



[MISSION STATEMENT]

Office of Environmental Quality Control [OEQC] through its director, serves the Governor in an advisory capacity on all matters relating to environmental quality control. At the request of the Governor, OEQC coordinates state governmental agencies in matters concerning environmental quality. OEQC directs the attention of the university, community and public to environmental problems and performs other related functions as specified in Ch. 341, HRS.

The Office serves as a clearinghouse for environmental review documents prepared under Ch. 343, HRS. Twice a month, OEQC publishes The Environmental Notice. This bulletin informs the public of all the projects being proposed in the State that are subject to public review and comment.

For more information on OEQC go to www.state.hi.us/health/oeqc/index.html



Linda Lingle
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[ENVIRONMENTAL COUNCIL]

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[ACKNOWLEDGEMENTS]

The **Environmental Council** is very grateful to the following people, whose tireless and energetic work has helped make this Annual Report possible:

- ☒ This Annual Report was designed by [Alban Cooper](#), [Anna Fujishige](#), [Etsuko Ono](#), and [Megan Wong](#), students in the Design Program, Department of Art and Art History at the University of Hawai'i at Mānoa. The award-winning Design Program regularly provides design services to non-profit organizations. For further information on the Design Program or to discuss potential projects please contact [Anne Bush](#), Design Program Chairperson at: design@hawaii.edu.
- ☒ The wide range of respondents to our Food Security and Self-Sufficiency questionnaire, including food producers, distributors, and consumers; academics and researchers; non-profit organizations; architects; and land owners. Without the attention and thoughtfulness of all these people, the Council would not have been able to develop this year's recommendations.
- ☒ [Elizabeth Cleary Cole](#), Ed.D., Deputy Director of the Kohala Center in Kamuela, for her assistance in identifying stakeholders, existing research, and valuable context in support of this year's theme of Food Security and Self-Sufficiency.
- ☒ [Ellen Mehos](#) of Agricon Hawai'i for her assistance in identifying stakeholders and valuable context in support of this year's theme of Food Security and Self-Sufficiency.
- ☒ [Christiane Tresler](#), who adeptly arranged and facilitated a Food Security and Self-Sufficiency stakeholder round table on Kaua'i.
- ☒ [Jenna King](#), whose research has informed the Council's recommendations addressing energy, and whose work has helped the Council monitor progress related to these recommendations.
- ☒ [The Hawai'i Energy Policy Forum](#), whose original and updated work has informed the Council's recommendations addressing energy.



Currently **90%** of the beef, **67%** of fresh vegetables, and **65%** of fresh fruits consumed in Hawai'i are imported. In 1984 Hawai'i produced **100%** of the milk consumed in the State, but today local production only fills **30%** of our needs.

Protecting Our Food Security
2008 Initiative – Office of the Governor

3826.1 miles

from

Omaha, NE

[FOOD MILES] Food miles are the distance food travels from where it is grown to where it is ultimately purchased or consumed by the end user. The increase in food miles is, of course, made possible by an increase in fossil fuel consumption. So the globalization of food production and the atrophying of localized food infrastructure are subsidized by cheap and abundant fossil fuels. As fossil fuels become less abundant and more expensive, this system will become increasingly strained until it finally collapses, leaving local communities without the ability to feed themselves.

Dale Allen Pfeiffer, *Eating Fossil Fuels – Oil, Food and the Coming Crisis in Agriculture*

[MESSAGE FROM THE CHAIR]

Everyone is talking about sustainability today – sustainable energy, sustainable food, sustainable economy. And why not? We are living large and if we could only sustain our current way of life, how great would that be?

Unfortunately, the way of life for America relies on large inputs of materials and labor from other countries. Countries that will eventually wish to use these materials themselves. Hawai'i is leading the way for an unsustainable lifestyle, even by US standards.

Almost everything grows here, year-round, yet we import 85% of our food. We have most forms of renewable energy here in abundance, yet we import 95% of our energy. Are we making wise choices?

The theme of this year's Annual Report is Food Security and Self-Sufficiency. Working on the theme over the last year, we realized the tremendous impact this topic will have on Hawai'i.

Becoming more self-sufficient on food production will lead to more local

jobs in farming and food processing. It will also bring opportunities for jobs monitoring the quality and safety of our locally produced food. When most of the \$6 billion per year we spend on imported food is spent on food grown in Hawai'i, our economy will move towards self-sufficiency as well. And the bonus – locally produced food is fresher, healthier, and tastes great! In this report the Environmental Council has made suggestions for the Governor and Legislature regarding this theme. It is important for individuals to make wise choices as well. Creating a

secure and self-sufficient food supply means supporting local farmers. Supporting local farmers means the money you spend will stay in your community, the community where you make your living.

Eat well. Buy local. The job you save may be your own.

Aloha,
Robert A. King [Chair]

[ABOUT THE ENVIRONMENTAL COUNCIL]

The members shall be appointed to assure the broad and balanced representation of educational, business, and environmentally pertinent disciplines and professions, such as the natural and social sciences, the humanities, architecture, engineering, public health, and planning; educational and research institutions with environmental competence; agriculture, real estate, visitor industry, construction, media, and voluntary community and environmental groups. Membership to the Council includes environmental consulting as an appropriate background. The Council is attached to the DOH for administrative purposes. Members elect their own Chairperson.

The Environmental Council consists of fifteen members appointed by the Governor with the advice and consent of the Senate. The Director of Environmental Quality Control serves as an ex officio voting member of the Council. Pursuant to Chapter 341-6, Hawai'i Revised Statutes [HRS], the Council serves as a liaison between the Director and the public on matters concerning ecology and environmental quality. The Council is responsible for drafting rules that govern the environmental impact statement process for the State. The Council is empowered to approve

an agency's exemption list of minor activities that can be implemented without first preparing an environmental assessment. The Council may only issue declaratory rulings on appeals of final, non-accepted environmental impact statements and rule making for Ch. 343, HRS.

Created in 1970, the Council is empowered to monitor the progress of state, county, and federal agencies' environmental goals and policies. In the annual report, the Council must advise state policy makers on important issues

affecting Hawai'i's environment. For more information on the Council go to www.state.hi.us/health/oeqc/envcouncil.html



2721.4 miles

from

Mattawa, WA

With an increase in food miles there is an:

⊕ Increase in fossil fuel consumption [for food transportation] — Increase in greenhouse gas emission — Increase in damage to the ozone — Increase in global warming — Increase in climate change

[RECOMMENDATIONS]



[INTRODUCTION]

The theme for the 2008 **Environmental Council** Annual Report is **Food Security and Self-Sufficiency**.

Providing food for Hawai'i residents and visitors involves large expense of resources, including water and fuel. All environmental factors have an impact on food production and distribution. Very many policy decisions also have an impact on food production, distribution, and consumption, including tax and regulatory structures.

In Hawai'i, we import 85% of the food and 95% of the energy we consume. The Environmental Council has chosen to address the implications of our reliance on outside means for our basic necessities.

To support the development of these recommendations, the Council did the following:

- ⌘ We identified and reached out to as wide a range of stakeholders as we were able, including food producers, distributors, and consumers, and providers of resources and inputs.
- ⌘ We sent a questionnaire to stakeholders on all the major islands; please refer to the sorted ratings from all the received results.
- ⌘ We talked with stakeholders on all the major islands, including a roundtable discussion on Kaua'i and among the Environmental Council members, and we reviewed results of studies from the Kohala Center on the Big Island.

[BASIS]

The **Environmental Council** understands the following four important points:

- ⌘ The current state of food security and self-sufficiency in the State of Hawai'i is precarious.
- ⌘ The current trend for local food production is reduction of capability, both on land and in the ocean.
- ⌘ The State of Hawai'i does not have sufficient local facilities for food production and processing.
- ⌘ The State of Hawai'i needs to cultivate key inputs for local food production, including water, energy, land and feed.

[RECOMMENDATIONS FROM THE ENVIRONMENTAL COUNCIL]

⌘ **Benchmark Research.** In 2009, engage and fund a comprehensive review of research to-date about food security and self-sufficiency. The goal of this review is to consolidate all the current knowledge, opinions, studies and benchmark information as a basis for development of policies. The results of this review will be completed before the 2010 legislative session.

⌘ **Policy Task Force.** In 2009, create and empower a multi-stakeholder task force, the Hawai'i Food Security and Self-Sufficiency Policy Task Force, to review the results of the benchmark study; to articulate the problems related to food security and self-sufficiency for all Hawai'i; to propose goals and their metrics; to enable our community to share their opinions and knowledge; and to identify candidate leverage actions to achieve these goals. This task force approach may be similar to that which created the Hawai'i 2050 Sustainability Task Force or the Hawai'i Energy Policy Forum. The recommendations from the Hawai'i Food Security and Self-Sufficiency Policy Task Force shall be delivered to the Legislature for its consideration and use by the start of the 2011 legislative session.

⌘ **Legislation.** In the 2011 legislative session, the Legislature uses the recommendations from the Hawai'i Food Security and Self-Sufficiency Policy Task Force as basis for legislation whose purpose is to improve food security and self-sufficiency in Hawai'i.

⌘ **Public Education and Communication.** In 2009, the State of Hawai'i, including the Legislature, Governor, and appropriate state departments, develop and implement a public communications program through which the public will be educated about the issues of food security and self-sufficiency, the risks in Hawai'i's dependence on imported food, the value of locally-produced healthy diet, and the improvements and options for every citizen of Hawai'i. This communications program would be similar in scope and approach to recent programs to educate citizens about the dangers of smoking, or the advantages of recycling.

Eat well. Buy local. The job you save may be your own.

[ADDITIONAL SUPPORTING DOCUMENTS—FOOD SECURITY AND SELF-SUFFICIENCY]

The **Environmental Council** has included these supporting documents on the following pages:

- ▣ Detailed summary stakeholder input, based on outreach categories of definitions, goals, impediments and actions.
- ▣ Overview from Island of Hawai'i Whole System Project Phase I Report [Rocky Mountain Institute, 2007]
- ▣ Graphic summary of stakeholder numerical responses to the Environmental Council Annual Report questionnaire.
- ▣ The Environmental Council Annual Report questionnaire.

[STAKEHOLDER INPUT SUMMARY: DEFINITIONS]

Economy

- ▣ Adjustment to fewer tourists and to tourists who pay more for the experience of Hawai'i

Availability

- ▣ Guaranteeing a food supply to our population, including when imports are scarce or unavailable
- ▣ Viable, self-sustaining local agricultural industry
- ▣ Stable and consistent food supply with more than a 6-day capacity
- ▣ Capacity: basic: keeping people alive if shipments stop.

Planning

- ▣ A planning process to allow the islands to weather shifts in global food production and distribution

Values

- ▣ Valuing small farms and small farmer creativity

Health

- ▣ Supplying healthy locally produced food, meeting the nutritional needs of local residents
- ▣ Complying with laws and regulations governing food storage, safety, and importation of food and feed stocks; keeping food safe from pathogens and contaminations
- ▣ Healthier local diets and eating habits

Efficiency

- ▣ Use of locally produced energy sources for agriculture
- ▣ More food produced per available resources

Carrying capacity

- ▣ Recognition of limits in natural resources and food production capacity

Capacity

- ▣ By various measures, provide significant portion of local food requirements through locally produced food:
 - : At least 50% of our caloric needs
 - : Most of our food
 - : Not dependent on imports

Sustainability

- ▣ Local food production through environmentally sustainable methods, including agriculture and fishing
- ▣ Care and protection of our soils, waters, oceans

[STAKEHOLDER INPUT SUMMARY: GOALS]

Capacity

- ▣ Have at least 2 months' food supply available at all times [2010]
- ▣ Meet at least 50% of our daily caloric needs [2020]

Efficiency

- ▣ Increase harvestable yields for targeted crops
- ▣ Develop and use crops that are more efficient users of water and fertilizers

Planning

- ▣ Establish production goals for crops and agricultural products
- ▣ Identify targeted ag lands for sustainable food production

Promotion and Education

- ▣ Promote eating locally produced food
- ▣ Promote small farms and farmers
- ▣ Create regional farm support centers
- ▣ Educate visitors about food security, self-sufficiency, production

Support

- ▣ Public financing for infrastructure [water, irrigation] for targeted ag lands for local food production
- ▣ Public assistance for establishing markets for locally produced food
- ▣ Tax incentives/credits for development of targeted ag lands for local food production, for small farm production
- ▣ Preferred shipping rates for locally produced food

[OVERVIEW FROM ISLAND OF HAWAI'I WHOLE SYSTEM PROJECT PHASE I REPORT – ROCKY MOUNTAIN INSTITUTE, 2007]

- ⌘ Diversified local agriculture, strong local market base, and reduced dependence on commodity crops form a powerful risk mitigation strategy.
- ⌘ There are two large opportunities for increased self-sufficiency: first, to focus on the biggest gaps in local market share [non-tropical fruits, meat, and processed food], and second to shift food preferences to favor products more conducive to the islands' climate and small farms and gardens.
- ⌘ The key leverage points include reducing cost along the value chain, building better distribution infrastructure, and growing high-end markets and resident market base.
- ⌘ The State of Hawai'i has pockets of self-sufficiency in food, a growing local market pull, and a strong future potential. Fresh produce, especially vegetables used in Asian cuisine, have a large local market share.
- ⌘ The greatest barriers to increasing food self-sufficiency are cost and distribution infrastructure.
- ⌘ Business and non-profit opportunities fall into three primary groups: increasing production, developing support infrastructure, and expanding markets.

[STAKEHOLDER INPUT SUMMARY: IMPEDIMENTS]

- | | | |
|--|---|---|
| <p>Resources</p> <ul style="list-style-type: none"> ⌘ Inadequate water and irrigation systems ⌘ Unavailable land; more value in alternative developments and uses ⌘ Fish are down quite a lot, and can be toxic. <p>Costs</p> <ul style="list-style-type: none"> ⌘ Food production ⌘ Land ⌘ Feed stock and inputs ⌘ Labor ⌘ Local grocery stores' payment schedule not coordinated with farmers' expense schedule ⌘ High information and transaction costs <p>Distribution</p> <ul style="list-style-type: none"> ⌘ Inadequate distribution systems and networks for locally produced food ⌘ Lack of overall coordination and tracking | <p>Education, Understanding</p> <ul style="list-style-type: none"> ⌘ Lack of understanding of the issues of food security and self-sufficiency: by the general public, by the government ⌘ Cultural differences about locally produced food ⌘ Lack of complete, accessible, organized information <p>Government</p> <ul style="list-style-type: none"> ⌘ Arduous and impractical regulations, permits ⌘ Lack of planning ⌘ Lack of coordination ⌘ Lack of direction and priorities ⌘ High information and transaction costs ⌘ For fishermen, it is so expensive to do business here in Hawai'i: Regulations add paperwork, process, and margins are so slight, that businesses stop. | <p>Markets, Demand</p> <ul style="list-style-type: none"> ⌘ Lack of secure local demand for locally produced food ⌘ Existing demand for bulk products, lowest price, less-than-healthy food ⌘ Do people actually value local food? ⌘ Local produce and products are more expensive often: tax structure, labor, lease agreements <p>Markets, Supply</p> <ul style="list-style-type: none"> ⌘ Lack of interest in farming, in being a farmer <p>Planning</p> <ul style="list-style-type: none"> ⌘ Not addressing scenarios including drought, import disruption, local economic downturn, visitor reduction |
|--|---|---|

[STAKEHOLDER INPUT SUMMARY: IMPEDIMENTS CONTINUED]

- | | |
|--|--|
| <p>Incentives</p> <ul style="list-style-type: none"> ⌘ Lack of subsidies, tax incentives for making farming viable, making small farming viable ⌘ Regulations favor large landowners and export crops | <p>Network, Support</p> <ul style="list-style-type: none"> ⌘ Lack of local support systems for food producers, consumers |
|--|--|

[STAKEHOLDER INPUT SUMMARY: ACTIONS]

- | | | |
|--|--|--|
| <p>Access to Land</p> <ul style="list-style-type: none"> ⌘ Long-term Lease Landlord: Investment in 100's of acres to benefit from buying in bulk. The landlord then leases small plots [1–5 acres] at reasonable rates for long periods [30–50 years] to farmers. <p>Leverage points</p> <ul style="list-style-type: none"> ⌘ Bring down input costs ⌘ Improve availability of farming land ⌘ Get higher prices for food ⌘ Build a direct relationship between the farmer and the consumer ⌘ Improve market channel infrastructure ⌘ Enhance sense of local food production community <p>Efficiency</p> <ul style="list-style-type: none"> ⌘ Mechanization R&D: Develop machines that can perform on difficult terrain. This is most applicable to large farms, and could be funded through public/private efforts. | <p>Costs</p> <ul style="list-style-type: none"> ⌘ Biodiesel Crop and Processing: Biodiesel crops may be able to grow effectively at small to large scale. ⌘ Depending on the feedstock, by-products can be used as compost or animal feed. <p>Land Use</p> <ul style="list-style-type: none"> ⌘ Contained dense communities and villages; retaining useful food and bio-fuel ag land. ⌘ Using mainland model for subdivisions rather than island methods. Denser development, nodes, allow more ag land. ⌘ Revise zoning to control and focus growth, encourage infill and density, require productive open space. <p>Credit</p> <ul style="list-style-type: none"> ⌘ Credit and "Barefoot MBA": A credit facility that would provide loans, letters of credit and advice to farmers applying to government and other grants. | <p>Sustainability</p> <ul style="list-style-type: none"> ⌘ Repairing ocean and land resources ⌘ Sustainable fishing and farming practices, elimination of monocultures, identification of holistic integrated food production system <p>Resources</p> <ul style="list-style-type: none"> ⌘ Provide incentives and funding to maintain and improve food-production supporting infrastructure, especially for water. ⌘ Reservoirs: If assign perfect liability to reservoirs, ag goes away. No way to get insurance with this level of liability. ⌘ Work toward more sustainable energy plan: not so wholly dependent on oil. We can do lots of things with our resources: solar, wind, water, biodiesel. Putting land into biodiesel: using land for fuel. |
|--|--|--|

[STAKEHOLDER INPUT SUMMARY: ACTIONS CONTINUED]

Network, Support

- Connecting local-food production, distribution, consumption entities
- Support Commodity Vegetables: Focus on farmers who want to grow fruits and vegetables consumed every day by residents of Hawai'i. Ventures might include greenhouse and hydroponic operations.

