maintenance, and future improvements.

[Rationale: Based on consultation with Department of Environmental Management. Hawai'i County currently has some of the lowest sewer rates in the country and the department subsequently does not have an adequate budget to address facility or service expansion to meet projected growth.]

143. Ensure that wastewater systems and improvements are designed and functioning to maximize system efficiencies, prevent accidental leaks or spills, and provide sanitary, reliable wastewater treatment that is not negatively impacting natural resources.

[Rationale: Based on Clean Water Act, Safe Drinking Water Act, and General Plan 4.4(a); 11.1.3(a); and 11.6.3(f)]

144. Partner with the Department of Health to better monitor private wastewater resources and advance progressive wastewater technology and regulations.

145. Integrate stormwater and wastewater management into Department of Water Supply to strive for water resource management that is comprehensive and as efficient as possible.

ACTION

- 2.32 Review, assess, and amend codes relating to sewer connection requirements (Hawai'i County Code Section 21-5, 21-6, 23-85 and 25-2-46 Concurrency) to ensure wastewater issues and requirements are addressed in a sustainable and socially equitable way. [Code]
- 2.33 Develop a wastewater master plan with a clear prioritization method for wastewater system expansions and improvements based on criteria involving land use, projected growth, social equity, and environmental factors.
- 2.34 Perform a study to assess individual wastewater systems (IWS) in unsewered urban coastal communities (within the SMA) for pollution impacts from private wastewater systems and develop plans to improve, connect, or develop new wastewater systems for impacted communities.
- 2.35 Perform a study to assess individual wastewater systems (IWS) in unsewered urban growth areas to assess rate of failures/negative impacts, determine rates of large capacity cesspool still in use, and to develop plans to improve, connect, or develop new wastewater systems for unsewered urban communities.
- 2.36 Develop plans and funding mechanisms to improve capacity/expand existing municipal wastewater systems to accommodate future growth;
- 2.37 Proactively seek opportunities for public-private partnerships for wastewater development;
- 2.38 Facilitate the use of infrastructure improvement districts and other types of localized funding mechanisms to fund improvements.
- 2.39 In coordination with Department of Health Wastewater Branch, amend Hawai'i County Code (23-85(a)) to extend the minimum distance required for subdivisions to connect to existing sewer systems. The recommended requirement is: "sewer lines shall be installed where the subdivision is within one thousand three hundred twenty lineal feet (1/4 mile) of the existing sewer system." [Code]
- 2.40 Review and amend Hawai'i County Code Section 21 39-45 (develops a sewer connection loan program) for legal implications to facilitate implementation. [Code]

- 2.41 Develop wastewater cost valuation in service fees (similar to water model fee structure).
- 2.42 Develop a criteria-based infrastructure prioritization tool to develop new or expand existing municipal wastewater systems. Base these priority areas on designated urban growth boundaries, urban zoning and density, population trends and anticipated growth, health/safety, and environmental factors.
- 2.43 Develop innovative wastewater systems at a cost-effective scale for small communities.
- 2.44 Amend Hawai'i County Code (including developing criteria and exceptions) to require connecting to accessible private sanitary sewer treatment facilities (PUC regulated and with existing capacity) to Section 21-5 (a) instead of only requiring connection to public sewer. [Code]
- 2.45 Amend Hawai'i County Code Section 21-26-1(a) requiring "all sewer extensions shall be approved by resolution of the County council" to read, "all sewer extensions outside of Urban Growth Areas shall be approved by resolution of the County council." [Code]
[Rationale: reducing sewer development hurdles is imperative to developing adequate infrastructure within urban area. This ensures that if for some reason, sewer extensions are proposed outside of the UGA, Council will have discretionary oversight.]
- 2.46 In coordination with Department of Health Wastewater Branch, reevaluate the development threshold for requiring new wastewater treatment plants and other requirements set forth in section HAR 11-62-31.1(a) (1) (B) and amend County sewer requirements accordingly. [Code]

INCREASING RESOURCE RECOVERY & REDUCING WASTE

SUSTAINABILITY OBJECTIVE

Waste reduction, resource reuse and recycling are maximized to achieve 50% diversion of recoverable materials from landfills. "50% minimum up to 100% by 2030" not sure is that too ambitious? State GHG sequestration task force recommendations?

POLICY

- 146. The County shall proactively pursue funding that will ensure continued progression toward zero-waste goals. which go hand in hand with GHG emissions reductions

[Rationale: Based on recommendations from the Zero Waste Implementation Plan (2009), the County of Hawai'i Integrated Resources and Solid Waste Management Plan Update: The Path to Zero Waste (2009).]

147. Optimize recoverable material diversion from landfill disposal by increasing percentage rates for diversion through waste reduction, recycling, and reuse.
148. Develop and promote take-back programs for appliances and other difficult to dispose of materials.
149. Composting at farms should be encouraged and facilitated.
150. Encourage salvage and reuse of building materials and elements when demolition is necessary or appropriate.
151. Support expansions to the organic material (green waste) recycling program to include drop-off and pick-up locations at all rural transfer stations.
152. The County should consider EPA's Comprehensive Procurement Guideline program as a model for purchasing products that use materials recovered through recycling.
153. Continue to evaluate the feasibility of waste to energy technology. with appropriate GHG and pollution considerations and public input
154. Promote opportunities for a circular economy.

ACTION

- 2.47 Develop and incentivize economic opportunities for diverted materials.
 - a) Continue to develop, manage, and partner with community groups in managing recycling and reuse centers at County facilities
 - b) Contract with, and or, make space available for cottage recycling operations in close proximity to transfer stations and County landfills.
- 2.48 Evaluate and amend Hawai'i County Code as appropriate with the following strategies to maximize landfill diversion and deal with materials:
 - a) Source Separation Ordinance: Revise Section 20-43 to reflect resource recover objectives and material separation rules, including evaluating the size restrictions reflected in Section 20-43 (b) (1), and the prohibited materials from Section 20-43 (b) (2).
 - b) Codify prohibition of organic material (green waste) disposal at the landfill.
 - c) Construction & Demolition (C & D) Recycling Ordinance
 - d) Consider Take-back Ordinances (for items that are difficult to recycle or compost).

Single use plastics ban please, mahalo!

- e) Develop an E-Scrap ordinance: all electronic discards should be designated as reuse items which essentially bans anything with a plug from being landfilled.
 - f) Codify County facility ordinance to require recycling at all County offices, facilities, and base yards.
[Rationale: Based on HRS 342G-15(a)4; and COH Resolution 30-07 "Requesting that the Mayor issue a Directive to Implement Recycling Programs at all County Agencies and Departments"]
 - g) Transition to eliminate the sale or use of polystyrene foam (Styrofoam) and single-use plastic food containers and other single-use plastics. [Code]
- 2.49 Develop programs to require advance disposal fees for specific products such as e-waste and new vehicles purchased in or shipped to Hawai'i. The fees from this should be used to fund resource management and disposal costs. (An example of a currently successful advance disposal fee (ADF) is the State Beverage Container Deposit Program).
- 2.50 Conduct pilot studies to facilitate waste recovery and increase diversion rates. The following types of pilot programs are recommended:
- a) Curbside waste, recycling, and resource pick-up in priority urban areas;
 - b) Partner/coordinate to facilitate the private use of large recycling roll-off bins in rural areas.
- 2.51 Reevaluate and initiate code changes to the fee structure for solid waste for residential and commercial uses. [Code]
- 2.52 Facilitate UH and/or Forest Service to complete necessary studies on local materials for use in construction. **Yes please!**

AGENCY ACTION

- 2.53 Amend Hawai'i Revised Statutes to include green waste, composting, and fertilizer yards (utilizing only manure and soil) for commercial use as permitted uses on agriculturally zoned land. **why just manure and soil, why not food waste/compost/paper scraps etc?**

COMMUNITY ACTION

- 2.54 Host composting and recycling workshops in collaboration with agencies /organizations such as Department of Environmental Management, Recycle

Hawai'i, and the University of Hawai'i College of Tropical Agriculture & Human Resources (CTAHR) Cooperative Extension Service.

- 2.55 Partner with the County to manage recycling/reuse centers at County Facilities.

SUSTAINABILITY OBJECTIVE

Eliminate illegal dumping sites.

POLICY

155. Ensure that redesign plans for landfill and transfer stations provide adequate space for Resource Recovery (RR) Stations and ensure that new transfer stations are sited and developed with capacity for Resource Recovery.
- a) Resource Recovery Stations provide organic material (green waste) and recycling options.
 - b) All drop-off and transfer stations must be designed/redesigned with a flow pattern and educational signage.
- [Rationale: Based on recommendations from the Zero Waste Implementation Plan (2009), the County of Hawai'i Integrated Resources and Solid Waste Management Plan Update: The Path to Zero Waste (2009), and General Plan policy 10.5.2 (c)]
156. Ensure waste and resource recovery facilities and equipment do not harbor, spread, or introduce harmful or invasive species.
- [Rationale: Based on community concerns expressed at public meetings and existing General Plan policy 4.3 (i).]
157. Site new solid waste/resource recovery facilities in appropriate areas that serve the needs of population centers but that do not negatively impact the environment or surrounding neighborhood.
158. Increase education programs for waste recovery options.
159. Reduce illegal dumping and littering through education programs and code enforcement.

ACTION

- 2.56 Develop and implement an environmental control program that includes the following:
- a) Regularly monitor and test for polluted runoff and leachate at waste recovery facilities, and develop effective mitigation protocols for

eliminating pollution at these sites, especially those located near sensitive receptors such as streams;

- b) Regularly monitor and implement protocols to mitigate for vector control and invasive species management to ensure that all solid waste facilities, transport vehicles, and equipment are not harboring or spreading harmful species that pose risks to human or environmental health.
- 2.57 Revise enforcement protocols and revise code to empower police officers to fine litterers and illegal dumpsites and junkyard owners.
- 2.58 Revise Hawai'i County Code Section 20-45 (b) and Zoning Code Section 25-2-31 requiring conviction of violation by a jury trial. [Code]
- 2.59 Develop a Litter Abatement Program aimed at education and community group participation in reporting and preventing littering and illegal dumping.
- 2.60 Develop a County clean-up program for special waste areas, i.e. junkyards, to ensure proactive removal of materials that pose environmental and public health hazards.

COMMUNITY ACTION

- 2.61 Educate neighborhood watch groups and other community groups about how to actively identify and report littering and illegal dump sites to the Police Department and to the Department of Environmental Management. Raise awareness of the issue through the use of outreach and social media tools to report sites and offenders. (See more on how to report littering and dumps sites here: <http://www.Hawaiiizerowaste.org/info/illegal-dumping>)
- 2.62 Organize community clean-up events for illegal dump sites and other polluted areas

IMPROVING TRANSPORTATION SYSTEMS

Transportation Planning & Financing

SUSTAINABILITY OBJECTIVE

Why not higher? Localization of economies in planning

Reduce individual vehicle miles traveled (VMT) by 3% by facilitating walking, bicycling, and other energy-efficient and safe alternative modes of transportation. should this be more for climate goals? not sure

POLICY

160. The County shall use performance targets, measures, and reporting to allow transparency for decision makers and the public as the County transitions to the Performance-Based Planning and Programming approach mandated by the US DOT and HDOT.
[Rationale: Based on identified gaps between County of Hawai'i practices and the Department of Transportation recommendations. See also MAP-21.]
161. There shall be coordinated planning of Federal, State, and County street systems to meet program goals of the other elements such as historic, recreational, environmental quality, and land use.
[Rationale: Based on General Plan 13.2.3 (g).]
162. Plan for present traffic and future demands, including the programmed development of mass transit programs for high growth areas. **and climate change considerations such as alternative routes, etc.**
[Rationale: Based on identified gaps in County transportation planning, particularly in addressing mass transit needs in high growth areas and on existing General Plan policy 13.1.3 (b).]
163. At a minimum, the County shall plan, site, and develop roads, bridges, and highways to:
- a) Protect areas that provide important water quality benefits or are particularly susceptible to erosion or sediment loss;
 - b) Limit land disturbance such as clearing, grading and cut and fill to reduce erosion and sediment loss; and
 - c) Limit disturbance of natural drainage features and vegetation, including mitigating impacts of stream crossings.
- [Rationale: Based on HRS 226-11(2); 226-11(3); 226-11(4); 226-11(7); 226-11(8); 226-13(2); 226-13(3); 226-14(2); 226-108(2); 226-17(10).]
164. Prioritize transportation investment to expand the multimodal transportation system. **clean renewable energy**
[Rationale: Based on Maui 2012.]
165. Evaluate all alternatives to preserve quality of life before widening roads.
[Rationale: Based on Maui 2030.]
166. Require new developments to contribute their pro rata share of local and regional infrastructure costs.
[Rationale: Based on Maui 2030.]
167. In planning, designing and constructing highway and road improvements, transportation agencies should balance conservation of the area's natural, historic and scenic qualities with transportation objectives. In some cases, it will be preferable to accept a lesser

design speed or capacity in order to maintain the rural character and appearance of the Island.

168. Incorporate pollution prevention procedures into the operation and maintenance of roads, highways, and bridges to reduce pollutant loadings to surface waters.
169. Support designing all transportation facilities, including airport, harbor, mass-transit stations, etc., to reflect local and/or Hawaiian architecture.
170. Promote transportation options to encourage the use of multimodal travel.
171. Develop an Asset Management Program aimed at utilizing maintenance plans for pavement, bridges and other road infrastructure to prolong the life of our transportation system as well as reduce its whole life cost.
172. Utilize transportation-demand management as an integral part of transportation planning.
173. Encourage civic participation in an Adopt-a-Street program where moderate landscaping and street cleaning can be done by community groups.
174. Use the road improvement program in conjunction with the Asset Management program in developing priorities for the six-year Capital Improvement Program, including phased implementation.
175. Work with various non-profit agencies to coordinate transportation and multimodal opportunities.
176. **Identify and evaluate** ^{and prioritize solutions to} transportation strategies to address energy and climate issues.
177. Investigate various methods of funding transportation improvements, including private sector participation, to meet the growing transportation ^{and GHG reduction} needs of the island. **(Including but not limited to impact fees, taxes, fare adjustments, dedicated sources of funding, improvement districts, and assessments).** ^{yes thank you :)}
178. Support and provide technical assistance to assist in the development of 'road improvement districts' in order to finance road improvements.

ACTION

- 2.63 As part of the Asset Management Program, create inventory databases for transportation facilities, with information including but not limited to pavement section thickness and type, street lights, street signs, signals, bridges and bridge types, drainage facilities and landscaping to use as a basis of development and implementation of Maintenance Plans, such as a Pavement Preservation (Paving

Cycle) Plan, Bridge Rehab and Replacement plan, Culvert Cleaning Plan and Landscape Maintenance and Grass Cutting Plan.

- 2.64 Develop a roads-in-limbo improvement and adoption process according to population, usage, alternative route/connectivity needs, and safety assessments.
- 2.65 Amend the Hawai'i County Code to increase bicycle and pedestrian-friendly development. [Code]
- 2.66 Provide more emergency call boxes along State highways.
- 2.67 Work with the owners of private roads and local community groups to help identify and develop road management agreements that mitigate road closures and access disagreements for public access and/or residential use. *yes please, more public access, especially old cane roads Hamakua*
- 2.68 Collaborate with the State to establish a clear agreement of the ownership and maintenance of the old homestead roads.
- 2.69 Develop a financing plan for improvements and identify tools for maintenance programs.
- 2.70 Investigate appropriate parking fees in urban and commercial locations.

AGENCY ACTION

- 2.71 Partner with Department of Transportation to identify areas vulnerable to rockfall and shoreline erosion in the highway right-of-way and prioritize funding for mitigation. *including cost/benefit analysis over time/climate predictions and moving of roads proactively?*
- 2.72 Request that the State allocate in the State Transportation Improvement Plan (STIP) a larger share of Federal "flex funds" (i.e., the Section 402 program funds) for projects related to highway capacity improvements, transit-related and alternative travel mode improvements, including pedestrian and bicycle safety.

IMPROVING TRANSPORTATION SYSTEMS

Transportation Safety

SUSTAINABILITY OBJECTIVE

Strive to achieve zero traffic deaths and serious injuries on County of Hawai'i roadways.

POLICY

179. Prioritize interdepartmental coordination and accountability of traffic safety through education, enforcement, engineering, encouragement, and evaluation. Focus on systemic transportation changes rather than on individual behavior changes in improving road and pedestrian safety.
[Rationale: Based on recommendations from Vision Zero.]
180. Commit to an equitable approach and outcomes, including prioritizing engagement and investments in traditionally under-served communities and adopting equitable traffic enforcement practices.
[Rationale: Based on recommendations from Vision Zero.]
181. Develop a Freight Masterplan to focus on safe reliable cross island truck movement to support the County's economic development.
182. Improve public health and safety by reducing speeding-related fatalities and injury.

ACTION

- 2.73 Partner with Federal, State, and private entities to develop demographic, geographic and modal -specific safety outreach materials including Safe Routes to School, Be Super Safe and Pedestrian Safety for Seniors.
- 2.74 Develop a safety improvement program that identifies high crash locations, hazardous substandard sections of roadway, and drainage problems.
- 2.75 Create a 20 MPH Zone Program, reducing speed limits on residential and local streets with high collision (crash) history to 20 MPH. Most 20 MPH Zones will be installed near schools and parks.
- 2.76 Review arterial speed limits and Reduce to 30 mph or lower paired with traffic calming devices.
- 2.77 Map and regularly update the County's fatal and serious injury crash locations, to use and guide priority action and funding.
- 2.78 Develop educational programs to increase safety for motorists, pedestrians and bicyclists.

IMPROVING TRANSPORTATION SYSTEMS

Roadway Design

SUSTAINABILITY OBJECTIVE

Achieve a roadway system that employs all modes of transportation for the safe, efficient and comfortable movement of people and goods across our island.