Personal Actions

- Individuals' growing their own food; Victory-style gardens
- Demanding local food in stores, farmers markets, restaurants
- Voting for people who will work for solutions to food security and self-sufficiency

Legislation

- Important Ag Land legislation
- Analysis of food production requirements, strategies, potentials, including targeted lands, targeted crops, response to supply disruptions, health
- Creation of targets for land use, resource and infrastructure development, range and proportion of crops
- Incentives for local food production, distribution, consumption
- Incentives for development to include local food production components
- Agriculture development program: grants, support
- Do we subsidize organic farmers? No. A recommendation?
- Assistance through lower property taxes, water rates?

Distribution and Market

- Creation of wholesale market for locally produced food
- Family and neighbor food exchanges
- Distribution Trucking and/or Use of Extant Infrastructure for Distribution: A small fleet of refrigerated trucks or vans that would visit small farms to pick up produce and deliver them to grocery stores, restaurants or markets. And/or use of existing modes of distribution to get local food to residents.
- Processing Facility for Prepared Foods: Home cooking is often a hurdle, so providing residents of Hawai'i with an option for locally grown processed food could boost local market share.
- Fruit Park: Modeled on Japanese fruit parks, an ag-tourism destination featuring a large variety of fruit trees, as well as a restaurant and fruit/fruit product store. Also includes a research station.

Education, Training

- Education and training for local food producers about business, regulations, efficient farming, available resources
- Create food production entrepreneurial incubator
- Education of general public about local food, what's available on land and in sea, what is involved in providing local food
- Education of general public about food security risks
- Education of general public about

healthy, locally-produced diet: availability, what it is, benefits

- Public relations, media campaign: TV, internet, print, film
- Benchmark research from around the world
- Create accessible, comprehensive information clearinghouse
- Establish criteria and methodology for "Made in Hawai'i" sticker for local food.
- Hawai'i Feeds Itself Day: A one-day, state-wide event where all restaurants, schools, public administration, companies and stores would be "local food only."
- Credit and "Barefoot MBA": A credit facility that would provide loans, letters of credit and advice to farmers applying to government and other grants.
- School Gardens: Spaces in schools where students have the opportunity to go to "garden class," take special garden electives or after-school classes. School garden also provides food for schools or families.
- Marketing/Education Body: A body that helps farmers organize to market their brand and products and educate consumers through outreach, chef education, adult cooking classes, etc...

[2009 ANNUAL REPORT QUESTIONNAIRE]



[QUESTIONNAIRE LETTER]

Linda Lingle Governor
David Atkin
David Bylund
Robert Inouye

Robert A. King Chairperson
Wade Lord
Christopher Steele
Mary Steiner

Gail Grabowsky Vice-Chairperson
James Sullivan

Aloha:
The State of Hawai'i Environmental Council would like your help in addressing the topic of Food Security and Self-Sufficiency in Hawai'i.

By law, the Environmental Council presents an Annual Report to the Legislature and the Governor just before the start of the legislative session.

The Environmental Council consists of fifteen members appointed by the Governor with the advice and consent of the Senate. The members of the Council are volunteers, and represent a wide range of industries, interests and communities.

You can find more information at <http://hawaii.gov/health/environmental/oeqc/index.html/envcouncil.html>.

For the 2008 Annual Report, the Environmental Council has selected the topic of Food Security and Self-Sufficiency in Hawai'i for a number of reasons. Providing food for Hawai'i residents and visitors involves large expense of resources, including water and fuel. All environmental factors have an impact on food production

and distribution. Very many policy decisions also have an impact on food production, distribution, and consumption, including tax and regulatory structures.

In Hawai'i, we import 85% of the food and 95% of the energy we consume. The Environmental Council would like to address the implications of this reliance on outside means for our basic necessities.

We would like your input on these issues, and will use this information to make recommendations to the Governor and the Legislature related to this issue.

Please take a few minutes to answer the following questions. The first portion of the questionnaire requires simple rating from 5 for most important to 1 for least important. The second portion of the questionnaire is more open; we are very interested in how you frame the issue of Food Security and Self-Sufficiency and your actions and proposals for improving on the status quo.

Mahalo from the
Environmental Council

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[QUESTIONNAIRE: ISSUES RATING]

5 = Most Important
1 = Least Important

- | | | |
|--|--|---|
| ☒ : State policy addressing food security and self-sufficiency | ☒ : Zoning for compact development | ☒ : Local food production businesses and facilities |
| ☒ : Collaboration of stakeholders | ☒ : Zoning for open space and ag uses | ☒ : Local meat-processing businesses and facilities |
| ☒ : Buying and eating locally-produced food | ☒ : Use of ag land for bio-fuels | ☒ : Local restaurants to use locally grown and produced food |
| ☒ : Variety in food choices | ☒ : Family farming | ☒ : Education for the general public about locally grown and produced food |
| ☒ : Self-sufficiency in times when imports are unavailable | ☒ : Roof-top farms | ☒ : Education for the general public about changing eating habits |
| ☒ : Regulations for food safety | ☒ : Climate change | ☒ : Education in schools about ecosystems, and how plants and animals become food |
| ☒ : Regulations for food production | ☒ : Public funds to repair and maintain water retention and distribution system | ☒ : Education in schools about traditional Hawaiian food production and land use |
| ☒ : Tax incentives for locally grown or produced food | ☒ : Public funds to improve and expand water retention and distribution system | |
| ☒ : Tax incentives for organically grown food | ☒ : Private funds to repair and maintain water retention and distribution system | |
| ☒ : Subsidies for locally grown or produced food | ☒ : Private funds to improve and expand water retention and distribution system | |
| ☒ : Control of invasive species | ☒ : Publicly-funded insurance for reservoirs | |
| ☒ : Restricting use of ag land to only ag uses | ☒ : Hawai'i-produced renewable energy sources for ag production and distribution | |
| ☒ : Ability to build a home anywhere | | |

[QUESTIONNAIRE: OPEN ENDED QUESTIONS]

From your or your organization’s perspective, regarding Food Security and Self-Sufficiency in Hawai’i:

- ☒ : **Definition:** What does “Food Security and Self-Sufficiency” mean? In what ways is this important?
- ☒ : **Goals:** What specific targets or goals do you have or propose relative to food security and self-sufficiency?
- ☒ : **Impediments:** What are the most significant current impediments to achieving food security and self-sufficiency? To successful local farming? To access to Hawai’i-grown or produced food?
- ☒ : **Actions Now:** What are you doing now or what do you see that is happening now in Hawai’i that moves us toward food security and self-sufficiency?
- ☒ : **Actions Next:** What next steps are you taking or do you propose that will help us move closer to food security and self-sufficiency?

[QUESTIONNAIRE ORDERED BY AVERAGE STAKEHOLDER RATINGS]



[MONITORING ACTIONS]



[MONITORING ACTIONS RELATED TO RECOMMENDATIONS IN THE 2007 ANNUAL REPORT]

The recommendations in the 2007 Annual Report focused on environmental justice. The following list includes, to the current knowledge of the **Environmental Council**, the status of each recommendation from 2007. We welcome any further information with which we can update this status report.

Take legislative action that mandates the incorporation of environmental justice practices in the completion of all environmental assessments and environmental impact statements.

[2008] To the knowledge of the Environmental Council, there has been no action related to this recommendation.

Continue and expand the Hawai'i Environmental Justice Initiative to address environmental justice issues impacting all affected groups and communities.

[2008] To the knowledge of the Environmental Council, there has been no action related to this recommendation.

Conduct community-wide campaigns to raise awareness among the people of Hawai'i about environmental justice and their rights.

[2008] To the knowledge of the Environmental Council, there has been no action related to this recommendation.

Develop and maintain a database of best practices for Hawai'i-specific environmental justice impacts and remediations.

[2008] To the knowledge of the Environmental Council, there has been no action related to this recommendation.

[RECOMMENDATIONS FOR FUTURE ENVIRONMENTAL EFFORTS] Original 2007 Document

Before Western contact, native Hawaiians subsisted in the ahupua'a, generally described as a valley bounded between two ridges. From the mountaintop to the ocean floor, the ahupua'a contained all the resources required for survival.

The ahupua'a was a pristine environment, creatively managed to sustain its resources for generations. Streams, home to native fish, shrimp, mollusks, and insects, were free from pollutants that could harm the life it sustained.

Today, the ahupua'a is no longer pollution-free. With the runoff of fertilizers, soaps and engine oil from the land into the streams and oceans, fish – a primary food source for native Hawaiians – themselves have become contaminated.

The polluting of streams and oceans has impacted native Hawaiian practices. Unlike their ancestors, today's Hawaiians find few places to practice subsistence fishing – providing enough fish to sustain their families – because

eating the contaminated fish would endanger their health.

All people have a right to a clean environment in which to live and work, according to Executive Order 12898. But low-income and minority groups, such as Native Hawaiians, are more likely to be impacted by harmful environmental conditions than any other group.

So to lessen potential impacts on minority and low-income populations in Hawai'i due to ever-increasing devel-

opment, Governor Lingle signed into law Act 294 – A Bill for an Act Relating to the Environment. One aspect of Act 294 requires “the development of an environmental justice guidance document to ensure that principles of environmental justice are systematically included in all phases of the environmental review process.” Act 294 assigns each agency involved in this process the duty of identifying and addressing negative impacts on Native Hawaiian, minority, and low-income populations. The environmental justice definition and guidance document aim to assist agencies with this.

The State of Hawai'i Environmental Council is responsible for implementing the Environmental Justice Initiative. The Council contracted with an Environmental Justice Project Coordinator in April 2007 to work with community members to define environmental justice for Hawai'i and develop the

guidance document. In January 2008, the Council will submit a report to the Hawai'i State Legislature, which will include the environmental justice definition and guidance document.

The passing of Act 294 is a first step in implementing environmental justice

Detailed below are recommendations from the Environmental Council to achieve Environmental Justice across the state.

- ☞ Take legislative action that mandates the incorporation of environmental justice practices in the completion of all environmental assessments and environmental impact statements.
- ☞ Continue and expand the Hawai'i Environmental Justice Initiative to address Environmental Justice issues impacting all affected groups and communities.
- ☞ Conduct community-wide campaigns to raise awareness among the people of Hawai'i about Environmental Justice and their rights.
- ☞ Develop and maintain a database of best practices for Hawai'i – specific Environmental Justice impacts and remediations.

principles in Hawai'i. But more needs to be done. Results of Act 294 will be presented in a report entitled “Hawai'i Environmental Justice Initiative.” This report will address requirements to meet Act 294 and Hawai'i laws that support the right for all people to live in a clean and healthy environment.

Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority and Low-Income Populations

In 1994, President Clinton signed Executive Order 12898 with the goal of protecting minority and low-income populations from industrial, government and commercial operations. Regardless of race, color, national origin or income, environmental justice ensures that no group of people suffers more negative environmental impacts than other groups. It also allows those people to participate in decisions that may impact their health or environment.

[MONITORING ACTIONS RELATED TO RECOMMENDATIONS IN THE 2006 ANNUAL REPORT]

The recommendations in the 2006 Annual Report focused on energy use. The following list includes, to the current knowledge of the **Environmental Council**, the status of each recommendation from 2006. We welcome any further information with which we can update this status report.

The Governor, agency heads, and legislators drive hybrid cars or use alternative transportation in a visible way.

[2007] Of the 21 officials who responded to our inquiries, the Director of the Department of Agriculture drives a hybrid car.

[2008] No: 13 Yes: 2

The State require solar hot water and/or PV systems be installed in retrofitted and new state and private buildings, including the Governor's Residence, the State Capitol, and highly visible public buildings.

[2007] HB2175 [2006] establishes policies for the design and building of high performance buildings, and the installation of energy savings devices in existing buildings. HB2175, Section 2 appropriated \$5,000,000 to install a minimum of four [4] photovoltaic, net energy metered pilot projects in public schools, one in each county. DAGS – Public Works Division is actively participating in the “Lead by Example” program to implement Administrative Directive No. 06–01 and Act 96 SLH 2006 Omnibus Energy Bill. Their efforts include developing a LEED application guideline for State agencies, providing LEED and commissioning programmatic support, pilot projects to apply for LEED silver certification at Mānoa Library and Kohala Library, and a pilot retro-commissioning project at the State Capitol.

[2008] The State passed a law, SB644, last year requiring solar hot water on all new construction. Existing buildings are not required to retrofit. PV is not included.

Priority permitting processes for renewable-energy and energy-efficient projects be instituted, and that these processes emphasize public participation and community benefits.

[2007] In 2006, the Department of Health gives priority to processing permits and approvals for affordable housing and alternative energy projects. Further, the Department of Planning and Permitting for the City and County of Honolulu, reports, as of July 2007, that DPP:
...currently offers online permitting for solar installations. Our HonLiNE service rolled out last February. Solar companies have been able to get permits 24/7 and find it convenient. We are also looking into other types of permits for online issuance. While we recognize the benefits of these projects, we do not have the resources to assign priority processing for renewable-energy and energy efficient projects.

People seeking priority permitting often use third party review services which are described online at our website www.honoluludpp.org

[2008] No hard information or laws, but officially the policy of the Governor's office.

The State initiate Programmatic EIS [PEIS] processes with site-specific related Environmental Assessments [EA's] for multi-site renewable energy projects.

[2007] No action.
[2008] No action.

The State implement and strongly encourage sustainable community development and design to support the local integrated economy and reduce transportation-related energy use.

[2007] The Office of Planning within DBEDT reports that they:
...promoted and advocated for planning and land use policy and practices for sustainable growth and development by: preparing three Administration bills that were introduced in the 2007 legislative session, which were intended to: 1: Strengthen the effectiveness and importance of county adopted general plans and community plans in effectuating sustainable growth and land use patterns; 2: Simplify the State land use district boundary amendment process for petitions based on adopted county plans; and 3: Redefine the State Rural District in the State Land Use Law to be able to direct non-farm uses away from agricultural lands and to ensure that rural development does not become rural sprawl.

[2008] No action.

[A TEN POINT PLAN TO MEET HAWAI'I'S PREFERRED ENERGY FUTURE]

Adopted by the Hawai'i Energy Policy Forum [Revised: January 2007 – July 2008]
Referenced in the Environmental Council 2006 Annual Report Recommendations

[Preamble]

Hawai'i's preferred energy future requires a comprehensive integrated approach.

[The Hawai'i Energy Policy Forum's Ten Point Plan strives to:]

- ☐ Promote energy security and sustainability
- ☐ Reduce energy consumption
- ☐ Enhance regulatory goals & protections
- ☐ Foster civic action & participation
- ☐ Diversify energy sources

[Points]

- ☐ Expand Renewable Energy Opportunities
- ☐ Promote Conservation and Energy Efficiency
- ☐ Reduce Green House Gas Emissions in Hawai'i
- ☐ Foster Civic Action and Participation
- ☐ Enhance Regulatory Goals and Protections
- ☐ Encourage Culturally Appropriate and Sustainable Energy Planning
- ☐ Improve Energy Efficiencies and Options in Transportation
- ☐ Support Research and Development of Alternative Energy Sources [hydrogen, wave energy, etc...]
- ☐ Support Sustainable Development and Use of Biofuels
- ☐ Ensure the Security and Reliability of Energy Supply and Distribution

The Hawai'i Energy Policy Forum adopted a preferred energy vision for Hawai'i of achieving "Smart energy solutions to sustain a healthy prosperous, and secure Hawai'i."