POLICY

183. Roadway designs and improvements shall accommodate pedestrian-friendly, multimodal design, and landscaping.
[Rationale: Based on existing General Plan 13.2.3 (l), Kona Action TRAN-3.3b, Hāmākua CDP Policy 70.]
184. Prioritize roadway drainage improvements in flood-prone areas and incorporate Low Impact Development/Green Infrastructure strategies, as appropriate.
[Rationale: Based on identified drainage issues during flooding events and existing General Plan 13.2.5.9.2(b), and Kaʻū CDP Policy 95.]
185. Ensure that roadway-design criteria and standards are compatible with surrounding neighborhoods and the character of rural areas.
[Rationale: Based on Kaʻū CDP Policy 74, 75, and 77, Hāmākua CDP Policy 72, and Maui 2030]
186. Provisions for on-street parking shall be evaluated during the design of road systems.
[Rationale: Based on identified parking issues in urban areas, including Hilo Downtown Multimodal Plan recommendations and General Plan 13.2.3 (h).]
187. Highways shall not be wider than four lanes and should be limited to the most populated areas typically connecting residential areas with employment centers.
[Rationale: Based on the Kauai General Plan.]
188. Develop rural road standards to ensure appropriate levels of public safety.
[Rationale: Based on identified issues related to road standards in rural areas, General Plan 13.2.3 (m), Kaʻū CDP Policy 74, 75, and 77, Hāmākua CDP Policy 72.]
189. Incorporate, where appropriate, bicycle routes, lanes, and paths within road rights-of-way in conformance with The Bikeway Plan for the County of Hawaiʻi.
[Rationale: Based on identified gaps in bicycle accesses, Bikeway Plan for CoH, General Plan 13.4.3 (c), Hāmākua CDP Policy 66, and Kona CDP TRAN-1.1.]

190. Use native landscaping ^{prioritizing trees for shade, GHG sequestration, and edibles} for highway improvements and connectivity points, emphasizing the retention of native vegetation.
[Rationale: Based on Hāmākua CDP Policy 72, Kaʻū CDP Policy 77, North Kohala CDP Strategy 4.8, and Puna CDP 4.4.1.c.]
191. Landscaping shall be provided along streets where regular rainfall or reclaimed water are available for irrigation, and arid species or xeriscape landscaping shall be the preference where reclaimed water and rainfall are not available.
[Rationale: Based on Kona CDP TRAN-3.2, 3.3; Kauai GP, and Environmental Protection Agency Greenspace recommendations.]
192. Street Standards
- a) Primary Arterial: Includes major highways and parkways that move vehicles in large volumes and at higher speeds from one geographic area to another; highest traffic volume corridor. Designed as a limited access roadway. Primary arterials shall have a minimum right-of-way of 120 feet.
[Rationale: Gp13.2.4.a]
 - b) Secondary Arterial: A street of considerable continuity that is primarily a traffic artery between or through large areas; interconnect with and augment primary system. Designed as a limited access roadway. Secondary arterials shall have a minimum right-of-way of 80 feet.
[Rationale: Gp13.2.4.b]
 - c) Major Collector: Any street supplementary to the arterial street system that is a means of transit between this system and smaller areas; used to some extent for through traffic and to access abutting properties; collect and distribute traffic between neighborhood and arterial system. Major collectors shall have a minimum right-of-way of 60 feet.
[Rationale: Gp13.2.4.c]
 - d) Local Streets-commercial/industrial: Local streets within commercial and industrial areas shall have a minimum right-of-way of 60 feet.
[Rationale: Gp13.2.4.d]
 - e) Minor Collector and Local Streets: Minor collectors are used at times as through streets and for access to abutting properties. The principal purpose of a local street is to provide access to property abutting the public right-of-way.
[Rationale: Gp13.2.4.e]
193. All subdivisions, including condominium property regimes (CPRs) and planned unit developments (PUDs), shall conform to connectivity standards in HCC 23 of the Hawaiʻi County Code to disperse traffic and integrate new development with the existing fabric

of the community.

[Rationale: Based on Ka'ū CDP Policy 94, Hāmākua CDP Policy 65, and Kona CDP Policy TRAN-2.1.]

194. Prioritize intersection improvements with roundabout designs to incorporate safer access through intersections, steady flow of traffic, lower traffic speeds, and safer pedestrian crossings.

[Rationale: Based on current transportation design best practices, Smart Growth America recommendations, and Puna CDP 4.4.1.a.]

195. County of Hawai'i roadway design standards should be updated and revised to accommodate pedestrian-friendly, multimodal design (including non-motorized facilities), future technologies, traffic calming design, and include low-impact development/green infrastructure strategies.
196. Incorporate traffic-calming features into highway design in preference to signage and signalization, where possible.
197. Incorporate Low Impact Development (LID) and green infrastructure strategies to address drainage in roadway design.

ACTION

- 2.79 Reevaluate on-site and off-site parking requirements in commercial town centers and amend code appropriately. [Code]
- 2.80 Amend Hawai'i County Code Chapter 23 Subdivision Code to incorporate connectivity standards, updated roadway design standards, and various related policies from the Community Development Plans and town/village plans. [Code]
- 2.81 Develop guidelines for a right-of-way landscaping program, including maintenance. Landscaping along public rights-of-way should be of native species appropriate to the location and natural environment. **prioritizing trees and edibles**
- 2.82 Collaborate with Department of Transportation to make intersection improvements along highways to allow safer access, giving preference to the use of roundabouts; and to incorporate traffic-calming features into highway design in preference to signage and signalization, where possible.
- 2.83 Encourage Department of Transportation to incorporate passing zones, turn lanes, and merge lanes where feasible to improve safety.
- 2.84 Collaborate with Department of Transportation to develop and use right-of-way landscape guidelines for highway improvements on State owned routes.

IMPROVING TRANSPORTATION SYSTEMS

Multimodal Transportation & Connectivity

SUSTAINABILITY OBJECTIVE

Improve roadway connectivity to increase efficiency, walkability, and alternative routes for emergency access.

POLICY

198. The County shall establish a corridor planning/management program that is data driven and uses performance-based targets and outcomes to help prioritize various multimodal projects. Design and selection of these projects shall use a context sensitive process utilizing the various Community Development Plans as guidance to increase access to opportunity while promoting health and wellness through active transportation options. [Rationale: Based on Hele Mai Maui 2040 -Maui Metropolitan Planning Organization.]
199. The Bikeway Plan for the County of Hawai'i (1979) shall be updated to include the development of a safe and usable bikeway system throughout the island; or incorporate the bikeway into an island wide comprehensive transportation plan. [Rationale: The current bike plan is from 1979. See also Downtown Hilo Multimodal Master Plan 2018, General Plan 13.2.3 (p) and 13.4.3 (c).]
200. Develop alternative means of transportation to provide alternative mobility for minors, non-licensed adults, low-income, elderly, and people with disabilities.
201. Create a multimodal circulation network plan for each urban community to best direct future improvements and needs. This network plan could be created in coordination with a CDP process.
202. Develop intermodal connections to facilitate the transfer between modes of travel, such as Automobile/Transit and Bike/Transit Transfer. Transit stations or transit hubs and nearby park and ride facilities (including bicycle storage) must be built to ameliorate the traffic congestion in key urban centers.
203. Improve the integration of transportation and land use planning in order to optimize the use, efficiency, and accessibility of existing and proposed transit systems.
204. Designate new connectivity points for local traffic roads and create redundant routes for existing highways, utilizing existing routes where possible, that can also serve as emergency and evacuation routes.

205. Use traffic demand management to aide in reducing traffic congestion.

ACTION

- 2.85 Develop a comprehensive, performance-based, island-wide multimodal transportation circulation plan and program that identifies the location and operation of automobiles, proposed arterials and collectors, mass transit facilities, bicycle and pedestrian systems, in coordination with appropriate Federal, State, and County agencies. The plan should show intended interconnections, plan and preserve transportation corridors, budget public improvements, etc.
- 2.86 Establish and coordinate the setting of multimodal transportation performance targets and measures with the designated responsible parties from Planning, Transit, and Department of Public Works (Engineering & Traffic Divisions) to ensure that the data measured is consistent, significant, measurable, achievable, reasonable and timely.
- 2.87 Establish bicycle, pedestrian, and equestrian travel ways to link up communities while also establishing alternative travel ways within individual communities.
- 2.88 Identify government roads (including roads-in-limbo, 'paper roads' and train infrastructure remnants) with public access value for trails. If these are being obstructed by private parties or other agencies, collaborate to remove the obstructions.

mass transit clean energy recharge stations?

AGENCY ACTION

- 2.89 Partner with Federal, State, and private entities to identify and establish alternative routes and connections.
- 2.90 Encourage improvements to pedestrian access to and around schools and between residential areas and school and library facilities.
- 2.91 Encourage businesses to promote alternative transportation options for resident and visitor use.
- 2.92 Implement Bike Plan Hawai'i.
- 2.93 Implement Statewide Pedestrian Master Plan.

IMPROVING TRANSPORTATION SYSTEMS

Bridges

SUSTAINABILITY OBJECTIVE

Develop an island wide bridge maintenance program that clearly sets safety and functional priorities for bridge maintenance, improvements, and replacements.

POLICY

206. Maintain the unique features of historic bridges, while balancing safety needs and preserving historic and scenic character.

[Rationale: Based on Hāmākua CDP Policy 67, and Kauai General Plan.]

207. Prioritize the replacement of deficient and inadequate bridges and maintain pedestrian/bicycle access across bridges.

[Rationale: Based on identified County bridge deficiencies listed in the Federal registry, and Hāmākua CDP Policy 67.]

208. Design new bridges and bridge improvements to accommodate and not negatively impede identified scenic resources.

ACTION

2.94 Create a both bridge repair/replacement and historic preservation priority list to balance safety with the preservation of historic sites and scenic character.

AGENCY ACTION

2.95 Encourage safe pedestrian/bicycle access on new or rehabilitated highway bridges.

IMPROVING TRANSPORTATION SYSTEMS

Mass Transit

SUSTAINABILITY OBJECTIVE

Achieve a reliable mass transit system that serves the transportation, employment and social needs of our County to attract a 50% increase in ridership.

is that enough for climate goals?

POLICY

209. Prioritize expansions to the paratransit and shared ride taxi programs for the growing elderly and disabled populations to ensure equitable access to services is available for all.
[Rationale: Based on identified needs and projected future needs for aging populations. Also see Puna CDP 4.2.2.b, Expanding Transportation Opportunities in Hawai'i Island (2014 Kohala Center); Mass Transit Authority 2018, General Plan 13.4.3 (d).]
210. Bus maintenance facilities shall be developed at or near transit hubs.
[Rationale: Based on Mass Transit Agency 2018, Kona Action TRAN-1.4c, and General Plan 13.1.3 (e).]
211. Transit infrastructure (e.g., bus stops, bus pullouts, waiting benches and shelters, signs) shall be adequate and upgraded along existing and future transit routes.
[Rationale: Based on policies from Hāmākua CDP Policy 75, 76, Kauai GP, Mass Transit Agency 2018, and M2012.]
212. Identify, preserve, and/or acquire corridors for future transit use, including but not limited to multimodal corridors and require new development to provide rights-of-way (ROWS) to accommodate transit services.
213. Create transportation hubs and bus stops with amenities that provide riders comfort and safety and that help support community and village gathering places.
214. Facilitate the transfer between modes of travel, such as bike/transit transfer, and install racks on all buses to carry bicycles and surfboards, and develop bicycle lockers at transit hubs. **mass transit bike share program at all hubs**
215. Maximize regular and paratransit service to the following:
a) Town centers, commercial districts, and employment centers.
b) Airports and cruise ship terminals.
c) University and adult education centers
216. Coordinate mass transit schedules and routes so as to accommodate school schedules such as after school activities and sports.
217. Public transportation is improved and expanded in communities with the highest socioeconomic needs, according to the Hawai'i Health Matters
218. The County's public transit system accommodates redeployment for emergency evacuations.
219. **Require replacement**
Develop a program to replace all fossil-fuel vehicles in the mass transit fleet with
clean renewable energy alternatives. **No more fossil fuel purchase, phase in EV etc**

ACTION

- 2.96 Fund and implement the Transit and Multimodal Transportation Master Plan (2018) and/or most recent County transit master plan.
- 2.97 Launch a public education campaign promoting transit services, tailoring them to target populations such as youth, commuters, and the elderly.
- 2.98 Expand the staff of the Mass Transit Agency to provide greater support for public relations, route planning and coordination, technical operations, and fleet management.
- 2.99 Investigate other incentives to increase ridership, such as convenient bus ticketing systems, reduced monthly rates for residents and special needs populations, adding airport and post office service, tourist passes, and purchase tickets online or mobile applications.
- 2.100 ^{clean energy based transport} Provide alternative services, such as park-and-ride service, express commuter routes, shuttle vans, circulation routes, flex service, zone paratransit service, and hub and spoke service.
- 2.101 Identify locations, design, and services to be provided at the major transit hubs and stations.
- 2.102 Amend the County subdivision and development regulations to require, where appropriate, transit-supportive roadway infrastructure. [Code]
- 2.103 Create and fund a purchasing schedule to replace and expand the County's bus fleet, including alternative energy options for all vehicles in the fleet.
^{Only clean alternative energy, not option}
- 2.104 Upgrade equipment on all buses, such as bicycle racks and technology for transit mobile application.
- 2.105 Develop a bus stop program and schedule to implement upgrade of bus stops each year, to include benches, rider information, and shelters as needed.
- 2.106 Identify alternative funding sources and create a stable level of funding for operating and capital programs.
- 2.107 Upgrade and expand maintenance facilities as needed to accommodate upgraded and expanded fleet. ^{EV/ alternative energy fleet}
- 2.108 Implement technology to provide real time mass transit information.

AGENCY ACTION

- 2.109 Increase inter-agency coordination in planning for future transit needs between MTA, the Department of Planning, State Department of Transportation, Department of Public Works, Future Island MPO, and other applicable agencies.
- 2.110 Cultivate public-private partnerships to reduce operational expenses and develop programs, such as employer and school sponsored bus passes.
- 2.111 Promote staggered work hours and telecommuting with major employers and institutions to reduce peak period traffic, starting with state and County agencies and including UHH.
- 2.112 Implement Rideshare Program for County employees and promote ride-sharing, van-pools, and car-pooling.

IMPROVING TRANSPORTATION SYSTEMS

Airports & Harbors

SUSTAINABILITY OBJECTIVE

Improve airports, harbors and navigation aids to address recreational and tourism opportunities that serve passengers, freight movement and general transport.

POLICY

- 220. Future land uses in the vicinity of airports and harbors should have an adequate open space buffer and/or be compatible with the anticipated noise exposure and industrial nature in the vicinity.
- 221. Explore all options to protect the traditional, subsistence, and recreational uses of small boat harbors and mitigate harbor-upgrade impacts to uses where feasible.
- 222. Support the State's objectives to acquire rights within the runway clear-zones, limit heights within approach zones, and restrict noise-sensitive uses within designated noise contours determined by the State.
- 223. Encourage pedestrian-oriented gathering places around harbors and small boat harbors.
- 224. Explore and encourage appropriate reuse for former airport facilities.

225. Encourage economically thriving and environmentally sensitive small boat harbors accommodating resident and business activity, including fishing, recreation, and tour boats.

ACTION

- 2.113 Partner with the State to upgrade and maintain smaller recreational boat launches island wide.
- 2.114 Create a strategic improvement plan for County owned and/or managed boat harbors and develop an island wide needs assessment to better serve regional gaps in ocean accesses.

AGENCY ACTION

- 2.115 Implement State plans for transportation terminals and related facilities in conjunction with the overall transportation system.
- 2.116 The State Department of Health should enforce and strengthen pollution regulations and programs at harbors and ports, including reduced disposal of waste and prevention of spills.
- 2.117 The State should provide efficient, adequate, and affordable parking and transit connections within and around airports and cruise ship harbors.
- 2.118 Encourage the modernization and maximized use/capacity of airports and harbors, including resistance to damage from natural hazards and disasters and separation of cargo and passenger uses.
- 2.119 The State should support and provide adequate facilities for secondary airports and small boat harbors.
- 2.120 The State should provide boat owners with adequate pier slips, utilities, repair facilities, waste-disposal capabilities, and yacht berthing/launch/recovery services.

EXPANDING TELECOMMUNICATION ACCESS

SUSTAINABILITY OBJECTIVE

Increase broadband options to provide affordable access to service all communities.

POLICY

5G?

226. Hawai'i County shall continuously improve County government's use of broadband communications and digital technology to educate and provide public services with a focus on digital access to County geographic information systems, health, permitting services, public safety, emergency communications, and to ensure that all County policies, plans, ordinances, departmental rules, and other jurisdictional information is available online.
[Rationale: Based on identified gaps in County online communication and recommendations in USDA Broadband initiatives and the Federal Communications Commission.]
227. Prioritize broadband access and seek to progressively improve speeds to keep pace with technological advances.
[Rationale: Based on identified gaps in network services and recommendations in USDA Rural Broadband initiatives and the Federal Communications Commission. See also Hāmākua CDP Kōkua Action 64, and Puna CDP Goal 3.4.1 (b).]
228. Hawai'i County shall advocate for and seek grant funding to support service diversity, redundant network capacity, and to provide improved communications to outlying rural areas and other underserved or unserved communities.
[Rationale: Based on identified gaps in network services in rural areas and recommendations in USDA Rural Broadband initiatives and the Federal Communications Commission.]
229. Telecommuting and home-based businesses that rely on the internet shall be considered permitted accessory uses to residential uses when operated in compliance with cottage industry performance standards. [Land Use][Econ]
[Rationale: Based on identified needs and economic opportunities, particularly in rural areas. See also Hāmākua CDP Community Objective 9, Ka'ū CDP Community Objective 11.]
230. Hawai'i County shall coordinate and collaborate with State of Hawai'i Cyber Security Team of the Information & Communications Services Division to maintain and improve cyber security and informational security of telecommunication facilities.
[Rationale: Based on recognized increases in cyber security threats within the County and County of Hawai'i Information Technology Department recommendations.]
231. Treat broadband access as a basic utility that is affordable, neutral, and available to all communities

232. Encourage broadband infrastructure development for new multi-residential and commercial developments within the urban growth area.
233. Work with stakeholders to remove regulatory barriers and seek funding to completing the island's fiber optic loop in an environmentally and economically appropriate manner.
234. Continue active collaboration with State and Federal agencies under the State Broadband Initiative (SBI) to further telecommunication planning and funding initiatives, including:
 - a) The American Recovery and Reinvestment Act of 2009 and other federal grant programs;
 - b) State Broadband Data and Development Program (SBDD), administered by the National Telecommunications Information Administration (NTIA),
 - c) Hawai'i Department of Commerce and Consumer Affairs (DCCA), and the National Telecommunications Information Administration (NTIA)
235. Continue and seek to improve County's partnership role in the Hawai'i Healthcare Transformation Initiative (HHIT) and implementation of the Healthcare Transformation Plan.
236. Pursue partnerships and funding for broadband initiatives and deployments by USDA/EDA.
 - a) Action Platform: Cool & Connected is a planning assistance program (pilot stage?) that helps community members develop strategies and an action plan for using broadband to create walkable, connected, economically vibrant main streets and small-town neighborhoods that improve human health and the environment. <https://www.epa.gov/smartgrowth/cool-connected>
 - b) Action Platform: USDA's Rural Utilities Service (RUS) administers programs that provide much-needed infrastructure or infrastructure improvements to rural communities. <https://www.rd.usda.gov/about-rd/agencies/rural-utilities-service>
237. Work with the telecommunications industry to increase the availability of fiber, broadband, wireless, and emergency telephone service throughout the island.
238. When opportunities develop to negotiate telecommunication franchise agreements that involve the use of County rights-of-way or other assets, the County will seek to ensure providers include socially equitable service options to nearby communities.
239. Provide technical planning assistance to communities and community based organizations interested in offering communications services for public, education and government purposes.