01 Expand Renewable Energy Opportunities

Actions to be taken:

- ☐ Work with the state Department of Business, Economic Development, and Tourism [DBEDT], the utilities, industry and others to monitor the rate of "take up" by the market to: determine how well existing policies and incentives are working; submit periodic progress reports; identify barriers to effective implementation of programs and their successes and/or failures.
- ☐ Monitor and report on the energy savings results of the Department of Education [DOE] solar pilot project, and if determined effective, expand to other schools.
- ☐ Identify and report on promising renewable energy technologies [such as solar thermal electric, sea water air conditioning [SWAC], solar air conditioning and wave energy]. Recommendations will be made to the Forum regarding potential state energy initiatives and appropriate legislative or regulatory actions.
- ☐ Explore wind/commercial solar/biomass/geothermal/hydro/wave Energy Development Zones.
- ☐ Evaluate the need for incentives to support statewide waste-to-energy projects.
- ☐ Improve Renewable Portfolio Standards:
 - Review and amend definition of "renewable energy" given the transfer of energy efficiency and other measures to the Public Benefit Funds Administrator. Investigate the establishment of a separate energy efficiency portfolio standard
 - Amend the language regarding utility profitability
- ☐ Expand and enhance Net Metering.
- ☐ Encourage renewable distributed generation.

Actions taken:

- ☐ Net Metering was expanded with the Commission's Decision and Order No. 24089 on Docket No. 2006-0084. The customer-generator and system limits were increased to 100 kW and 1% for the HECO Companies, and to 50 kW and 1% for KIUC. The Commission's D&O also provided a process for consideration of additional modifications to the law without the need for a hearing or legislative action.
- ☐ Briefed legislature on renewable energy working group progress [annually since 2006].
- ☐ Provided testimony which aided in the adoption of renewable energy related legislation in 2007, including:
 - HCR 280/HR 221, requesting DBEDT to conduct a feasibility study of a one-stop permit shop for renewable energy projects
 - Act 205 [SB 987], amending the definition of "renewable energy producer" to include producers of thermal energy from renewable energy resources for purposes of leasing public land; establishing as policy that state and county governments provide priority handling and processing of all state and county permits required for renewable energy projects
 - Act 165 [HB 870], allowing use of \$20 million of special purpose revenue bonds [SPRBs] for Honolulu Seawater Air Conditioning LLC
 - Act 229 [HB 334], allowing use of \$10 million of SPRBs for Sopogy [concentrating solar project at NELHA]
- ☐ Provided testimony for legislation in 2008 Legislature, which resulted in:
 - Act 31[HB2502], making solar energy facilities a permitted use in the agricultural district on class D or E land
 - Act 208 [HB2505], establishing a temporary full-time renewable energy facilitator position

02 Promote Conservation and Energy Efficiency

- Actions to be taken:**
- ☒ Continue work with state agencies and the private sector to improve energy efficiency in buildings. Identify barriers and amendments to existing law or develop new law to advance energy conservation, renewable energy, and to reduce greenhouse gas emissions.
 - ☒ Improve the Energy performance of State buildings.
 - ☐ HEPF’s preliminary energy assessments of the Hawai’i State Capitol building in 2006–07, resulted in the retro-commissioning of the building; which will see energy savings of 25%.
 - ☐ Track the Capitol and other projects to promote and expand retro-commissioning services for other state facilities and quantify energy savings realized or anticipated.
 - ☒ Implement and track the use of commissioning and retro-commissioning services and energy performance contracts in state buildings.
 - ☒ Work closely with the UHM administration to demonstrate energy conservation and energy efficiency applications on the campus, including “Sustainable Saunders” activities, and explore energy efficiency measures on other UH campuses.
 - ☒ Identify viable options for financing energy efficiency and renewable energy opportunities.
 - ☒ Develop case studies showing the financial benefits of implementing energy efficiency projects in state buildings.
 - ☒ Provide periodic reports for dissemination to the public.
- Actions taken:**
- ☒ Supported adoption of Act 96, which established energy efficiency objectives in State Facilities efforts by the counties in developing model energy codes [2006].
 - ☒ Sponsored “Energy by Example” program, performing preliminary energy audits for the State Capitol, Saunders Hall on the UHM campus, Farrington High School, and United Laundry Service. A report of the actions taken to date was produced in 2007. Additionally, support for the Sustainable Saunders project was recognized by the 2007 Legislature with adoption of HR 126; and efforts continue to obtain state CIP funding for the efficiency measures identified.
 - ☒ Supported adoption of Act 157 [HB 1787], which replaces definition of “energy-savings performance contract” with “energy performance contract” with the addition of commissioning and retro-commissioning; extends the maximum term of an energy performance contract from 15 to 20 years [2007].
 - ☒ Co-sponsored with Hawaiian Electric Company [HECO] a facilitated dialogue to develop “Ocean Energy Development Guidelines” [2007].
 - ☒ Supported 2008 legislation [Act 118], clarifying provisions of Chapter 269, Part VII, HRS, relating to the administration and use of moneys for energy-efficiency and demand-side management programs and services.
 - ☒ UHM administration established new energy policy guidelines for the main campus as follows: [a] 30% reduction in overall campus energy use by 2012; [b] 50% reduction by 2015; and [c] 25% renewable energy supply by 2020; and appointed an Assistant Vice Chancellor to oversee the campus facilities and to ensure that energy performance of all new and existing buildings meet or exceed the Act 96 standards. Additionally, HECO and UHM are partnering to reduce large-scale energy use on the Mānoa campus, including installation of an electricity-metering program.
 - ☒ The State Department of Education [DOE] initiated an incentive/disincentive energy conservation program for 280 schools statewide.
 - ☒ Hawai’i Public Housing Authority is developing a performance-contracting Request for Proposals to initiate energy efficiency improvements in its state and federal public housing facilities.
 - ☒ DAGS retro-commissioned five state buildings; and is taking the lead on performance contracting initiatives
 - ☒ DBEDT completed a cost-benefit, life-cycle analysis for the new College of Education; and is developing a cost-benefit, life-cycle analysis for the State Capitol at LEED Silver.

03 Reduce Greenhouse Gas Emissions in Hawai’i

- Actions to be taken:**
- ☒ Monitor the actions of the Greenhouse Gas Emissions Task Force.
 - ☒ Monitor actions of stakeholders, stakeholder groups, governmental agencies or other entities involved in the analysis, regulation or implementation of greenhouse gas measures and policies.
- Actions taken:**
- ☒ Conducted a Greenhouse Gas Emissions panel discussion, which updated members and the public on the current state of the UH greenhouse gas emissions working group [2007].
 - ☒ Supported 2008 legislation [Act 235] appropriating \$140,000 to establish two positions in DBEDT to support the Greenhouse Gas Emissions Task Force created by Act 234, SLH 2007.
- 04 Foster Civic Action and Participation**
- Actions to be taken:**
- ☒ Increase public awareness of energy initiatives in the community at large.
 - ☒ Develop regular energy briefings for policy and community leaders.
 - ☒ Create more informational material about energy issues.
 - ☒ Enhance marketing and paid media activities to reach broader audiences.
- Actions taken:**
- ☒ Coordinated annual informational briefings before the House and Senate energy committees [2006 to present].
 - ☒ Briefed Congressional delegation on energy issues, including their involvement on the HEPF since 2007.
 - ☒ Invited panel presentation to the University of Puerto Rico-Mayaguez on Hawai’i’s experience in developing sustainable energy in island states [2007].
 - ☒ Conducted public briefing on the “Plans and Priorities of the DBEDT and PUC” [2007].
 - ☒ Co-sponsored “Hawai’i’s Climate Crisis,” a documentary aired on KHON and KGMB to bring awareness of the climate and energy crisis to the general public [2008].
 - ☒ Sponsored public briefing on the Hawai’i Clean Energy Initiative [HCEI] presented by the U.S. Department Of Energy and DBEDT [2008].
 - ☒ Invited presentation at the University of Ryukyus’ public forum on “Environmental Preservation.”

05 Enhance Regulatory Goals and Protections

Actions to be taken:

- Monitor the implementation of recently adopted laws and actions regarding energy utility regulation and actions to be implemented by the PUC and Division of Consumer Advocacy [DCA] [July 2006 – July 2008]:
 - Implementation of Renewable Portfolio Standards
 - Implementation of a Public Benefits Fund and “Third Party” DSM administrator by the PUC
 - Greenhouse gas emission limits
 - Hawai’i Clean Energy Initiative including proposed broad revisions to the utility regulation incentives framework
- Ensure that the PUC and DCA have the necessary resources to timely and fairly address regulatory issues [July 2006 – July 2008].
 - Monitor reorganization plans and support the agencies’ plans and funding in the 2009 legislature.
 - Ensure that the Administration and the 2009 Legislature follow through with funding and staff positions consistent with the previously approved restructuring of the PUC.

Actions taken:

- Supported adoption of Act 183 [HB 1004] and Act 177 [HB 1005], providing funding and staffing to restructure the DCA and PUC [2007].
- Commissioned a comprehensive study examining existing policies and regulations and recommending amendments to promote efficiency and renewable resource implementation [“Opportunities and Obstacles in Hawai’i’s Laws to Implementing Energy Efficiency and Renewable Energy Resources”] [2007].
- Supported 2008 legislation [Act 118], clarifying provisions of Chapter 269, Part VII, HRS, relating to the administration and use of moneys supporting energy-efficiency and demand-side management programs and services and the status of the public benefits fee administrator.

06 Encourage Culturally Appropriate and Sustainable Energy Planning

Actions to be taken:

- Revitalize urban centers and rural plantation communities to promote healthy living environments and strong economies by rebuilding and upgrading local infrastructure so people can afford to live where they work.
- Expand the redevelopment of idled urban and plantation era “brownfield” lands into productive use.
- Maintain and expand the amount of “greenbelts” [that preserve from development certain undeveloped natural areas dedicated to agriculture and/or park space].
- Develop strategies for culturally sensitive siting of renewable energy development
- Develop culturally sensitive models for renewable energy.
- Explore ways in which indigenous communities can be major stakeholders in new technology and opportunities for energy production and energy conservation.

Actions taken:

- Facilitated dialogue on ocean energy development guidelines [2007].

07 Improve Energy Efficiencies and Options in Transportation

Actions to be taken:

- Explore energy efficient strategies in the transportation sector.
- Develop indicator[s] to measure progress of energy efficient vehicles program and the implementation of the alternative fuel standard.
- State Government Energy Efficiency Vehicle Report Card: work with DBEDT to monitor the effectiveness of energy efficient vehicle implementation actions in state departments and produce a departmental energy efficient vehicle report card.

Actions taken:

- Supported study of energy efficient strategies in the transportation sector, which resulted in Act 254 [HB869][2007]; and convened stakeholders to explore policies and strategies for making Hawai’i a “transportation paradise.” The work resulted in a proposed study and a report [“State of Hawai’i Energy Efficiency in Transportation Strategies”] [January 2008] and subsequent study of energy efficient strategies in ground transportation [2008].

08 Support research and development of alternative fuels [hydrogen, wave energy, etc.]

Actions to be taken:

- Recognize Hawai’i as a premier demonstration site for the deployment of the hydrogen economy.
- Invest in long term research and development of alternative renewable energy resources such as hydrogen fuel cell technology, wave energy, etc...
- Seek funding for development of an ongoing energy strategy for renewables/hydrogen economy, including support for DBEDT’s implementation of the Renewable Hydrogen Program.
- Identify sites for demonstration of hydrogen production, distribution and use in both stationary and vehicle fuel cell applications.

Actions taken:

- Supported establishment of a hydrogen fuel cell test facility and for commercial fuel cell development.

9.9 Support Sustainable development and use of biofuels

- Actions to be taken:**
- ⌘ Support use of biodiesel derived locally.
 - ⌘ Study and provide recommendations for possible paths for expansion of statewide ethanol and biodiesel production, including the long range implications and impacts of increased use.
 - ⌘ Encourage public procurement of biofuels for government vehicles.
 - ⌘ Adopt renewables fuels standard.
 - ⌘ Prepare a white paper on “Biofuels for Hawai’i” addressing the use of biofuels for electricity and transportation needs.
 - ⌘ Support development of strong biofuels production and use in the state.
- Actions taken:**
- ⌘ Assessed biofuel industry development in response to HCR 195, which resulted in a report to the Legislature [“Biomass and Biofuels to Power Study”] [2007].
 - ⌘ Supported adoption of Act 159 [SB 1943], which adds biofuel processing facilities to the list of permitted uses in an agricultural district; establishes an energy feedstock program [2007].
 - ⌘ Supported funding and staffing for DBEDT to develop the Hawai’i Bioenergy Master Plan [2007 and 2008].
 - ⌘ Convened public briefing on “Hawai’i’s Pathway to Energy Independence” by Congressman Collin Peterson, Chair of US House Committee on Agriculture, which resulted in inclusion of funding for the Pacific Insular Sun Grant Center in the recently reauthorized 2008 Farm Bill [2007].
 - ⌘ Convened public briefing on Hawai’i’s biofuel research, titled “Hawai’i’s Energy Future: What Will It Look Like?” [2008].

10.0 Ensure the security and reliability of energy supply and distribution

- Actions to be taken:**
- ⌘ Develop indicator[s] to measure the progress in developing secure and safe energy system.
 - ⌘ Develop systems that have endurance, hardening resistance, and can overcome vulnerabilities to potential acts of terrorism and natural disasters such as hurricanes and tsunamis.
 - ⌘ Provide guidance to PUC to allow recovery of utility investments that improve grid security.
- Actions taken:**
- ⌘ In partnership with the Office of Hawaiian Affairs, commissioned a study to evaluate the natural gas options for Hawai’i [“Evaluating Natural Gas Import Options for the State of Hawai’i”] [2007].
 - ⌘ Monitored the implementation of adopted laws on energy utility regulation and actions of the PUC and DCA. See Act 182 [SB 990], Implementation of Petroleum Industry Monitoring, Analysis and Reporting [2007].
 - ⌘ Supported advance preparedness for energy shortage emergencies due to oil market disruptions or natural or manmade disasters by securing the delivery of electric and gas services and protecting production and storage of fuel and fuel feedstocks for utility and transportation [ground, air and marine] uses.
 - ⌘ Monitored the work of the Hawai’i Harbors User Group and the State Harbors, to work together on a statewide Harbor Modernization Plan to upgrade harbors infrastructure, ensuring adequate harbor capacity to avoid disruption in the delivery of hydrocarbon and biofuels as well as other cargos. Supported adoption of Act 127 [HB 250], which establishes a formal partnership between the Aloha Tower Development Corporation and the Department of Transportation Harbors Division for the development of the Honolulu Harbor infrastructure.



A close-up photograph of a salmon fillet on a white plate with a wooden spoon. The salmon is the central focus, showing its characteristic orange-pink color and flaky texture. The background is softly blurred, showing the white plate and the handle of the wooden spoon. The overall lighting is warm and natural.

3908.0

miles

from

Austin, MN

☞ With an increase in food transportation there is an:

Increase in packaging and processing



Increase in fossil fuel consumption [for food packaging]



Increase in greenhouse gas emissions → Increase in damage to the ozone → Increase in global warming → Increase in climate change

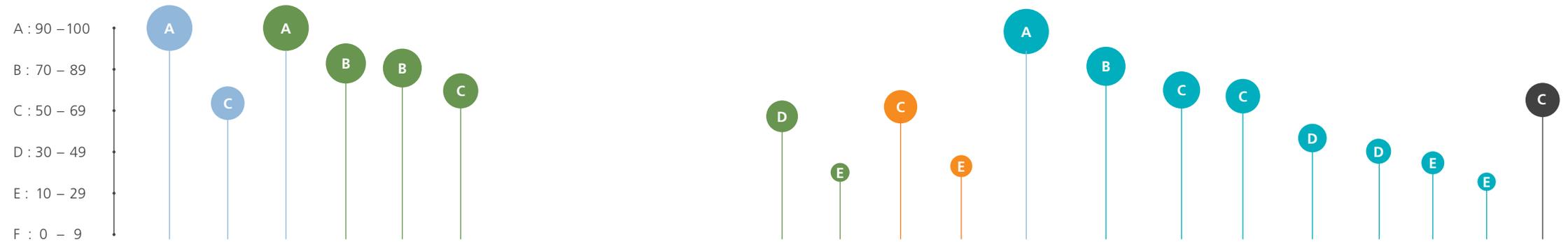
[ENVIRONMENTAL INDICATORS]

Environmental indicators are measurements that track environmental conditions over time. Each year, the **Environmental Council** collects data on several indicators of the quality of Hawai'i's environment. These data are presented in text, tables and graphs. The indicators provide a wide look – from water quality to native species – at the many faceted task of keeping Hawai'i clean and healthy. In order for an ecosystem to be “sustainable,” it must:

- ☞ Use renewable energy alternatives such as wind as the source of energy
- ☞ Dispose of wastes and replenish nutrients by recycling
- ☞ Maintain biological diversity
- ☞ Maintain adequate carrying capacity

[INDICATORS REPORT CARD]

In this section, the Environmental Council grades the status of Hawai'i's environment. This report card provides citizens and policy makers with a quick assessment of how well we are caring for our environment. The Council hopes this evaluation stimulates the public to learn about and take action to improve our environment. The method used is based on the National Wildlife Federation's 1971 Environmental Quality Index [Kimball, 1972]. Individual indicator scores are assigned as follows:



	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%	
SCORE	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%	
LATEST DATA	28	517	2.70	1.97	352	71.21	36	217	20.59	5.66	99.80	725,000	16	1519	80.401	70	0.83	8		
BENCHMARK DATA																				
Desired	75	100	2.50	2.25	100	124.00	75	1,309	16.74	25.00	100.00	1,000,000	25	500	50,000	-	0.33	50		
Undesirable	100	1,000	-	1.03	1000	-	-	-	25.00	-	90.00	-	-	3,000	100,000	100	1.00	-		

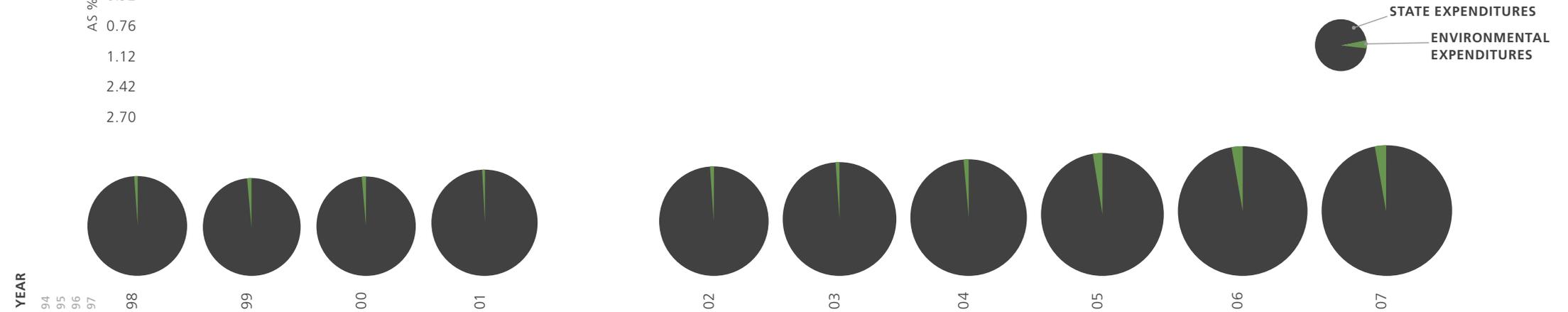
A linear scale is employed to assign scores for conditions falling between the limits listed. Letter grades correspond to the assigned scores.