- 240. Develop and support a program of free, public-use broadband services at appropriate County-owned facilities and other community anchor institutions.
- 241. Include an analysis of the availability of telecommunication infrastructure with other basic utilities during appropriate planning processes.
- 242. Incentivize communications infrastructure improvements and expansion as a means to reduce transportation impacts.

ACTION

- 2.121 Create and maintain inventory and mapping of communications infrastructure, to include but not be limited: wireline, wireless, cell tower locations, and known proposed facilities.

SUSTAINABILITY OBJECTIVE

Reduce impacts and visual clutter of telecommunications infrastructure.

POLICY

- 243. Require concealment or screening strategies to minimize visual impacts of towers within views of scenic highways, public parks, cultural facilities, and coastal scenic areas. Concealment strategies and/or increased setbacks shall be used to ensure community compatibility.
 - a) An alternatives analysis may be required at the time of application that documents why the proposed project is the best way to accomplish project alternatives while minimizing project impacts.
 - b) Support structures shall be designed to minimize their visibility with a preference towards each of the following in the order so listed:
 - 1) use of existing structures,
 - 2) stealth designs for concealment, and
 - 3) monopoles.
 - c) Component parts, equipment cabinets, buildings, and security fencing shall be designed to achieve a minimum profile through painting, screening, landscaping, and architectural compatibility with surrounding structures.
 - d) Photo simulations or balloon tests with views from various vantage points may be required to show visual impact of the proposed facility.
 - e) Hawai'i County shall require the timely removal of communications towers and equipment that are no longer needed or in active use, as a condition of approval.

[Rationale: Based on identified visual clutter in scenic areas and Ka'ū CDP Policy 58 Hāmākua CDP Policy 34 and 108, and General Plan Policy 11.3.2 (a), (c).]

244. Siting of new communications facilities shall comply with the following standards:
- a) Performance Standards. Develop standards for siting design, visibility, construction impacts, noise, on-going operation, and other characteristics that affect the compatibility and environmental and safety impacts of proposed facilities.
 - b) Site Co-location. When at all feasible, communications facilities shall be located adjacent to, on, or incorporated into existing or proposed buildings, towers, or other structures. The County shall require new facilities to accommodate future co-location to the maximum extent feasible. [mapping]
- [Rationale: Based on identified visual clutter in scenic areas and Ka'ū CDP Policy 58 Hāmākua CDP Policy 34 and 108, and General Plan Policy 11.3.2 (a), (c).]
245. Manage the environmental, cultural heritage, visual and social impacts of telecommunications infrastructure.
246. Incentivize or require underground siting of electrical and telecommunications facilities within public rights-of-way, especially in urban centers and along designated scenic corridors.
247. Establish wireless and telecommunication design and siting standards to mitigate the visual impact of telecommunications and broadcast facilities.

ACTION

- 2.122 Develop and codify design and removal standards for telecommunication towers.
- 2.123 Undertake a study and environmental review to determine appropriate places to deploy wireless communication facilities that would provide reliable coverage to every community within the County.
- 2.124 Adopt a Communications Facilities Ordinance.

STRENGTHENING ENERGY DIVERSITY & CONSERVATION

SUSTAINABILITY OBJECTIVE

100% clean renewable energy by 2030

The County of Hawai'i should lead the State in reaching its goal of 100% renewable energy. (30% by 12/31/2020, 40% by 12/31/2030, 70% by 12/31/2040, 100% by 12/31/2045)

POLICY

248. Public utility facilities shall be designed to complement adjacent land uses and minimize conflict with the natural environment and minimize pollution.
[Rationale: Based on General Plan Goal 11.1.2 (c), Policy 11.1.3 (a, c), and Hāmākua CDP Policy 62.]
249. The County shall remove barriers for energy systems that ^{prioritize and incentivize} improve resiliency, such as microgrids, combined heat and power (CHP), backup generation and storage, and other decentralized electricity systems.
[Rationale: Based on General Plan Policies 3.3 (a, c, e, g, k, o), Kaʻū CDP Policy 142 and Community-Based Collaborative Action 6.4.5, and Hāmākua CDP Community Action 55.]
250. The County of Hawaiʻi shall increase its energy efficiency by upgrading its vehicle fleet to alternative energy vehicles, ^{where practical.} ^{Only alternative energy vehicles}
[Rationale: Based on the Kaʻū CDP Policy ENGY-1.7 (f), and the vehicle priority lists of the Hawaiʻi State Energy Office <https://energy.hawaii.gov/vehicle-purchasing-guidelines> and recommendations from Sustainable Transportation Coalition of Hawaiʻi, A U.S. Department of Energy Clean Cities Coalition.]
251. To encourage the use of electric vehicles, the County of Hawaiʻi shall install electric vehicle chargers at community facilities in urban centers, for both County vehicles and public parking.
[Rationale: Based on Kona CDP Policy ENGY-1.7 and Hāmākua CDP Policy 110. See also General Plan Policy 3.3 (g, k).]
252. Maintain tax incentives for renewable energy improvements and continue to revise incentives as energy technologies progress.
[Rationale: Based on General Plan 3.3 (g, m).]
253. The County shall advocate the Public Utility Commission in support of the following types of strategies and initiatives:
- a) Programs and fee structures that ^{clean} promote ^{low or no carbon} renewable energy;
 - b) Consumer incentives to utilize ^{clean} renewable alternatives;
 - c) Social Equity analysis of proposed energy projects to ensure residents are protected as energy consumers in regards to rates, grid planning, utility compensation, and energy project siting. ^{and GHG climate impacts}
- [Rationale: Based on the Hāmākua CDP Kōkua Action 65 and General Plan Policy 3.3 (o).]
254. Require special or use permits for all energy producing facilities that distribute power beyond their own use.
[Rationale: Based on General Plan Policies 3.3 (e).]

255. Increase the County of Hawai'i's role in ensuring energy facility production and distribution is adequate, efficient, and dependably available to each community to support present and future demands.
256. Promote and support increased energy efficiency measures and the proportion of electricity generated by alternative and renewable energy, including, but not limited to solar, wind, ^{clean low or no emissions} ~~wave~~ ^{biofuels} and other sources. **NOT whole tree woody biomass, and not biofuels if agricultural food production/reforestation goals are not met, that is priority**
257. Coordinate with energy providers to encourage investments that increase reliable, equitable, efficient, and affordable energy for Hawai'i residents and businesses.
258. Continue to participate at the State level to provide feedback on all energy related initiatives and proposed revisions to comprehensive Integrated Resource Plans.
259. Encourage energy efficiency designs in all new County facilities and upgrade existing facilities with energy efficient systems as practical.
260. Continue to support building codes that require solar hot water and other energy efficient designs.
261. Encourage large developments to meet Leadership in Energy and Environmental Design (LEED), Low Impact Development (LID) or similar energy sustainability certification standards.
262. County strives for Leadership in Energy and Environmental Design (LEED), Low Impact Development (LID) or similar energy sustainability certification for new buildings or when renovating existing buildings for County use.
263. Encourage use of technologies, techniques, and materials in building design, construction, and removal that result in the least environmental impact over the life cycle of the structure.
264. Increase the amount of electric vehicles used on the Island. **targeting 100% by 2030**
265. **Determine realistic targets for the appropriate mix of variable renewables and firm renewables within the energy network.** **Prioritize up to date science & climate considerations and needs of a habitable planet to set targets**
266. Partner with both government and private sources for research and development of alternative/^{clean low or no emissions}renewable energy resources.
267. Support innovative heating and cooling technologies such as sea water cooling, heat pump technology, and low carbon systems that serve multiple buildings.
268. Support local training and education programs to develop green job growth; especially in ^{clean}renewable energy and natural resource management/**climate mitigation**
269. Support the development of commercially produced energy to meet the needs of the County of Hawai'i in a culturally sensitive manner.

270. Promote biomass energy and fuel production using wood chips from exotic/invasive trees. Absolutely not. Why is this in here?
271. Monitor and advocate for discounted off-peak electrical rates.
272. Encourage eco-districts, where multiple partners work together to achieve sustainability and resource efficiency goals at a neighborhood/district scale.
273. Encourage and promote development that uses renewable resources, such as solar, wind, and water to generate power on-site and to contribute to the energy grid.
274. Support renewable energy producing incentives through local utility programs such those developed for community-based renewable energy systems, customer grid-supply, customer self-supply, smart export, interconnection agreements, net energy metering, and other similar incentives for independent energy producers.

ACTION

- 2.125 Identify appropriate renewable energy resource zones and support commercial clean, low emissions renewable energy facilities in these resource zones.
- 2.126 Develop a County purchasing policy that incorporates energy saving principles for its own buildings, facilities and services.
- 2.127 Incorporate appropriate green building or climate resilient specifications into competitive bids.
- 2.128 In partnership with State and Federal agencies, develop and codify standards for overhead utility and broadcast facilities, including requirements for underground siting, co-location of services, incorporating visual mitigation strategies in design, and accommodations for future expansions.
- 2.129 Identify utility corridors for high voltage transmission lines. Route selection for high voltage transmission lines should include consideration for setbacks from major thoroughfares and residential areas.
- 2.130 Develop and implement incentives for energy efficient/green design standards.
- 2.131 Develop or participate in programs for improving consumer energy efficiency and conservation through advanced metering infrastructure installations (also known as *smart meters*).
- 2.132 Define appropriate criteria for clean, low emissions renewable energy resource zones for commercially produced energy. These could include, but are not limited to:
- a) Solar Farm;
 - b) Wind Farm;

- c) Hydroelectric Sources;
 - d) Geothermal Sources;
 - e) Wave Energy Locations;
 - f) Develop an electric vehicle charging station network map and identify regional gaps in service.
- 2.133 Revise code to require new thresholds for, and/or incentivize, electric vehicle charging stations. Incentives may include reducing minimum parking requirements in exchange for the development of charging stations in high use areas, multi-family residential developments, or in areas identified as underserved in the network maps. [Code]
- 2.134 Reevaluate vehicle charging station requirements in the code to determine if the parking lot threshold for requirements should be lowered, and determine if additional requirements or incentives are warranted to facilitate electric vehicle use.
- 2.135 Revise code to set criteria for underground siting of utilities to minimize conflict with the natural environment and preserve viewshed resources.
- 2.136 Develop code to address commercial energy development. prioritizing clean energy
- 2.137 Develop standards and principles for reviewing PUC applications. including GHG considerations
for a habitable planet
- 2.138 Conduct a feasibility report for using renewable sources to generate power for public water system infrastructure. clean low emissions



Section 3: Economic & Opportunity Planning

GOALS

3. Hawai'i's local economy is diverse, stable, innovative, and complements the Island's unique ecology, community character, and cultural heritage. We strive for residents to be economically self-sufficient while focusing to reduce import dependence. **and resilience**
- a) Agriculture is a robust, diversified sector that emphasizes food security and includes a broad range of agricultural-based businesses, and agricultural tourism.
 - b) Residents have physical and economic access to sufficient, safe, nutritious, and locally produced food to meet their dietary needs and food preferences for an active and healthy life.
 - c) Residents have physical and economic access to adequate and affordable housing in various types, sizes and price ranges to meet that meets the needs of the population and provides equitable opportunities for household flexibility and mobility.
 - d) The visitor industry thrives by exposing guests to authentic cultural representations and by providing interactive experiences with the 'āina and Hawai'i's natural wonders, while maintaining a high quality of life for residents.

FOCUSING ON ECONOMIC DIVERSITY & INNOVATION

SUSTAINABILITY OBJECTIVE

Progressively increase percentage of residents that are economically self-sufficient.

POLICY

275. Prioritize economic diversity, stability, and innovation in County programs, plans, and research.

[Rationale: Based on Kona CDP Strategy 4.8.2, Hāmākua CDP Community Objective 8 and Ka'ū CDP Community Objective 11, and General Plan Goal (2.2 (c, f).]

276. Evaluate new business proposals for potential community and cultural impacts and negative impacts are identified and properly mitigated.
[Rationale: Based on Puna CDP Goal 2.1.1, and General Plan Goal 2.2 (h).]
277. Eco-Industrial Parks shall be available to areas within the Urban Area zoned MG, ML, or MCX, to encourage the feasibility testing of the concept of an eco-industrial park, which is a community of firms that exchange and make use of each other's byproducts.
[Rationale: Based on a need identified in the Kona CDP process to increase industrial land use availability and form collaborative, mutually beneficial enterprises. Kona CDP ECON-1.8. See also General Plan Policy 14.4.3 (a)]
278. Invest in infrastructure and facilities that support economic development. *resilient, sustainable*
279. Promote sustainable business development opportunities focusing on diversified agriculture, educational and institutional research-based tourism, green technologies and building, and sustainable tourism.
280. Support **subsistence-based businesses** and economies and preserve opportunities to "live off the land". *what is a subsistence business? not sure, but shouldn't that term apply to families/ individuals only, not businesses?*
281. Collaborate to expand the research, development, energy, and small and high technology industries.
282. Assist in the development of creative industries to market local sites and coordinate event activities.
283. Promote Hawai'i Island as a center for natural scientific research.
284. Monitor trends and identify business needs, strengthen existing industries, and diversify the economy by attracting emerging industries.
285. Support education, training, and workforce development. *especially in professions of climate mitigation and adaptation*
286. Support apprenticeships and mentorships to strengthen the entrepreneurial skillsets and networks.
287. Collaborate with the private sector to identify business needs, strengthen existing industries, and diversify the economy by attracting new endeavors.
288. Partner with business associations, realtors, and the chamber of commerce to recruit small-scale manufacturers to establish retail locations in village and town centers to support reinvestment.
289. Partner with business associations, realtors, and the chamber of commerce to match potential tenants with local landowners.
290. Shared workspaces, including certified kitchens and industrial co-work buildings, are encouraged in appropriate locations.

291. Maintain a program for updating zoning code to accommodate emerging industries and technologies consistent with other goals, objectives and policies of this General Plan.
292. Partner with business associations, realtors, and chamber of commerce to remove regulatory barriers and create incentives for urban renewal, rehabilitation, and/or redevelopment programs in cooperation with communities, businesses and governmental agencies, instead of developing new commercial areas.
293. Promote use of the incentives offered by the opportunity zones and enterprise zones partnership programs to attract businesses.
294. Partner with business associations, University of Hawai'i at Hilo, and other agencies and private entities to host local fairs, markets, and networking events in target communities.
295. Plan for and identify appropriate areas for business incubation/innovation districts and industrial/ business parks.
296. Remove regulatory barriers that restrict entrepreneurial endeavors, such as zoning restrictions for home-based businesses that do not negatively impact the infrastructure network or the character of the neighborhood.
297. Encourage land uses that allow for small-scale manufacturers in retail establishments that enhance and are balanced with the County's natural, cultural, and social environments.
298. Encourage partnerships that leverage existing infrastructure and financial resources as well as projects that provide for additional infrastructure resources desirable for development of sustainable local industries.

ACTION

Yes! Community Carbon offsets, community watershed development, etc :)

- 3.1 Pilot a program to secure community payments for ecosystem services.
- 3.2 Study the feasibility of economic and financial impact reviews.
- 3.3 Develop an inventory of the following commercially zoned lands:
 - a) Undeveloped commercial, industrial, and resort zoned areas in order to evaluate their land use designations and consider reallocating these land uses to more appropriate areas for development; how does this impact development?
 - b) Actively developed industrial and resort areas to provide data for future land use decisions and economic market research.
- 3.4 Identify incentives and other economic development tools to promote reinvestment in underperforming commercial corridors.

- 3.5 Identify public lands within designated village and town centers that could serve as assets for economic development. This could also include parking areas, pocket parks, art parks, and public gathering spaces. **community co-op gardens and ag lots**
- 3.6 Develop a tiered tax program for commercial properties within special districts to facilitate tenant retention, occupancy rates, and to discourage derelict vacant buildings.
- 3.7 Identify and maintain an inventory of blighted areas, as defined in HRS 53, for urban renewal, rehabilitation, and/or redevelopment programs.
- 3.8 Identify and maintain an inventory of potentially polluted lands to determine qualifications and feasibility for renewal, rehabilitation, and/or redevelopment through the Environmental Protection Agency's Brownfields Program.
- 3.9 Develop business improvement districts and Main Street programs to fund revitalization efforts.
- 3.10 Provide technical support to develop Town Revitalization Plans to preserve historic and cultural village character and support local businesses.
- 3.11 Develop a masterplan and feasibility study for Ho'olulu Complex redevelopment into an athletic-exhibition-conference facility.
- 3.12 Develop a masterplan and feasibility study for a civic auditorium and/or performing arts center for the Kona area.