Latest data equal to or better than desired level = 100
 Latest data equal to undesirable level = 0

INDICATOR	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Particulate levels as percent of fed standard	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Number of noise complaints	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Percent of state funding for environment	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Acres of conservation land [millions]	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Number of oil & chemical spills	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Hazardous waste generated in tons	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Percent waste diverted	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Bikeway miles	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Greenhouse gases emissions in million tons	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Percent renewable and alternative energy	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Percent population served water below MCL level	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Acres of watershed partnerships	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Percent of treated wastewater reused	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Number of bus boardings [millions]	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Water consumption in million gallons	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Number of impaired streams	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Number of motor vehicles per capita	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Main HI Islands Onaga SPR	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%
Overall Grade	100%	54%	100%	77%	72%	59%	48%	17%	53%	23%	98%	73%	66%	57%	39%	30%	25%	16%	56%

State Environmental Expenditures

YEAR	STATE EXPENDITURES	ENVIRONMENTAL EXPENDITURES	ENVIRONMENTAL SPENDING
98	[MILLION \$] 5,395	[MILLION \$] 60	1.11
99	5,315	69	1.30
00	5,538	69	1.24
01	6,175	51	0.83
02	6,700	64	0.95
03	7,198	66	0.92
04	7,367	56	0.76
05	7,564	85	1.12
06	8,293	201	2.42
07	9,212	249	2.70



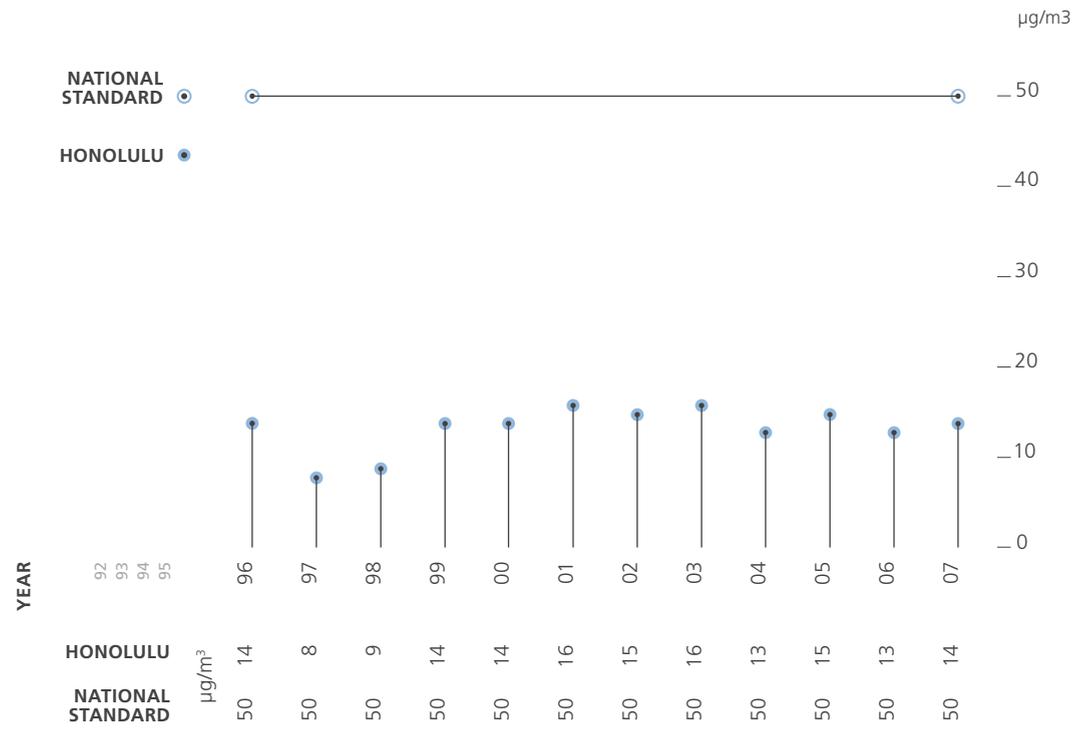
Source: The Variance Report, State of Hawai'i, compiled by the Department of Budget and Finance. This report is prepared annually and submitted to the state Legislature.

Environmental protection is one of 11 primary objectives of state government. Programs under the purview of environmental protection include:

- Department of Health
 - Environmental Management
 - Office of Environmental Quality Control
 - Environmental Health Administration
- Department of Land and Natural Resources
 - Aquatic Resources
 - Native Resources and File
 - Protection Program
 - Water Resources
 - Conservation and Resources Enforcement

- Natural Area Resources and Watershed Management
- Natural Physical Environment
- Department of Agriculture
 - Pesticides

More funding to promote the goals of Hawai'i's environmental programs will result in better overall state environmental quality. The portion of expenditures for environmental protection reflects the priority given to environmental programs relative to other functions. The table shows the sum of money and the percentage of total state expenditures spent on environmental protection programs. The increase in expenditures is mainly due to filling vacant positions.



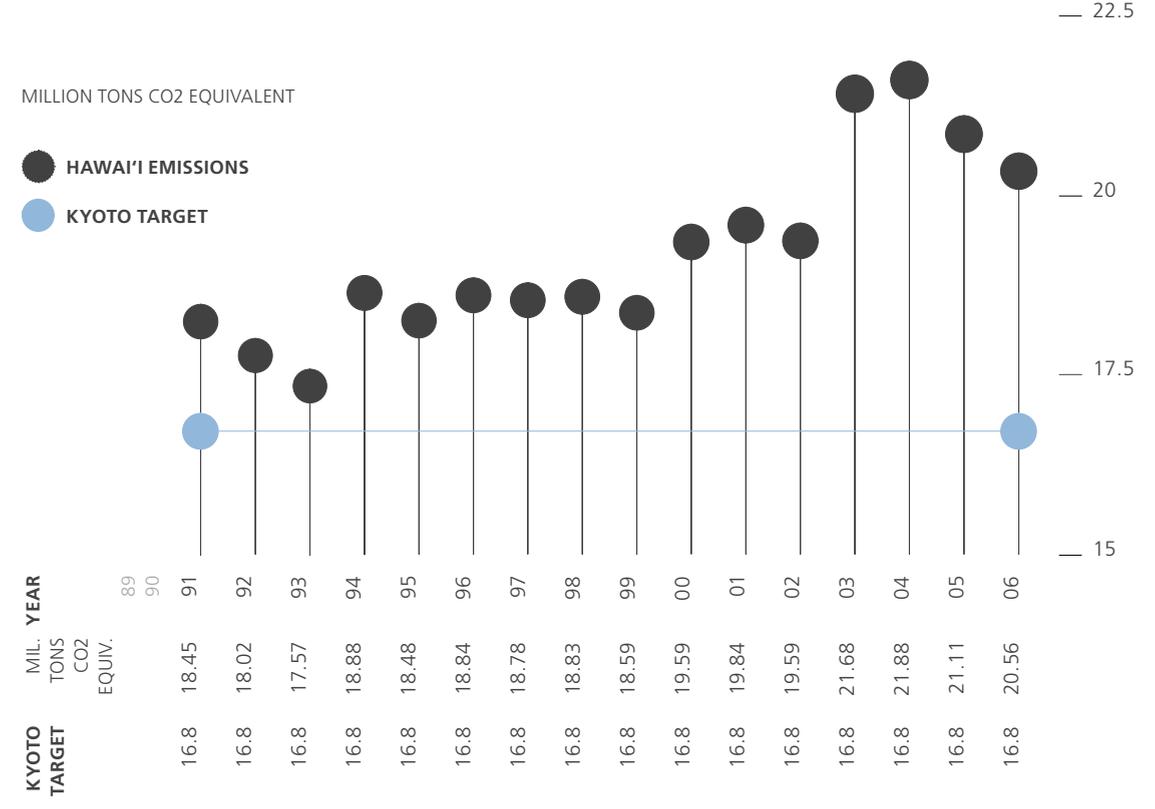
Source: Hawai'i Department of Health. The EPA has set the annual average of small particulate matter, or PM₁₀, at 50 micrograms/cubic meter. PM₁₀ is defined as particulates with an aerodynamic diameter less than or equal to 10 microns. At the Honolulu monitoring station, located in downtown, the annual average concentration of particulates varied from 14 to 16 micrograms/m³. At 16 µg/m³ this annual average is 72% below EPA's standard.

The concentrations measured in Honolulu are far below the national standard. The visual trend line shows that, within the past 5 years, the particulate levels have stayed on a fairly even line between 14–16 µg/m³. Concentrations of PM₁₀ are not significantly affected by sulfates from volcanic emissions carried over O'ahu by Kona winds.

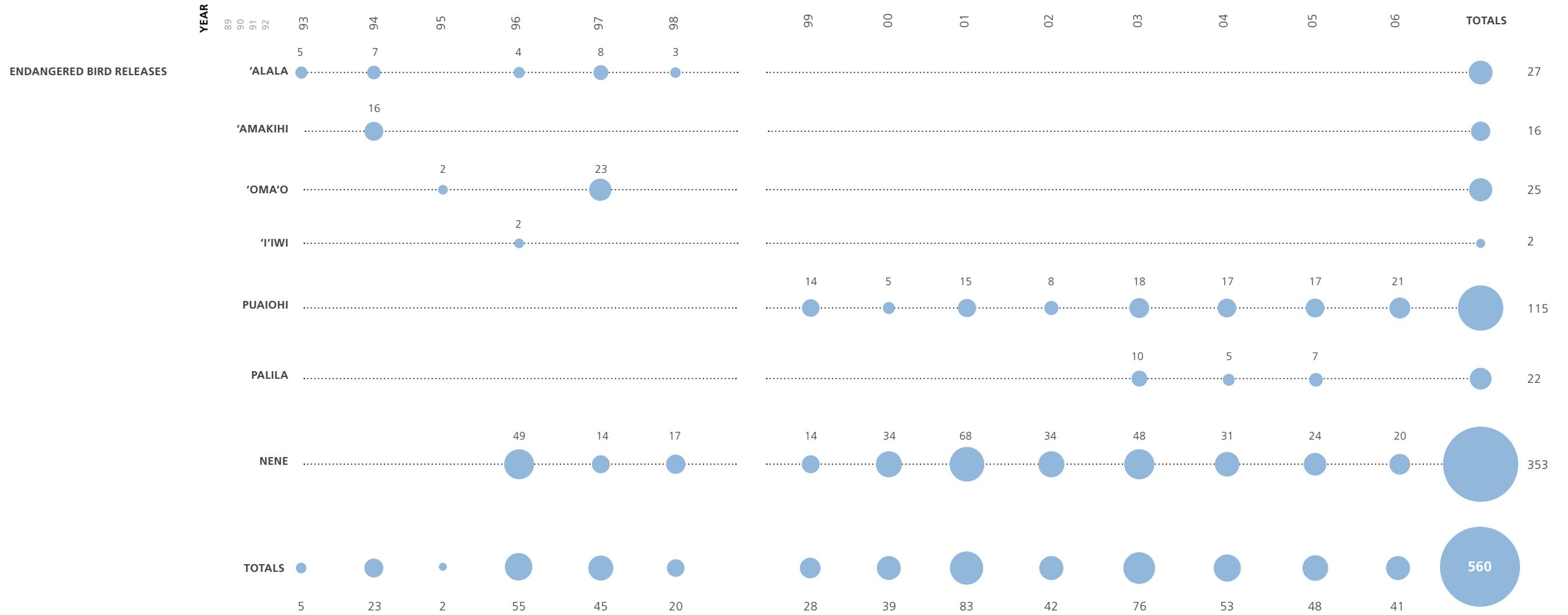
Note: PM₁₀ are annual means

For a statewide report on air: www.hawaii.gov/health/environmental/air/cab/cabmaps/report.html

For real/near time monitoring data for O'ahu and Hawai'i: www.hawaii.gov/don/air-quality/index.html



Source: State DBEDT, Databook 2006. The earth's climate is changing because human activities are altering the composition of the atmosphere through the buildup of greenhouse gases, primarily carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons. The energy sector produces 90 percent of the greenhouse gases. The table shows the estimated greenhouse gas emissions in Hawai'i.

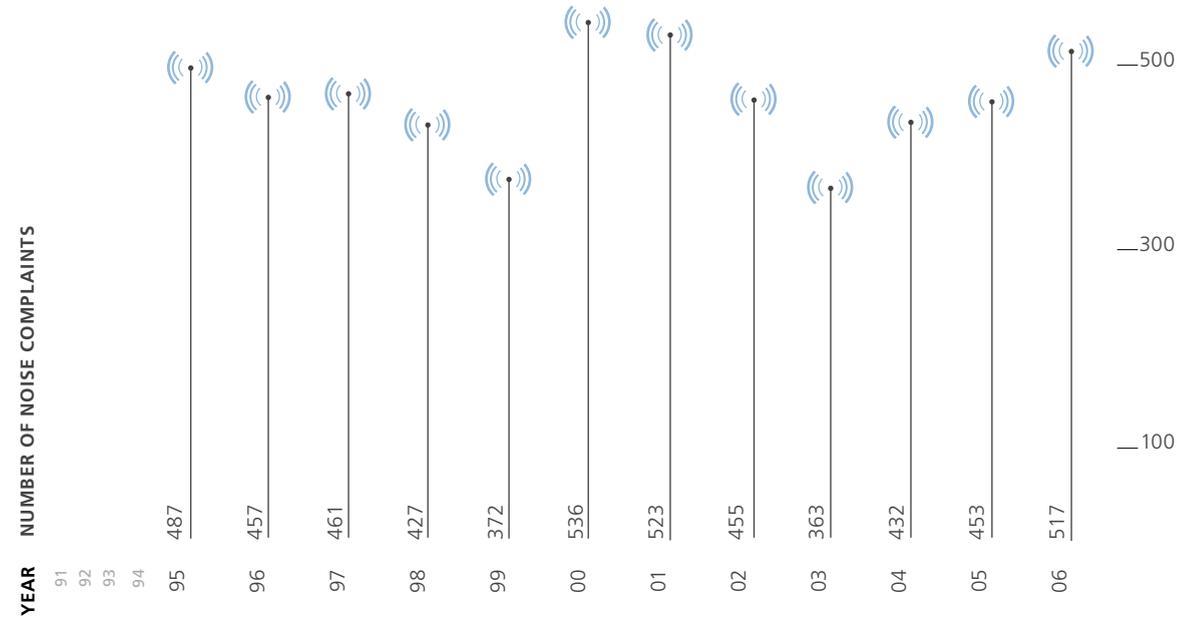


Source: DLNR, DOFAW
 The Hawaiian Islands are home to species of birds that are found nowhere else on the planet, exhibiting a staggering array of adaptations to life in their unique habitats. Prior to human disturbance, Hawaiian birdlife was abundant from the mountain cloud

forests to the dry forests by the sea in what are thought to have been the highest densities of any birds on earth. Of the more than 140 native breeding species and subspecies present prior to the colonization of the islands by humans, more than half have been lost

to extinction. The Division of Forestry and Wildlife collaborates broadly with government and private researchers, managers, and landowners to implement programs designed to protect and recover Hawai'i's unique forest bird species and their habitats.