AGENCY ACTION

- 3.13 UH and Workforce Development: Develop workforce for emerging industries
- 3.14 State: Appropriate and release funds for Capital Improvements in visitor areas
- 3.15 State: Invest in infrastructure, terminals, and facilities that support economic development

PRIORITIZING AGRICULTURE & FOOD SECURITY

SUSTAINABILITY OBJECTIVE

Increase locally owned and operated agricultural businesses. **sustainable** **prioritizing food production as much as possible?**

POLICY

299. In order to provide a means for local agricultural producers to market their products, the County shall interpret HRS 205 liberally to allow the establishment and continued operations of open farmers' markets and road-side stands in the State Land Use Agricultural district without a Special Permit. If the project qualifies for Plan Approval, a market management plan containing provisions for adequate on-site parking, on-site and off-site traffic management, and adequate sanitation facilities must be approved by the Planning Department prior to the operation of the open farmers market.
[Rationale: Based on Hāmākua CDP Policies 116 and 117, Ka'ū CDP Policy 139, and General Plan 2.3 (u).]
300. Educate landowners about agriculture, ranch, and forestry land preservation programs and encourage participation in these programs. *climate smart especially climate mitigation strategies*
301. Assist in the expansion and promotion of the agricultural industry through the protection of viable and productive agricultural lands.
302. Partner with appropriate state and federal agencies, and other groups for programs, training, and building community capacity in the promotion of the agricultural industry.
303. Support the development and stability of marketing plans, programs, cooperative groups, and other networking organizations that promote the *sustainable?* agricultural industry.
304. Support the development of private and state agricultural parks to make agricultural land available for agricultural activities.
305. Support the University of Hawai'i at Hilo and Hawai'i community college aid in their development of education, training, and workforce development programs that assist agriculture. *especially climate smart ag?*
306. Support apprenticeships to strengthen the skillset and networks of industry leaders.
307. Incentivize small-scale farming, such as taro production, through expanded tax credits for small farms.
308. Support the *sustainable* development of the *development of a sustainable fishing industry* fishing industry, various forms of aquaculture, and other fresh and marine-based activities.
309. Support research and development of viable *biofuel projects that will supply renewable transportation fuels or power for Hawai'i Island in ways that are community-supported, sustainable, ecologically sound, and complimentary to food production.*
310. Promote operations that utilize local materials and secondary byproducts from agriculture, agroforestry, silviculture, and aquaculture.

311. Promote the development of a local timber industry through support of timber processing and building code flexibility for locally produced building products.

ACTION

- 3.16 Develop distinctive, regional identities to enable public and private industries to promote Hawai'i agricultural products as unique within the state of Hawai'i.
- 3.17 Update the County of Hawai'i's tax reduction programs to provide tax incentives for commercial agriculture operations, prioritizing food and and community gardens.
- 3.18 Update the County of Hawai'i's tax reduction programs to ensure that tax incentives for agricultural land use result in actual public benefits and promote sustainable, climate smart (drawdown) agricultural production where possible.
- 3.19 Create a real property tax exemption (perhaps 4 to 6 years) for farmers entitled to Federal crop loss insurance.
- 3.20 Amend code to remove barriers to allow for off-site directional signage to promote local farms engaged in direct sales and other permitted visitor-related businesses, while minimizing scenic impacts. [Code]
- 3.21 Revise grubbing and grading ordinances as they pertain to agriculture including the creation of exemption categories for water storage and aquaculture.

AGENCY ACTION

- 3.22 State Department of Agriculture: Support programs to prevent harmful alien species from becoming established and impacting commercial agriculture.
- 3.23 State legislature: Amend Hawai'i Revised Statutes to include green waste, composting, and fertilizer yards (utilizing only manure and soil) for commercial use as permitted uses on agriculturally zoned land.
- 3.24 State of Hawai'i, Department of Agriculture: Support the development of agricultural parks in areas with adequate infrastructure for agriculture and processing.
- 3.25 State DLNR: Support the establishment of community-based subsistence fishing areas.

SUSTAINABILITY OBJECTIVE

climate smart
Increase total acres of active food production.

POLICY

312. Develop and maintain a food self-sufficiency strategy for Hawai'i County to serve as a mitigation and adaptation strategy that decreases Hawai'i's food carbon footprint (via imports) while increasing community resilience to climate and natural hazards, ^{and agricultural methods} ^{and working to drawdown GHG}
- [Rationale: Based on recommendations from the University of Hawai'i at Manoa Sea Grant College Program: June 2014 Climate Change Impacts in Hawai'i - A summary of climate change and its impacts to Hawai'i's ecosystems and communities.]
313. Prioritize restoration of traditional agricultural uses.
- [Rationale: Based on the recognized need to increase local food production and Kona CDP Policy section related to CR-3.1 and Action CR-3.3b.]
314. Increase public-private partnerships to strengthen the local food system.
315. Reduce County greenhouse gas (GHG) emissions by improving food system waste management.
316. Support training related to the requirements of the food safety modernization act.
317. Support the development of community-based food systems, ^{and community growing areas}
318. Allow for and encourage urban agriculture uses such as on-site sales and small-scale animal husbandry.

^{Promote and incentivize Climate smart agriculture, such as no till, cover crop, and other beneficial carbon capturing methods}

ACTION

- 3.26 Develop a program to monitor local food production and consumption.
- 3.27 Conduct regional community food-system assessments.
- 3.28 Develop and implement an emergency food plan which could be deployed in the event of a natural or economic disaster. ^{and agricultural recovery (such as seed banks)}
- 3.29 Adopt procedures to allow for the development of ^{Promote and incentivize} community gardens and edible landscaping on public lands, maybe through Friends of the Park agreements. ^{YAY!}
- 3.30 Amend Hawai'i County Code, Section 15-72 to allow farmers' market permits to include parks in rural areas that lack appropriate commercial zoned lands for farmers markets. [Code]
- 3.31 Pilot a project to restore at least one ahupua'a using traditional knowledge and innovative strategies to produce enough food to be self-sustainable.

AGENCY ACTION

- 3.32 State Legislation: Seek State legislation or rule-making to allow local agricultural producers to make direct sales to consumers at County-designated farmers markets at the 0.5% general excise tax rate rather than the 4.0% rate that applies to retail sales.
- 3.33 State department of agriculture: apply for specialty crop block grants to strengthen taro production, **and climate smart ag that is diversified to withstand storms and climate events, including promoting Pacific island root crops such as kalo, uala and cassava**
- 3.34 State DOE: Develop and support Farm to School programs and other programs designed to provide locally produced food to Planning Area schools.
- 3.35 Coordinate with University of Hawai'i at Mānoa College of Tropical Agriculture and Human Resources' to increase the farm food safety coaching program and farm food safety certifiers.

SUSTAINABILITY OBJECTIVE

Increase availability of infrastructure (agricultural water, transportation systems for product and equipment access, and packing and processing facilities for ranching, agricultural crops, timber, and value-added products) to areas of high agricultural production.

POLICY

- 319. Support the creation of water cooperatives supported with County revenue bonds and other sources. Cooperative users should be responsible for development, maintenance and repair of the agricultural water systems.
- 320. Where the County has replaced surface water sources with groundwater sources to meet Safe Drinking Water standards, the County should consider allocating the surface water sources for agricultural use. **without compromising natural ecosystems**
- 321. Support expanding the capacity of air and sea port facilities and staffing for the exportation of agricultural crops.
- 322. Promote agricultural processing, including the development of non-profit or private commercial kitchens, processing, storage, and distribution facilities, using existing facilities as appropriate for the development of value-added local products.
- 323. Support the continued operation of the USDA's Pacific Basin Agricultural Resource Center facility.
- 324. Incentivize and remove barriers to allow the **and small scale farms** **agricultural industry** to provide or develop employee housing and workers quarters.

325. Evaluate code and statutory amendments to allow agricultural worker housing to be developed without requiring the housing be sited on the same parcel (TMK) of the working subject farm. [Code]

ACTION

- 3.36 Map existing and proposed agricultural infrastructure.
- 3.37 Expand programs to provide for agricultural irrigation water.
- 3.38 Develop criteria to determine appropriate places for agricultural parks, including the availability of potable water.
- 3.39 Expand County programs to provide for water for designated Agricultural Parks and prime agricultural areas.
- 3.40 Encourage the Board of the Department of Water Supply (DWS) to include agricultural water planning in County water system expansion plans.
- 3.41 Amend Hawai'i County Code to include provisions for suitable agricultural infrastructure projects financed by County bonds and liens on real property of participating agricultural stakeholders, whether or not such assessments on TMKs involve contiguous parcels of lands encumbered under an "Agricultural Improvement District". [Code]

AGENCY ACTION

- 3.42 State DHHL, DOA and ACD: expand agricultural water systems in prime agricultural areas.
- 3.43 DOA- Restoration of the ditch systems should be investigated and planned to meet anticipated future agricultural needs.

DEVELOPING A PLACE-BASED VISITOR INDUSTRY

SUSTAINABILITY OBJECTIVE

Increase visitor expenditure or length of stay.

POLICY

- 326. Encourage, where appropriate, the establishment of visitor-related uses and facilities that directly promote the agriculture industry.
- 327. Support the promotion and development of programs, festivals, and events that engage visitors and residents in unique and authentic ways
- 328. Support the development of a place-based tourism industry that emphasizes the preservation of our unique cultural, natural, and built environment assets.

ACTION

- 3.44 Continue to seek funds from the State Capital Improvement Program to help develop visitor industry support facilities in accordance with the County's General Plan.

AGENCY ACTION

- 3.45 Hawai'i Tourism Authority: Encourage the development of a visitor industry that promotes small business development in harmony with the character of Hawai'i Island and with the environmental and social goals of residents.

PROVIDING EQUITABLE AND SAFE HOUSING OPTIONS FOR ALL

SUSTAINABILITY OBJECTIVE

Increase in number of newly constructed housing units (1,300 du/year to reflect needed housing units referenced 2014 Rental Housing Study).