Noise Complaints

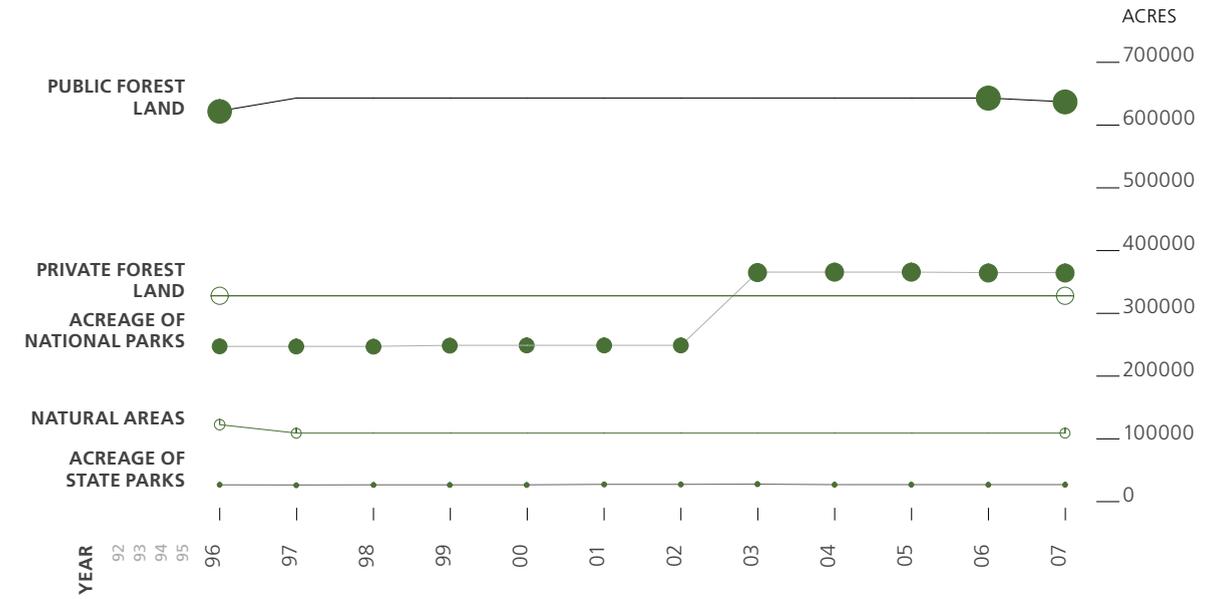


Source: Department of Health – Noise, Radiation and Indoor Air Quality Branch.

Loud noises can lead to health problems such as stress and hypertension. Noise also causes distress to wildlife and disrupts people’s enjoyment of nature and wilderness. Usually, increases in urbanization result in more noise.



Acreage of Forest Lands, Natural Areas, State and National Parks in Hawai'i



The table below and graph above show the acreage in public and private forestland, natural areas, state and national parks in Hawai'i. In general, this acreage has increased. However, the acreage in the Natural Area Reserve System [State] and the number of trees in City and County Parks has decreased.

YEAR	PUBLIC FOREST LAND	PRIVATE FOREST LAND	NATURAL AREAS	STATE PARKS	NATIONAL PARKS
96	622,339	328,742	122,703	26,784	247,349
97	643,134	328,742	109,164	26,554	247,349
98	643,134	328,742	109,164	26,814	247,349
99	643,134	328,742	109,164	26,815	249,001
00	643,134	328,742	109,164	26,815	249,001
01	643,134	328,742	109,164	27,626	249,001
02	643,134	328,742	109,164	27,626	249,042
03	643,134	328,742	109,164	28,002	356,830
04	643,134	328,742	109,164	27,116	356,830
05	643,134	328,742	109,164	27,164	356,830
06	643,134	328,742	109,164	27,164	364,999
07	637,000	328,742	109,164	27,164	364,999

Source: State of Hawai'i Databook 2006

Natural Area Reserves System
NARS was created to preserve and protect representative samples of the Hawaiian biological ecosystems and geological formations. In 1937, 1027,299 acres were in forest reserves.

Public Forest Land
State owned and privately owned lands under surrender agreement in forest reserve system.

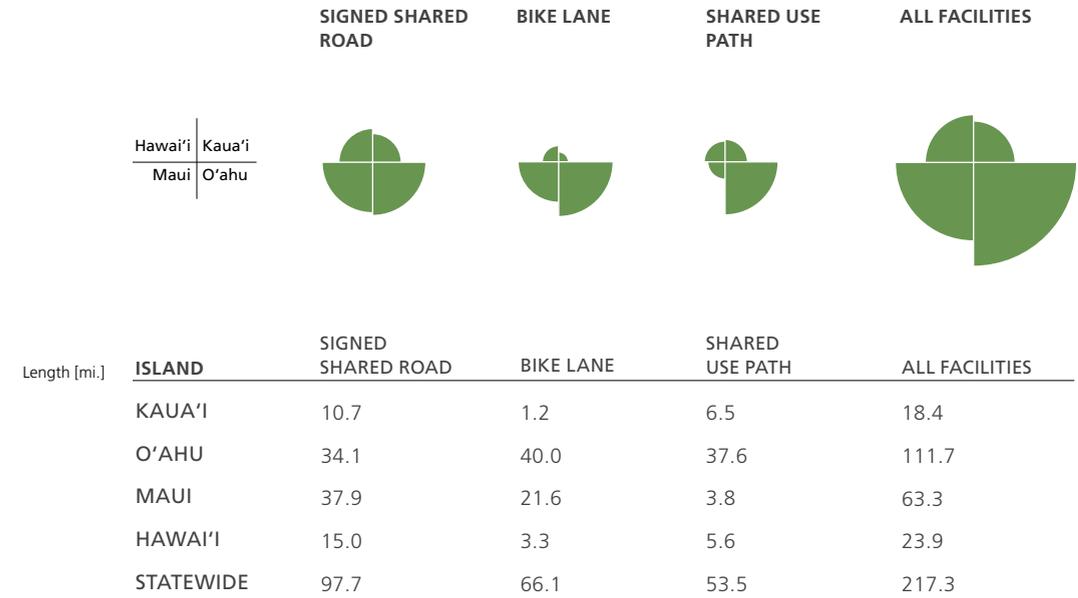
Private Forest Land
Private forest land within conservation district. Most lands were previously in the forest reserve system.



Source: Hazardous waste generation, as presented in this indicator, is reported to EPA by “large quantity generators” biennially in odd years. Data from the last reporting cycle for 2005 is available on the EPA website [www.epa.gov]. Overall, the quantity of waste generated has ranged from about 780 to 1700 excluded from the indicator because the data quality for wastewater volumes is particularly questionable, especially since volume was removed as an EPA reporting requirement in 1997. The majority

of hazardous wastes in Hawai‘i are sent to permitted commercial treatment storage disposal facilities on the mainland, while the recyclable solvents are processed in state. Hazardous waste is defined in 40 CFR 261.3 as waste having any of the four hazardous characteristics: ignitability, corrosivity, reactivity or toxicity, or a waste specially listed as a substance to be regulated as a hazardous waste. Common examples include paint, battery acid, oil, lead, and waste bleaches.

Compared to other states, hazardous waste generation is relatively low in Hawai‘i. During the previous eight-year period, hazardous waste generation appears to be decreasing after a slight increase in 1997. The significant decrease in waste generation for 2001 is linked to the efforts of the waste minimization coordinator and a stronger inspection and enforcement presence. The increases in 2003 and 2005 may be due to a one-time generation for clean-up of contaminated sites.



Alternate transportation modes such as bicycling and mass transit systems conserve energy, alleviate traffic congestion, reduce air pollution, and support physical fitness and recreation. Overall, they improve environmental quality and the urban landscape. The table below shows the inventory of bikeways miles in Hawai‘i as of 2007.

Notes:
 i) Bikeway miles are those within State and County jurisdiction.
 ii) Bikeway miles are provided only for those that are designated as such through signage. The State and Counties have installed many miles of improved paved shoulders, 4 feet or wider, on roadways which can accommodate bicycles but are not designated as such.

Number and Type of Deposit Beverage Containers Recycled



- ALUMINUM 104,332,358
- PLASTIC 52,770,560
- GLASS 50,754,239

- ALUMINUM 305,505,271
- PLASTIC 168,757,194
- GLASS 153,889,934

- ALUMINUM 304,916,891
- PLASTIC 179,775,037
- GLASS 147,096,713

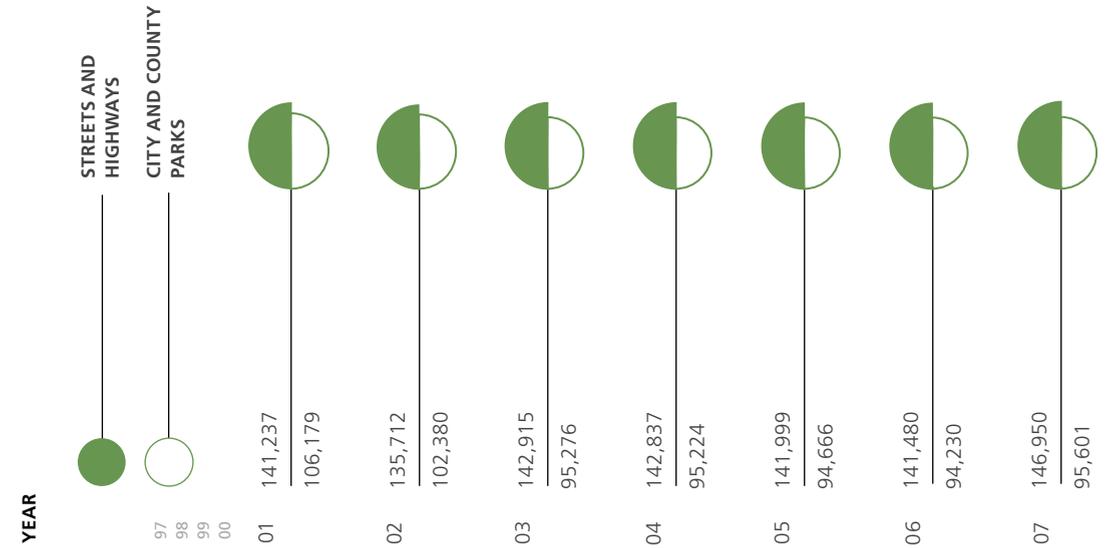
01
02
03
04
05 [Jan-Jun]
06
07
YEAR



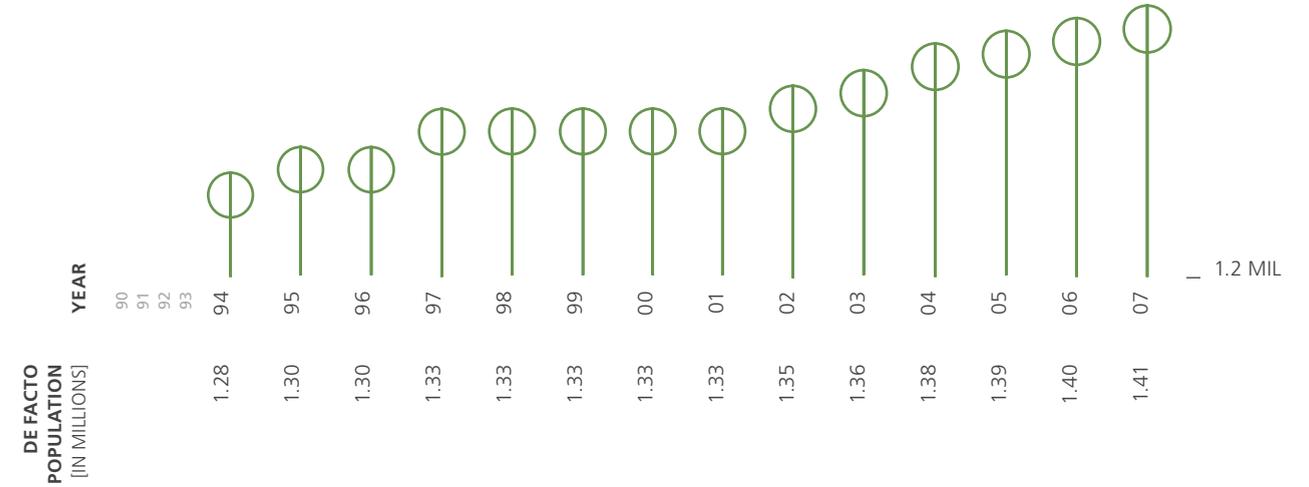
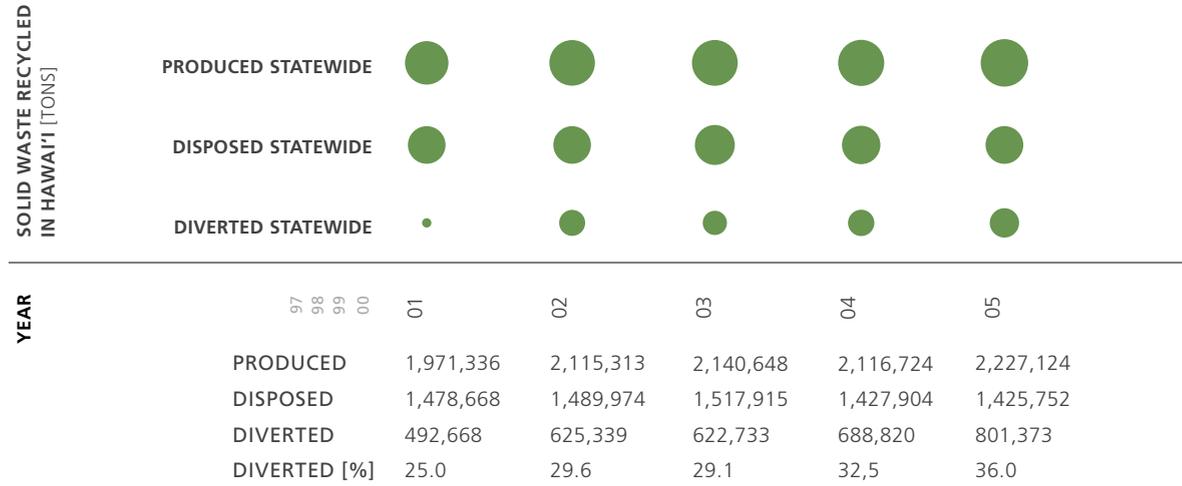
Source: Department of Health
Each year, approximately 900 million beverage containers are sold in Hawai'i. These containers are often discarded in the waste stream or as litter in our community. Consumers can help by recycling as many beverage containers as possible. As an incentive, the Hawai'i Deposit Beverage Container Program, passed in 2002, places a 5 cent redeemable deposit on each beverage container. Consumers get back their 5 cents when they return their containers to a redemption center. Unclaimed deposits are used to support Hawai'i's

recycling infrastructure. A unique feature of Hawai'i's bottle bill is that beverage distributors pay a 1 to 1.5 cent fee per container.

Number of Street Trees or in City and County of Honolulu Parks



Source: State of Hawai'i Databook 2006



Source: Department of Health

The amount of waste being landfilled has been increasing over the past seven to eight years. The percentage of solid waste diverted from landfills for recycling or reuse in Hawai'i has also slowly increased over the past several years.

The state's current diversion rate stands at 36% and is in line with the most recent national statistics. The Environmental Protection Agency [EPA] data indicates a national recycling rate of 28% in 1999. The state's goal of 50% waste diversion was set in 1991 and mirrored the EPA's recycling goal at the time. The EPA has since revised

its recycling goal to 35%. This change was made in recognition of the fact that states and municipalities needed a broader time frame in which to reach higher waste reduction levels.

Some mainland states and municipalities have taken great strides in increasing recycling rates, while Hawai'i's commercial recyclers continue to deal with long-standing issues. Most notable is the high cost of shipping to the Far East or the mainland U.S. where most recycling markets are located. Volatility in recycled materials markets, combined

with the relatively small amounts of materials generated in Hawai'i, also continues to challenge recyclers.

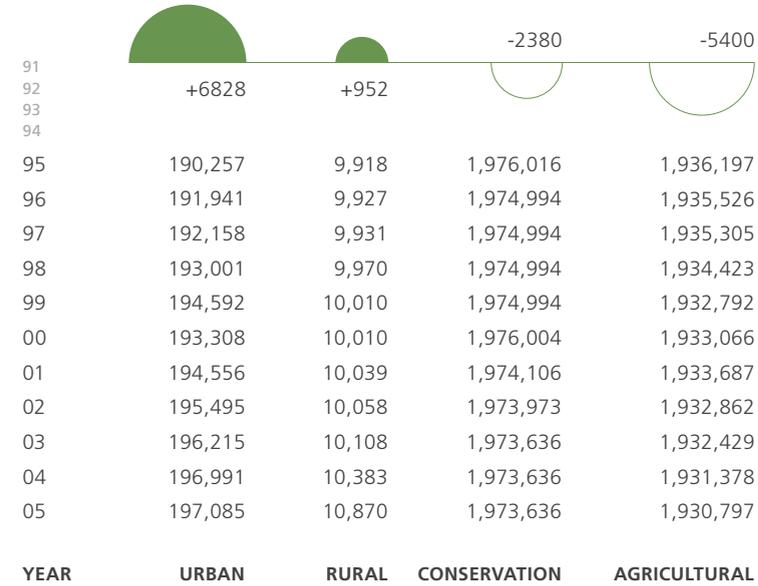
Source: State DBEDT, Databook 2006

The stress of population growth adds pressure on our ecosystem. More people mean more wastes, more housing areas, more cars. Hawai'i's de facto population [which include visitors present on that day but excludes residents temporarily absent] keeps growing from year to year. DBEDT estimates that by the year 2020 our de facto population will reach 1.72 million. This population increase creates many of the challenges as we try to balance the needs of our people and the health of our ecosystem. According to the Commission for Environment Coopera-

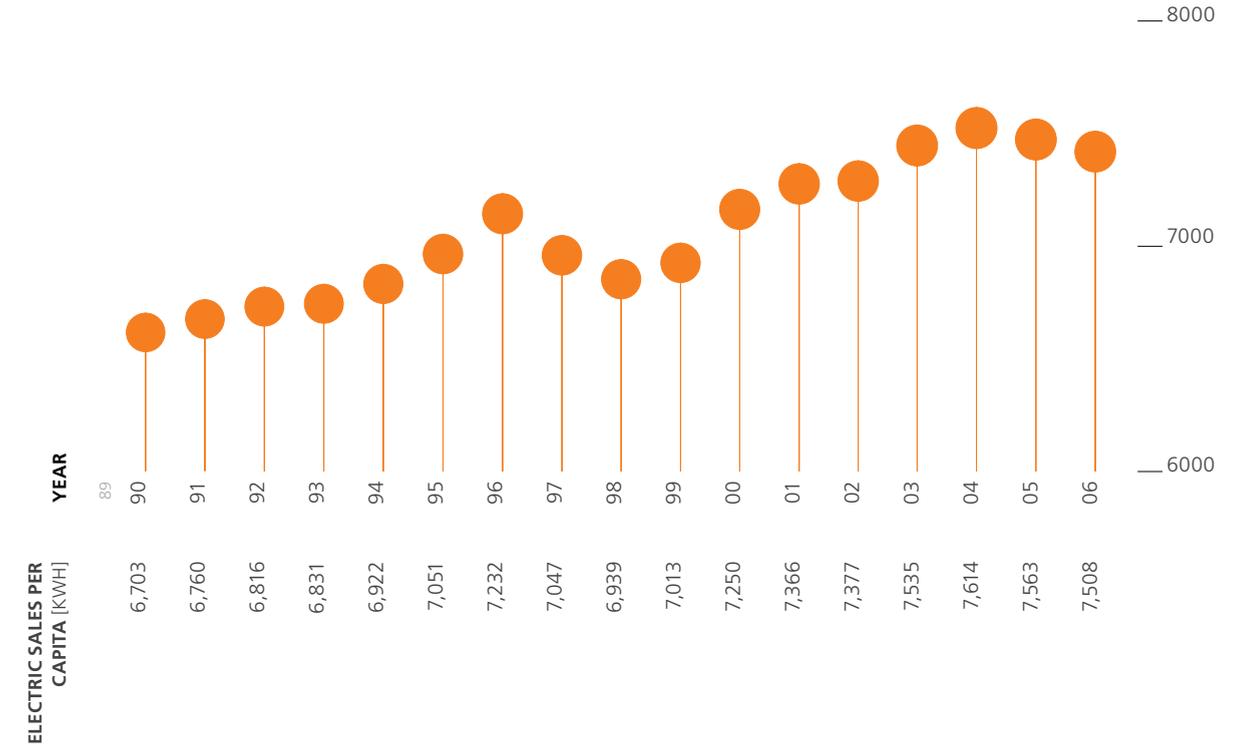
tion [2001], an average person in the U.S. consumes four times as many resources as the average person in the world. Reducing our consumption is one way to minimize our impact on our ecosystem.



CHANGE IN ACRES
1995 – 2005

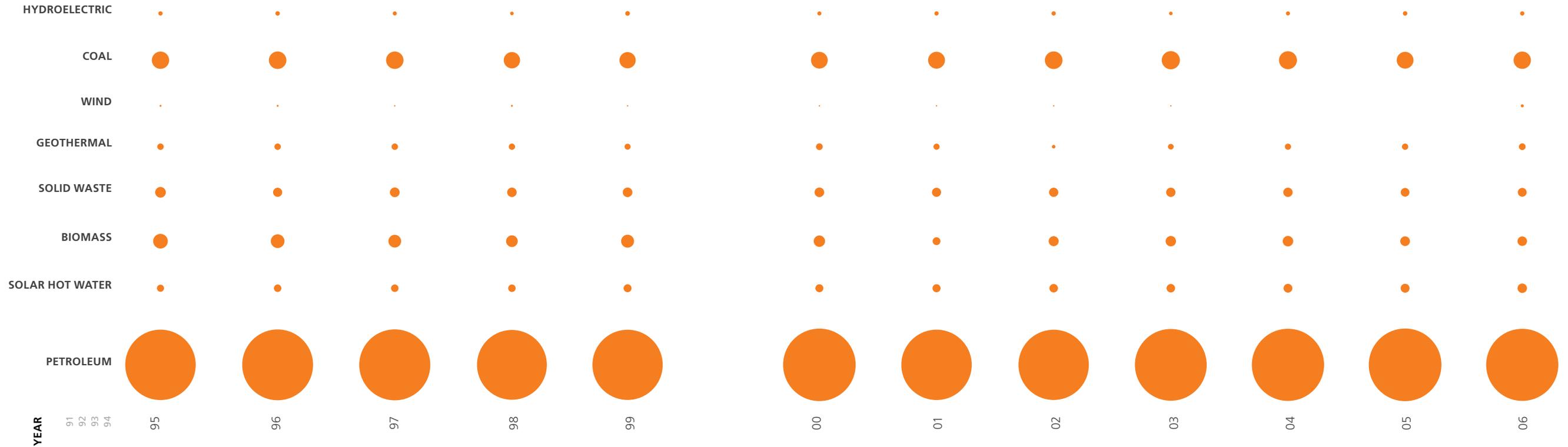


There are four land use districts designations for all lands in the state: urban, rural, agricultural, and conservation. With the decline of sugar cane and pineapple, there may be less productive agricultural land in Hawai'i than in previous years. The table shows the change in acreage of each state land use district between 1995 and 2005.



Source: Utility FERC Form 1 and Annual Reports to PUC via DBEDT SID. The table depicts the electricity sales [all utilities, all islands] per capita of de facto population in Hawai'i.

Energy Consumption by Source



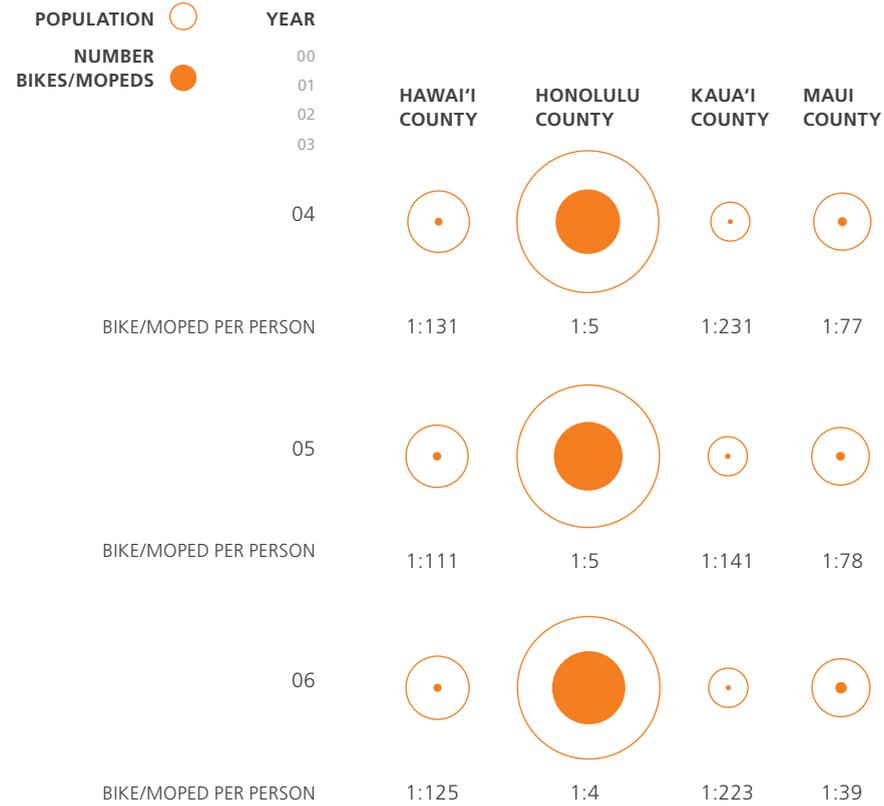
Source:
State DBEDT,
Databook 2006

One of Hawai'i's goals [for example, see Chapter 226–18, HRS] is to replace energy produced from fossil fuel with renewable [hydroelectric, wind, geothermal, biomass, solar] and alternative [solid waste] sources. The table below shows the amount of energy used in Hawai'i in trillion British thermal units [Btu].

YEAR	95	96	97	98	99	00	01	02	03	04	05	06
HYDROELECTRIC	1.0	1.1	0.9	0.7	1.2	0.9	1.0	1.0	0.7	0.9	1.1	1.0
COAL	16.5	16.9	16.7	14.7	14.5	15.4	15.7	17.1	18.2	17.8	15.5	16.5
WIND	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.5
GEOHERMAL	2.3	2.3	2.3	2.2	2.0	2.5	2.1	0.7	1.8	2.1	2.2	2.5
SOLID WASTE	6.3	4.6	5.2	5.0	5.1	5.1	4.6	4.7	4.8	4.8	4.2	4.3
BIOMASS	11.8	10.3	8.9	7.5	9.2	7.1	3.4	5.5	6.1	6.1	5.2	5.0
SOLAR HOT WATER	2.8	3.1	3.1	3.1	3.5	3.5	3.6	4.0	4.3	4.3	4.4	4.9
PETROLEUM	273.9	277.1	278.3	269.1	272.4	290.2	273.7	272.8	287.7	287.7	291.5	287.1

TRILLION BRITISH THERMAL UNITS [BTU]

Number of Bicycles and Mopeds

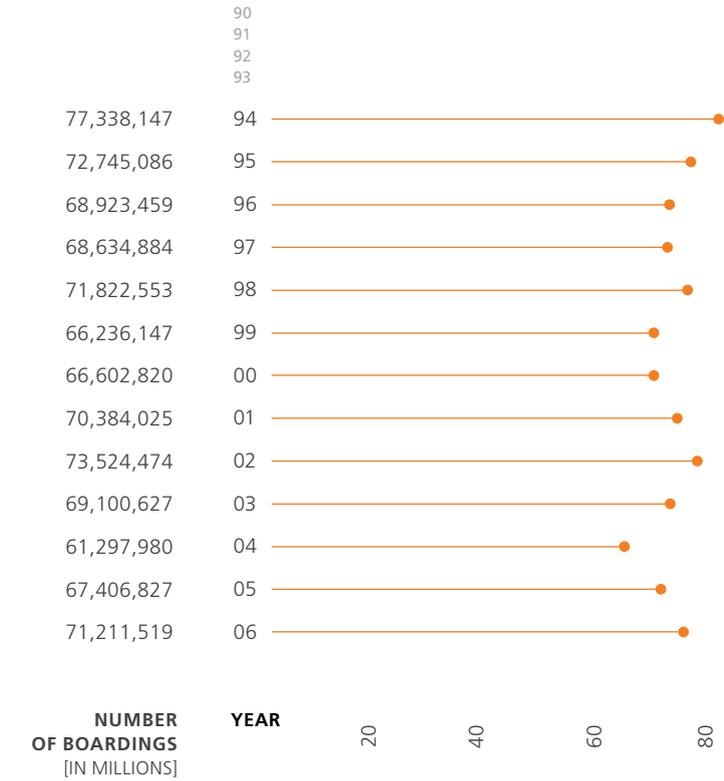


Source: State Databook 2006

	04		05		06	
	POPULATION	NUMBER BIKES/MOPEDS	POPULATION	NUMBER BIKES/MOPEDS	POPULATION	NUMBER BIKES/MOPEDS
HAWAI'I COUNTY	160,129	1,223	164,770	1,485	169,419	1,357
HONOLULU COUNTY	895,895	176,848	902,034	200,240	906,715	229,135
KAUA'I COUNTY	61,006	264	61,673	437	61,986	278
MAUI COUNTY	137,142	1,786	139,104	1,788	140,515	3,589



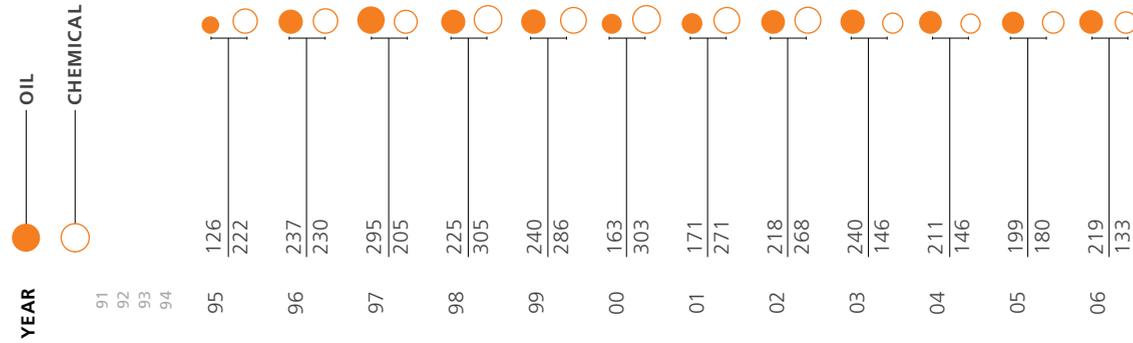
Number of Bus Boardings on O'ahu



Source: DBEDT Databook 2005
The data are estimates other the number of boardings on O'ahu for TheBus. An effective mass transit system can reduce traffic congestion and improve the quality of life in a city. These estimates are calculated based on the amount of money in the fare box, number of monthly passes sold, and random samples.

Notes:
i) Figures include residents and visitors.
ii) The figures are calendar year estimates of total passengers for TheBus calculated from reports to the American Public Transit Association.

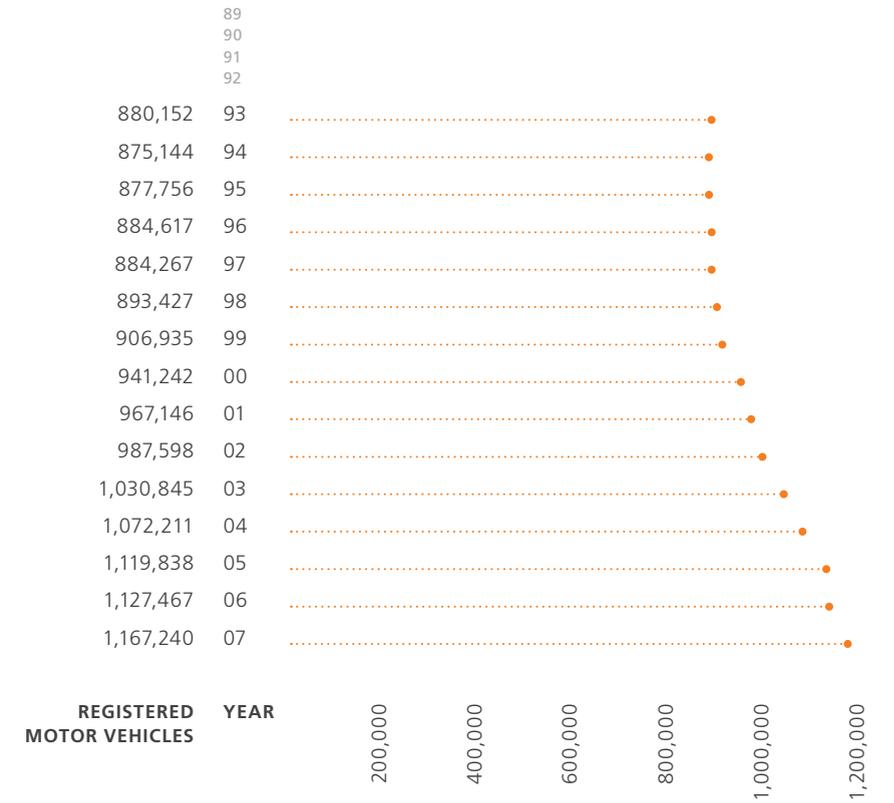
Oil and Chemical Spills



Source: State of Hawai'i Databook 2006
 Any release of oil or chemicals must be reported to DOH. The database currently contains only initial information regarding a release. Follow-up information on releases [including volumes of releases] is not included.
 Hazard Evaluation and Emergency Response [HEER] office crews respond to roughly 400–500 spills each year. Most are minor, a few are major, and some are false alarms.



Registered Motor Vehicles



Source: DBEDT Databook 2006
 Exhaust from motor vehicles contains many air pollutants including carbon monoxide, ozone and particulates. We breathe these toxic pollutants. Reducing the number of motor vehicles on our roads and improving emission control technology will improve air quality. We can help reduce air pollution by walking, biking or taking the bus instead of riding gas-powered cars. The table shows the total number of registered motor vehicles in Hawai'i.