POLICY

- 329. Hawai'i County shall expand its participation in Federal, State, and Hawaiian housing assistance programs to rehabilitate owner and rental housing for very low, low, median, and moderate income residents by seeking grants, loans, and technical assistance in conjunction with public and private stakeholders.
[Rationale: Based on General Plan Policies 9.3 (a, c, j, l, s, v).]
- 330. Maintain an affordable housing and property inventory system consistent with 201H-6 HRS.
[Rationale: Based on HRS 201H-6, and General Plan 9.2 (e, h).]

331. All affordable housing projects which receive development benefits from Hawai'i County, including but not limited to land use/ zoning approvals, special approvals, conditional uses, and density bonuses, shall be required to maintain the project (or portion thereof) as affordable for a period of 40 years pursuant to deed restrictions or other mechanisms specified in the HCC.
[Rationale: Based on Kona CDP Policy HS- 5.2]
332. Affordable and transitional housing shall be prioritized on vacant urban land already zoned for multifamily development and around transit hubs.
[Rationale: Based on General Plan Goal 9.2 (d, g) and Policy 9.3 (t, x). See also the McKinsley Global Institute (MGI) report.]
333. Limit the locations of government facilitated or mandated affordably priced housing units to Urban Service Areas. *or include self sufficiency ag component for affordable housing on ag land that has appropriate transit infrastructure?*
[Rationale: Based on the ongoing trend to locate affordable housing developments in agricultural areas that lack basic infrastructure; thereby shifting the infrastructure development, maintenance, and service costs to populations that can least afford it. See also General Plan 9.3 (x).]
334. Partner with Federal, State, and nonprofit housing entities and housing trusts to fund and support community-based non-profit organizations in their efforts to provide adequate affordable housing.
335. Incorporate reasonable flexibility in codes and ordinances to achieve a diversity of socio-economic housing mix and to permit aesthetic balance between single-family residential structures and open spaces.
336. Support collaborative partnerships that address homelessness, work toward immediate solutions to house and service homeless populations and work toward long-term strategies to reduce homelessness.
337. Encourage use permits for innovative and experimental housing types to address homelessness, temporary, and transitional housing located close to services, job centers, transit hubs. *and ag self sufficiency opportunities?*

ACTION

- 3.46 Create incentives and remove barriers to reduce cost of building residential units. *including energy efficiency and low carbon emissions*
- 3.47 Remove barriers to the use of local building materials, traditional 'island appropriate' construction techniques, recycled materials and other alternate building materials.
- 3.48 Evaluate and revise inclusionary zoning and housing requirements.

- 3.49 Develop rules and criteria for the County's administering the State's affordable housing incentive program as per HRS 201H.
- 3.50 Revise code to determine maximum developable area based on lot size and zoning designation.
- 3.51 Develop criteria for the elimination or reduction of off-street parking requirements.
- 3.52 Change zoning regulations to increase allowable residential densities in Urban-designated locations.
- 3.53 Change zoning regulation in Urban-designated locations, to require a minimum and maximum level of residential density.
- 3.54 Revise the following financial mechanisms in HCC:
 - a) Revise Big Island Tax Increment Financing (TIF) ordinance.
 - b) Housing Trust Funds (as ongoing renewable source of revenue for AH, capitalized with other sources such as commercial linkage fees and in-lieu fees).
 - c) Tax incentives to facilitate affordable housing owners to recoup the costs of repairs.
- 3.55 Revise County Code Chapter 11 to implement rules and criteria for administering the State's affordable housing incentive program as per HRS 201H.
- 3.56 Perform a feasibility study to explore mechanisms to ensure affordable housing development is progressive and to ensure adequate affordable housing stock remains in a tiered approach.
- 3.57 Form an Affordable Housing Advisory Committee at County level to complete an island wide Affordable Housing Plan, including the following:
 - a) Barriers assessment survey
 - b) Define, assess, craft, and/or initiate, where appropriate, research opportunities to identify promising strategies to maintain adequate rental housing stock.
- 3.58 Amend Chapter 25 of the Zoning Code and Chapter 23 of the Subdivision Code to allow Clustered Rural Subdivisions as an alternative to Cluster Plan Developments (C.P.D.) Section 25-6-20. [Code]

SUSTAINABILITY OBJECTIVE

Increase in various housing types.

POLICY

- 338. Require residential and mixed-use developments to incorporate a variety of housing types within a single development project.
[Rationale: Based on General Plan Goal 9.2 (c) and Policy 9.3 (I).]
- 339. Support the development of a variety of housing types, uses and models, including experimental housing and compact housing communities. (Ex: modular/pre-fab; work/live arrangements; co-housing, limited equity cooperatives, etc.)
- 340. Incentivize the development of compact and energy efficient housing types that minimize use of resources such as smaller detached homes, accessory dwellings, and attached homes. **and agricultural self sufficiency**
- 341. Encourage housing construction to take into consideration the need for ADA accessible-housing as well as the needs of the growing elderly population who have mobility impairments.
- 342. Consider broadening current real property tax reductions or exemptions as financial incentives for a private property owner's provision of a certifiable affordable housing rental unit as a second dwelling unit where allowable.

ACTION

- 3.59 Revise code to facilitate Accessory Dwelling unit development.

SUSTAINABILITY OBJECTIVE

Eliminate housing determined to be structurally unsound.

POLICY

- 343. Hawai'i County shall develop minimum standards for structural safety and coordinate to monitor and inventory housing conditions. Standards for evaluation of the structural condition of the housing stock are summarized below:
 - a) Sound: Most housing units in this category are in good condition and have no visible defects. However, some structures with slight defects are also included.
 - b) Deteriorating: A housing unit in this category needs more repair than would be provided in the course of regular maintenance, such as repainting. A housing unit is classified as deteriorating when its deficiencies indicate a lack of proper upkeep.
 - c) Dilapidated (Substandard): A housing unit in this category indicates that the unit can no longer provide safe and adequate shelter or is of inadequate original

construction including being constructed below the minimum required elevation by FEMA or the County's Floodplain Regulations.

[Rationale: Based on identified quality issues with current housing stock and General Plan Goals 9.2 (a, e, l) and Standards from 9.4 (a-f).]

ACTION

- 3.60 Adopt a program including necessary staffing to inventory, monitor, and enforce safe housing conditions.

DRAFT



Section 4: Community Placemaking

GOALS

4. Hawai'i is a safe, healthy, and diverse community deeply connected to the 'āina, our historical roots, and in sustaining our multicultural heritage for future generations. We are invested in enhancing public spaces, natural and cultural assets, and our social systems.

- a) Communities are safe and protected and residents have access to quality, integrative health and social services to support a high quality of life, decrease health and social problems, and extend life expectancies.
- b) Public infrastructure and facilities effectively service community needs, are sustainably built and maintained with innovation and pride, promote a sense of community, and support a high quality of life.
- c) Health is prioritized by providing access to a wide variety of options and facilities that promote physical activity and healthy lifestyle choices for residents and visitors of all ages. *does this wording limit cultural access? Not sure...*
- d) Responsible and reasonable public access for spiritual, religious, cultural, recreational, and subsistence practices is assured and protected.
- e) An interconnected, island-wide multimodal trail system is developed and maintained to encourage healthy living and provide links between people and their natural environment.
- f) Our Hawaiian and multi-ethnic cultural values are preserved and perpetuated in celebration of the evolving diversity that enhances our island way of life.
- g) The historical integrity and character and scenic assets and open spaces of our communities are protected, restored, and treated as unique assets with significant social and economic value and managed in perpetuity.

MAINTAINING EDUCATION FACILITIES AS ANCHOR INSTITUTIONS

SUSTAINABILITY OBJECTIVE

Increase the opportunities for collaboration with State and community organizations on community events at school facilities.

POLICY

344. Partner with State and community organizations to ensure that school facilities, including their surrounding area open spaces, are community-centered, designed for multiple uses as appropriate (aka: joint-use facilities) and serve as anchor institutions in the community.

[Rationale: Based on General Plan 10.2.2 (a, b, c).]

345. Design enrollment guidelines for new schools are:

- a) Elementary (preK-5) 400 to 750 students 8 to 15 usable acres
- b) Middle (6-8) 500 to 1,000 students 15 to 20 usable acres
- c) High (9-12) 800 to 1,600 students 45 to 55 usable acres

In existing urban areas where the availability of land is limited to infill sites and where new housing developments require the construction of new school facilities, design enrollment guidelines for new schools are:

- d) Elementary (preK-5) 400 to 750 students 2.5 to 3 usable acres
- e) Middle (6-8) 500 to 1,000 students 5 to 6 usable acres
- f) High (9-12) 800 to 1,600 students 8 to 10 usable acres

[Rationale: Based on Hawai'i Board of Education Policy 301-2.]

346. School sites are identified in master plans for all new town developments or major expansions to ensure coordination with roads, water, sewer and recreations infrastructure and other support facilities and considerations such as traffic and safety, and access for vehicle, bicycle, and pedestrian.

[Rationale: Based on General Plan 10.2.2 (a).]

347. Establish and maintain joint-use of public facilities in close proximity to each other, including: schoolyards, parks, libraries, and other public facilities for community use for recreational, cultural, and other compatible uses.

[Rationale: Based on General Plan 10.2.2 (b, c), 12.3 (g), Hāmākua Policy 101; Ka'ū CDP 5.9.3.2.]