ESTIMATED ABUNDANCE

YEAR



Source:
NOAA Results of
Marine Mammal
Surveys on
US Navy
Underwater
Ranges in
Hawai'i, 2004.

These following humpback whale abundance estimates were based on corrected densities for 1993–2004 survey results. Based on these results, the numbers of humpback whales peaked in 2000 with an estimated abundance of 4,615. If the increasing density trend described above had continued, we would have expected approximately 5,275 whales by 2003. However, the 2003 estimate of 3,558 is a full 33% below that estimate. It is not clear whether this represents a reliable downturn in abundance, or whether this is simply an anomalous estimate. More surveys are needed to determine the robustness of this trend.



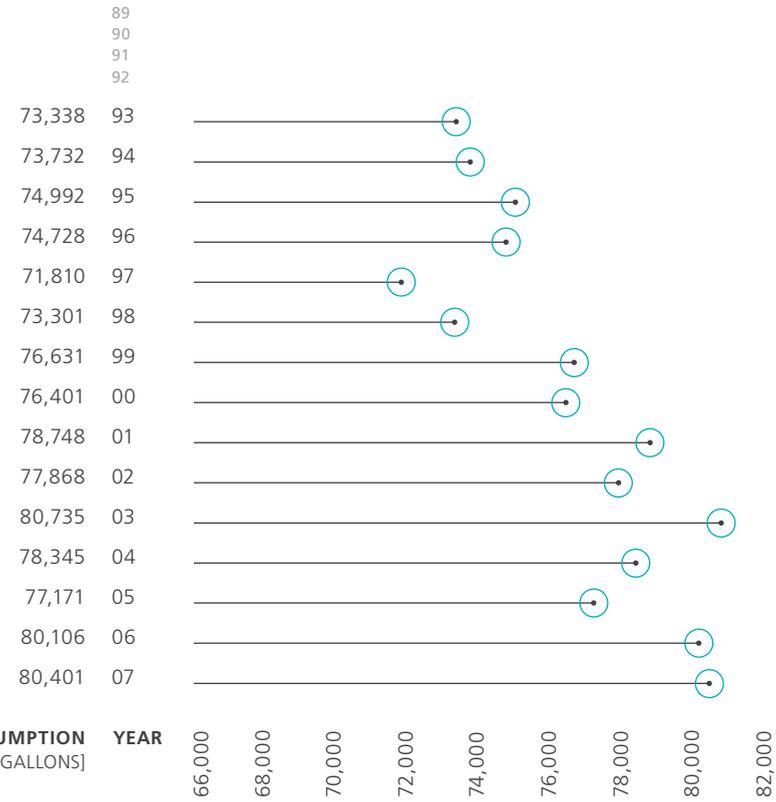
Commercial fishers are required to obtain commercial marine licenses and submit fishing reports to DLNR–Division of Aquatic Resources. The commercial marine landings summary trend report only contains catch data or pounds landed. The data shows that tuna is the favorite fish with commercial longline fisherman.

SEA LANDINGS BY SPECIES [IN POUNDS]	YEAR				
	01	02	03	04	05
TUNA	12,012,132	14,984,882	14,059,039	13,314,259	14,596,986
BILL & SWORDFISH	2,577,817	2,263,181	3,030,082	2,295,488	4,655,440
MISC. PELAGIC	2,966,447	3,501,554	4,110,796	4,645,777	4,405,774
DEEP BOTTOMFISH	573,815	557,084	558,601	613,374	522,797
AKULE/OPELU	944,260	939,372	847,465	1,003,583	887,225
INSHORE FISH	258,277	301,162	295,184	296,418	256,586
ALL OTHER	332,419	359,674	380,083	321,160	446,259
TOTAL	20,665,167	22,906,909	23,281,250	22,490,059	25,771,067

Source: Commercial Marine Landings Summary Report, 2005. DLNR, DAR



Municipal Water Consumption



Source: State of Hawai'i Databook 2006

Good drinking water is one of Hawai'i's greatest natural assets. The combination of a growing population and limited potable water resources is reducing the availability and quality of our drinking water. The chart shows water consumption through the respective municipal [county] water distribution systems.

Note: These figures include only municipal water supply. Military, private and plantation water systems are not included.

Number of Days Beaches Posted as Unsafe Due to Pollution

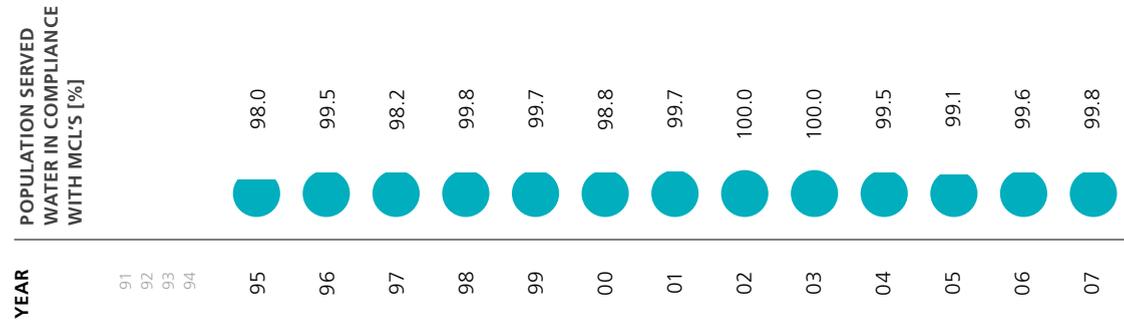


Source: Hawai'i Department of Health

Residents and visitors use our public beaches and the ocean for recreation and fishing. Sewage, chemical spills, and other releases can restrict our enjoyment and use of the shoreline as well as affect aquatic life. The chart shows the number of times shoreline waters were posted with warning signs [unsafe due to water pollution] by the counties, military, private parties or DOH. The reports from 2005 reflect a major change in that all shoreline recreational waters were considered. Although harbors are not considered recreational waters, they were included

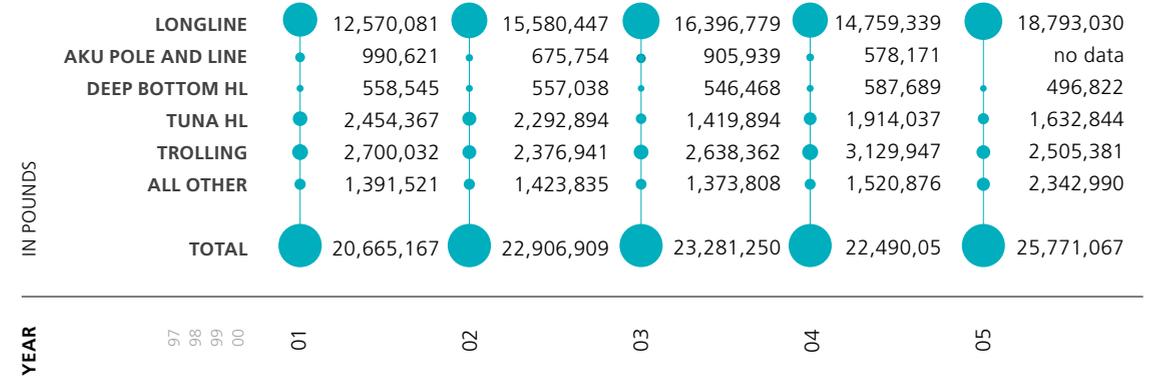
to be consistent with the 2005 annual report. Reports prior to 2005 only covered sandy beaches. Each day for each shoreline segment is counted.

Notes: i] These numbers do not reflect postings of warning signs on streams, lakes, and other inland waters, such as the Ala Wai Canal. ii] Other agencies may also post other shoreline warning signs such as the City and County of Honolulu. These are not included.



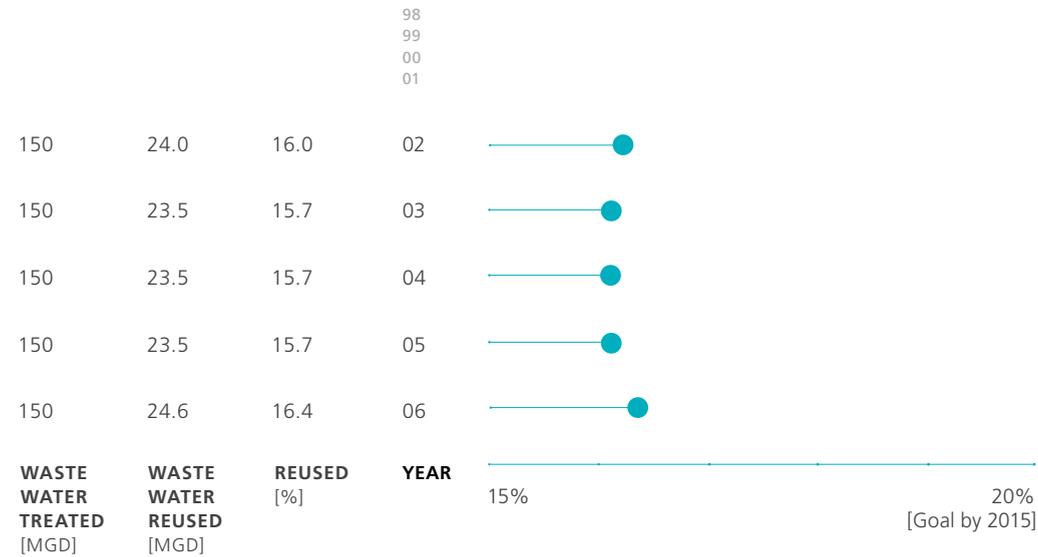
Source: Drinking water microbiological or chemical standards are called Maximum Contaminant Levels [MCLs]. Water that exceeds MCLs is believed to be harmful to human health. In 2006, 99.6% of Hawai'i's residents and visitors were served drinking water that met all of the MCLs all year long. The compliance rate has consistently exceeded 99.0% over the last five years. Whenever a violation is found, the public is notified through electronic media, hand-delivered notices, or published notices.

Hawai'i Department of Health



Source: The commercial marine landings summary trend report only contains catch data or pounds landed. The data shows that longline fishing is the preferred method with commercial longline fisherman.

Commercial Marine Land-ing Summary Report, 2005
DLNR, DAR



Source: Hawai'i Department of Health
 Wastewater recycling [of reuse of water treated to a level appropriate for irrigation purposes] has stayed in the range of 23.5 to 24.6 million gallons per day [mgd] between 2002 and 2006. In 2003, there was a slight decrease in wastewater reuse due to the deployment of troops from Schofield Barracks to the wastewater reuse at the US Navy's Barber's Point golf course.

DOH has plans to encourage reuse to about 20 mgd, or about 20%, by 2015.

Forested watersheds provide us with nearly all of our state's fresh water. Watershed Partnerships are voluntary alliances of public and private landowners committed to the common value of protecting large areas of forested watersheds for water recharge and other values. As of 2006, more than 725,000 acres of important watershed areas in Hawai'i have been placed within these unique public-private partnerships

East Moloka'i Watershed Partnership [5,000 acres]

- Kamehameha Schools
- Kapualei Ranch
- Ke Aupuni Lokahi Enterprise Community
- Hawai'i Dept. of Health
- Dept. of Land and Natural Resources
- Kalaupapa National Historical Park
- Maui County
- Maui Board of Water Supply
- Moloka'i-Lana'i Soil and Water Conservation District
- USDA Natural Resource Conservation Services
- US Fish & Wildlife Service
- US Geological Services
- The Nature Conservancy of Hawai'i

Lana'i Watershed Partnership [3,580 acres]

- Castle & Cooke
- Maui County Board of Water Supply
- Hui Malama Pono O Lana'i
- Dept. of Land and Natural Resources
- US Fish & Wildlife Service
- USDA Natural Resources Conservation Service
- Moloka'i-Lana'i Soil and Water Conservation District
- The Nature Conservancy of Hawai'i

Ola'a-Kilauea Watershed Partnership [420,000 acres]

- Kulani Correctional Facility - State, Public Safety
- Puu Maka'ala NAR - State, DLNR DOFAW
- Kamehameha Schools
- USDI - Hawai'i Volcanoes National Park Service

- USDA - Forest Service
- USGS - Biological Resources Division

Kohala Watershed Partnership [31,325 acres]

- Parker Ranch
- Kahua Ranch
- Ponoholo Ranch
- Kamehameha Schools
- The Queen Emma Foundation
- Dept. of Hawaiian Homelands
- Dept. of Land and Natural Resources

Kaua'i Watershed Alliance [75,000 acres]

- Ben A. Dyre Family Limited Partnership
- Kaua'i Dept. of Water
- Kamehameha Schools
- Kaua'i Ranch, LLC
- Lihue Land Company
- McBryde Sugar Company, Ltd.
- Princeville Corporation
- Dept. of Land and Natural Resources
- Grove Farm Company, Incorporated

West Maui Watershed Partnership [50,000 acres]

- The Maui County Board of Water Supply
- Kamehameha Schools
- C. Brewer and Company Limited
- Amfac/JMB Hawai'i, L.L.C.
- The Nature Conservancy of Hawai'i
- Maui Land & Pineapple Co., Inc.
- Dept. of Land and Natural Resources
- The County of Maui

East Maui Watershed Partnership [100,000+ acres]

- State Dept. of Land and Natural Resources
- The Nature Conservancy of Hawai'i
- The Maui County Board of Water Supply
- Haleakala Ranch Co.
- East Maui Irrigation Co., Ltd.
- Haleakala National Park
- Hana Ranch
- The County of Maui

Leeward Haleakala Watershed Partnership [43,175 acres]

- Dept. of Hawaiian Home Lands
- James Campbell Estate
- Haleakala National Park
- Haleakala Ranch
- Kaonoulu Ranch
- Nu'u Mauka Ranch
- Dept. of Land and Natural Resources
- Ulupalakua Ranch
- John Zwaanstra

Ko'olau Watershed Partnership [50,000+ acres]

- Kamehameha Schools
- Dept. of Land and Natural Resources
- Dept. of Hawaiian Home Lands
- Agribusiness Development Corporation
- U.S. Army
- Honolulu Board of Water Supply
- Queen Emma Foundation
- Bishop Museum
- Manana Valley Farm LLC
- Tiana Partners
- Dole Food Co., Inc.
- The Nature Conservancy of Hawai'i



2387.9

miles

from

South Dos Palos, CA

⊗ : An increase in fossil fuel consumption for food transportation → Higher prices

⊗ : Cheap imports → Adverse effect on local farm industry → Loss of sustainable food system and food security



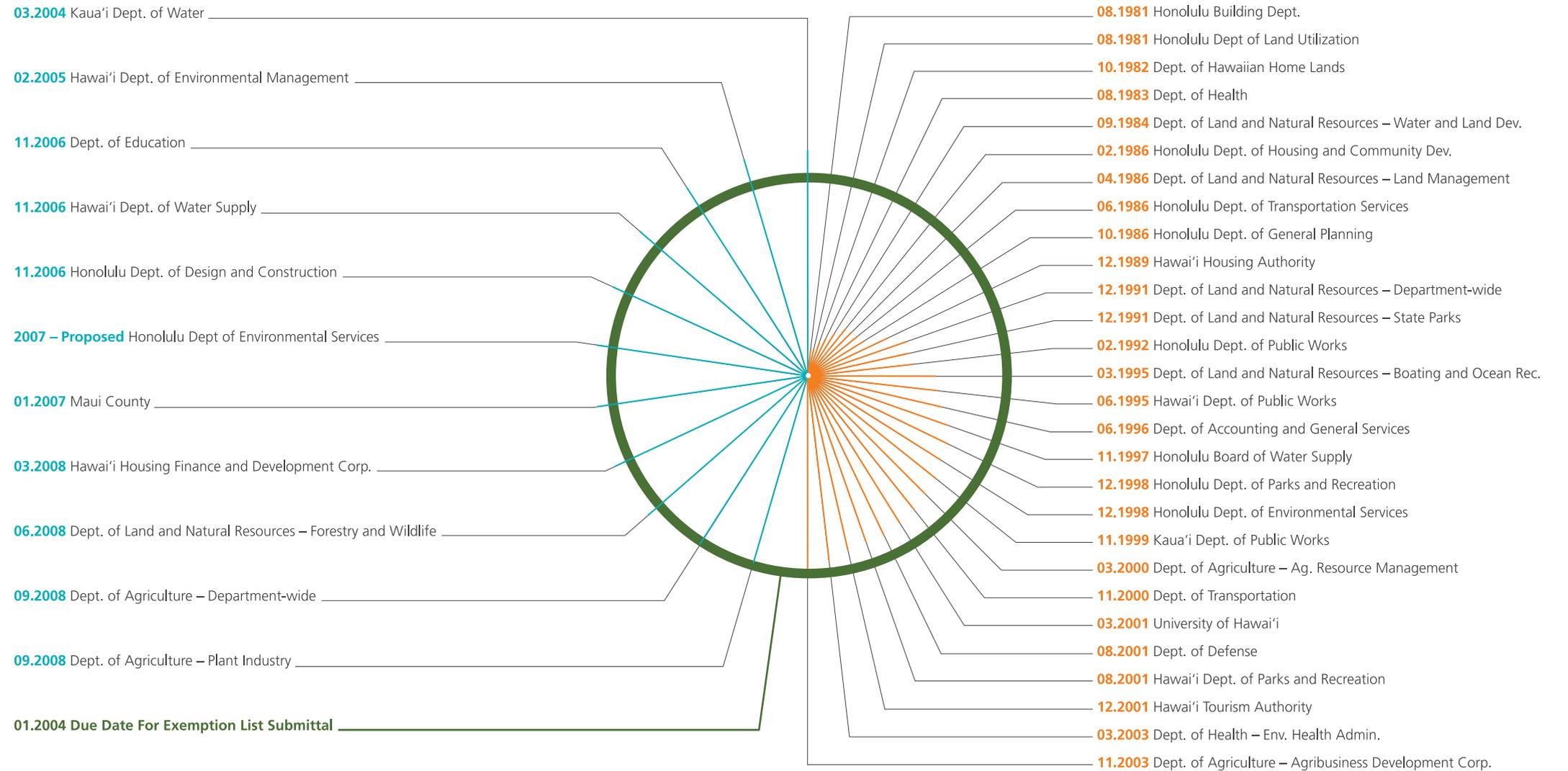
[REPORT OF AGENCY EXEMPTION LISTS UPDATES]

An agency's exemption list indicates the actions within its purview that generally do not trigger an Environmental Assessment or Environmental Impact Statement. Exemption lists do not remove the Agency's responsibility to comply with other legal requirements.

In compliance with the EIS Rules, the Environmental Council will periodically review agency exemption lists that are on file. Based on the review, the Council will recommend that the affected agency revise its exemption list and submit the amended list.

Agencies should review their exemption list every five years and revise it as appropriate.

The summary shown here indicates the most recent revision for each agency's exemption list.



[ENVIRONMENTAL GOALS OF STATE AND COUNTY AGENCIES]

The **Environmental Council** asked selected state and county agencies the three questions listed below. Responses by the agencies are reprinted in the following pages.

© **EG** 2007
Environmental Goals
for fiscal year FY 2007
[July 1, 2006 to June 30, 2007]

© **EA** 2007
Environmental Achievements
in fiscal year FY 2007
[July 1, 2006 to June 30, 2007]

© **EG** 2008
Environmental Goals
for fiscal year FY 2008
[July 1, 2007 to June 30, 2008]

The following is a list of agencies invited to submit their environmental goals. Agencies that submitted their goals are highlighted in green.

[State Agencies]	[City and County of Honolulu]	[County of Hawai'i]
Dept of Accounting and General Services	Dept of Board of Water Supply	Dept of Environmental Management
Dept of Agriculture	Dept of Design and Construction	Dept of Parks and Recreation
Dept of the Attorney General	Dept of Environmental Services	Dept of Public Works
Dept of Business, Economic Development and Tourism	Dept of Facility Maintenance	Dept of Water Supply
Dept of Defense	Dept of Parks and Recreation	Fire Department
Dept of Education	Dept of Planning and Permitting	Office of Housing and Community Development
Dept of Hawaiian Home Lands	Dept of Transportation Services	Planning Department
Dept of Health	Honolulu Fire Department	
Dept of Land and Natural Resources	O'ahu Civil Defense Agency	
Dept of Public Safety		[County of Maui]
Dept of Transportation		Dept of Fire Control
	[County of Kaua'i]	Dept of Housing & Human Concerns
	Dept of Planning	Dept of Parks and Recreation
	Dept of of Public Works	Dept of Planning
	Dept of Water	Dept of Public Works and Env. Management
	Fire Department	Dept of Department of Water Supply
	Office of Economic Development	

[AGENCY REPORT PREAMBLE]

In preparation for the 2009 **Environmental Council** Annual Report, each of the agencies listed that have identified their Environmental goals and missions will be contacted and asked to provide an analysis of the success of their goals and missions. In addition, each of the agencies will be asked to identify new areas of potential concern or concentration when looking towards the concept of sustainability of Hawai'i. Furthermore, various new agencies will be contacted and their identified goals and missions will also be provided for further information. It is our hope to continue this process, to one day encompass and report on the Environmental goals and missions of all City Departments and State Agencies.

Department of Accounting and General Services – Central Services Division

⊙ **EG** 2007

- ☞ Implement energy conservation measures as provided for in Act 96 and the Governor’s Executive Directive No. 06–01.
- ☞ Convert to the use of environmentally preferable custodial cleaning products, herbicides, pesticides and fertilizers.
- ☞ Complete the retrofit of restroom toilet flush valve and basin valves with automatic sensor valves.
- ☞ Replace conventional light switches with occupancy sensors to conserve electricity.
- ☞ Increase the awareness of building occupants on steps that they as individuals can conserve energy in the workplace.
- ☞ Improve the quantity of recycled material collected from state office buildings.

⊙ **EA** 2007

- ☞ Initiated projects to replace T–12 fluorescent lamps in selected State Office Buildings on the neighbor islands with energy efficient electronic ballasts and T–8 lamps.
- ☞ Designated “retro-commissioning [R–Cx] pilot projects” for selected State Office Buildings on O’ahu, Hawai’i, Maui and Kaua’i. The designated “R–Cx pilot projects” will include intensive field assessments on the existing building operations and subsequent identification of work task needed to “optimize operations [in accordance with the Act 96, SLH 2006 requirements]” for the State Office Buildings.
- ☞ Conducted “cost-benefit analyses” and worked with DAGS–Public Works Division [PWD] staff to determine the feasibility of replacing existing energy efficient electronic ballasts and T–8 lamps for State Office Buildings on O’ahu with the new Super T–8 lighting ballasts and lamps.

- ☞ Initiated repair and renovation upgrade projects for the landscape irrigation systems in the downtown civic center [on O’ahu] to increase water conservation. DAGS–Central Services Division [CSD] staff worked with the Board of Water Supply to determine the feasibility of using leak detection loggers to locate and repair “phantom” plumbing leaks.
- ☞ Initiated a project to install a “non-chemical filter system” for the air-conditioning [AIC] chiller units at the State Capitol Building. This will be the first of this type of system installed at a DAGS managed facility that should decrease domestic water usage and provide the option of using the treated AIC waters for other purposes.
- ☞ Started field testing custodial cleaning products that are environmentally friendly. The goal for FY2006–2007 was to increase the use of such products by 70%.

⊙ **EG** 2008 – **Department of Accounting and General Services – Central Services Division**

- ☞ Initiate repair and renovation upgrade projects for landscape irrigation systems [similar to what is being done for the downtown civic center] for DAGS managed Sate buildings outside of the downtown civic center on O’ahu.
- ☞ Specify “low-flow plumbing fixtures” for all new State construction and major renovation projects and replace existing fixtures with low-flow fixtures whenever replacement is required.
- ☞ Install sensor-type flush valves and faucets in public restrooms [starting FY07-08].
- ☞ Investigate the feasibility of alternative water conservation measures, such as the installation of waterless urinals in public restrooms.
- ☞ Integrate Green Seal or equal certification into the DAGS-CSD custodial program. Continue to purchase paper and other products that are recycled or have a recycled-content whenever such products are available.

- ☞ Researched the availability of environmentally friendly products for landscape maintenance application.
- ☞ Continued to purchase paper and other products that are recycled or have a recycled-content whenever such products are available.

Department of Accounting and General Services – Public Works Division

⊙ **EG** 2007

DAGS – Public Works Division is actively participating in the “Lead by Example” program to implement Administrative Directive No. 06–01 and Act 96 SLH 2006 Omnibus Energy Bill. Our efforts include developing a LEED application guideline for State agencies, providing LEED and commissioning programmatic support, pilot projects to apply for LEED silver certification at Mānoa Library and Kohala Library, and a pilot retro-commissioning project at the State Capitol.

⊙ **EG** 2008 – **Department of Accounting and General Services – Public Works Division**

DAGS – Public Works Division continues to actively participate in the “Lead by Example” program to implement Administrative Directive No. 06-01 and Act 96 SLH 2006 Omnibus Energy Bill Our efforts include developing a LEED application guideline for State agencies, providing LEED and commissioning programmatic support, pilot projects to apply for LEED certification at Mānoa Library and Kohala Library, and a pilot retro-commissioning project at the State Capitol.

⊙ **EA** 2007

- ☞ Participated in a DBEDT–Energy Division created working group that reviewed and evaluated the results of the Department of Education [DOE] designated “LEED pilot project” at the Waipahu Intermediate School New Cafeteria project. The DAGS Public Works Division [PWD] staff managed the design and bidding phase and the DOE staff managed the construction phase work for project. The project did receive a LEED Certification award [the first State building to receive any type of LEED Certification award].
- ☞ The experience gained and lessons learned from the “Waipahu Intermediate School, New Cafeteria” project made DAGS–PWD staff more familiar with:
 - ☞ The LEED certification process and sustainable design criteria.
 - ☞ Potential impacts on overall project cost [say about 10%] to attain at least a LEED Certification award.
 - ☞ Potential challenges in trying to

- attain LEED Silver Certification awards for all future State projects.
- ☞ Started design phase work for the following DAGS designated “LEED pilot projects”:

 - ☞ Kamamalu Building, Asbestos Removal and Renovation DAGS Job No. 12–10–935.
 - ☞ Mānoa Public Library, Expansion and Site Improvements DAGS Job No. 12–36–6364.
 - ☞ Kohala Public Library DAGS Job No. 11–36–6367.

- ☞ Worked with Hawaiian Electric Company [HECO] staff to develop a preliminary “DAGS/HECO process flow” with the objective to increase the number of DAGS managed projects on O’ahu applying for available HECO rebates on energy-efficiency or energy-conservation measures. This program will be expanded to the neighbor islands.
- ☞ Initiated approximately \$3,000,000 in projects [using available FY2006–2007 CIP funds] for DAGS Energy Plan

work in selected State Office Buildings on each island. The projects included:

- Replacement of existing T-12 lamps with energy efficient electronic ballasts and T-8 lamps.
- DAGS designated “retro-commissioning [R-Cx] pilot projects” for the State Capitol Building and Keelikolani Building on O’ahu; Lihue State Office Building on Kaua’i; Hilo State Office Building on Hawai’i; and Wailuku State Office Building on Maui.
- Incorporated sustainable design criteria [“LEED like” process] during the design phase of the Kapolei Judiciary Complex project within the project funding constraints.
- Worked with DAGS-Central Services Division [CSD] staff, DBEDT-Energy Division staff, and DBEDT funded consultant firms on:
 - ENERGY STAR re-certification of the Kakuhihewa Building [aka Kapolei State Office Building] and ENERGY STAR certification for the Leiopapa A

Kamehameha Building [aka State Office Tower] and the Abner Pahi District Court Building [aka Ko’olaupoko District Court Building].

- Identifying and evaluating various sources of reference information for development of preliminary application guidelines that DAGS staff [and other State agency staff] could use for future:
 - [1] Implementation of the LEED certification process under projects involving new State buildings or major renovations, in accordance with Act 96, SLH 2006. This also includes incorporation of commissioning [Cx] requirements that are needed for the LEED certification process plus proper coordination of the design phase and construction phase work.
 - [2] ENERGY STAR certification process or assessments and retro-commissioning [R-Cx] assessments on State buildings.
 - [3] Consideration of “energy saving performance contracts [ESPC]” for State buildings.

[4] Consideration of photovoltaic [PV] array installations and “power purchase agreements” for installation of PV arrays on State buildings.

- Advertised for qualified consultant firms interested in doing:
 - DAGS managed projects involving new State buildings or major renovations that incorporate the LEED certification process.
 - DAGS managed Cx work for projects involving new State buildings or major renovations.
 - ENERGY STAR certification process or assessments and R-Cx assessments on State buildings.
- Started preliminary discussions with the General Contractors’ Association [GCA] on proposed changes to the typical DAGS design specifications for construction waste recycling requirements and posted a draft “Construction Waste Management Guide Specification [CWMGS]” on the DAGS website.

Department of Business, Economic Development and Tourism – Office of Planning

© EG 2007

- Conduct statewide planning activities to promote the orderly future growth and development of the State pursuant to Chapter 225M, HRS.
- Administer a comprehensive system of public planning on a statewide basis to enhance the overall effectiveness of the Hawai’i State Planning Act, Chapter 226, HRS.
 - Community and Rural Economic Development Strategies
 - Promoted new models for engaging rural and distressed communities in planning for community-based economic development by: coordinating the Governor’s Leeward Coast Initiative, which involved identifying the range of State programs and assistance provided to the Leeward Coast of O’ahu, and conducting com-

munity outreach to identify strategies to promote sustainable community economic development and improve community participation in the regional/ State economy.

- Brownfields
 - Promoted reuse and redevelopment of contaminated or underutilized sites to contain growth and ease pressure on undeveloped land by: conducting environmental site assessment activities for three sites planned for redevelopment on O’ahu.
 - State Comprehensive Economic Development Strategy
 - Promoted programs to increase environmental awareness and enhance outreach in support of sustainability and environmental resource management by: Planning assistance for site selection for the development of the Kohala Center’s environmental education center.
 - Planning Legislation
 - Promoted and advocated for planning and land use policy and practices

for sustainable growth and development by: preparing three Administration bills that were introduced in the 2007 legislative session, which were intended to: [1] strengthen the effectiveness and importance of county adopted general plans and community plans in effectuating sustainable growth and land use patterns; [2] simplify the State land use district boundary amendment process for petitions based on adopted county plans; and [3] redefine the State Rural District in the State Land Use Law to be able to direct non-farm uses away from agricultural lands and to ensure that rural development does not become rural sprawl.

- Administer a State land use program that reflects public policies and concerns and presents guidance and recommendations before the State Land Use Commission for land use decisions affecting the development and growth of the State pursuant to Chapter 205, HRS.
 - Promoted sustainable growth pat-

terns, mitigation of the environmental and societal impacts of proposed new growth, and protection of environmental quality and natural and cultural resources for petitions before the State Land Use Commission through: Participation in approximately 10 petitions statewide.

- Advocated for incorporation of best practices to reduce resource use, increase sustainability, and mitigate development impacts in the projects proposed in the petitions heard by the State Land Use Commission by: incorporating discussion and consideration of certification of proposed projects using the Leadership in Energy and Environmental Design [LEED] rating system.

- Carry out lead agency responsibilities for the Hawai'i Coastal Zone Management Program pursuant to Chapter 205A, HRS.

- Hawai'i Ocean Resources Management Plan [ORMP]

- Act 104, Session Laws of Hawai'i [SLH] 1995, provided for the integra-

tion of the Hawai'i Ocean Resources Management Plan [ORMP] into the State's CZM Program. The CZM Program worked with numerous groups and agencies to shape an innovative three-perspective framework to update the Hawai'i ORMP. This framework is accompanied by concrete management goals and strategic actions to address them in five-year implementation phases over the next 30 years.

- Input was obtained from governmental agencies before producing a second ORMP draft at the end of August 2006. The second draft was circulated publicly via the CZM website, email, and to all 51 public libraries across the State. A series of eight statewide public meetings were held to obtain public feedback on the draft ORMP. The public comments emphasized the need for inter-agency collaboration, strong funding support for implementation and stressed the need for strong enforcement of exist-

ing laws. One hundred twenty-two [122] members of the public attended the meetings statewide. Public comments were compiled and incorporated into the ORMP and the final plan was completed in December 2006.

- The final ORMP was transmitted to the Governor and the 24th session of the State Legislature and is available on the CZM website at www.hawaii.gov/dbedt/czm/.

- By incorporating the ORMP into the newly completed strategic plan and operational plan, the CZM Program will focus on facilitating comprehensive ocean resources management in coordination with the Marine and Coastal Zone Advocacy Council [MACZAC]. During this reporting period, the CZM Program established an ORMP Policy Group and an ORMP Working Group, consisting of representatives from DLNR, OHA, DOA, DOH, DOT Harbors, the county planning departments, and other agencies with large ORMP

implementation responsibilities. The University of Hawai'i, MACZAC, and the Association of Hawaiian Civic Clubs are also represented in these Groups. The Groups will help develop annual agency work plans based upon the ORMP recommendations, further develop the management aspects of the ORMP, and continue increased interagency collaboration.

- Coastal Hazards Mitigation
- Implementation of the Section

309 Wind Speed Mapping and Building Code Project began in 2006. Work took place on development of specialized wind speed-up maps in geographic information system [GIS] format and building code amendments for use in Hawai'i and Maui counties. The building code amendments will be prepared as amendments to the latest International Building Code, and provide localized wind mitigation standards for the two counties, based on topography and directionality. Three workshops on the

City and County of Honolulu's newly adopted IBC were held in May 2007 for 260 government and industry professionals. This training is essential to the development of a highly qualified public/private building industry.

- Federal Consistency Reviews
- Conducted 79 Federal Consistency reviews of Federal actions for consistency with Hawai'i Coastal Zone Management Program objectives and policies in fiscal year 2007.

- The Hawai'i CZM Program hosted an intern from the Naval Facilities Engineering Command Pacific. The Navy's civilian employees an in-depth working perspective of the federal and state agencies that the Navy interacts with. OP has hosted Navy interns in the past with significant benefits to the Federal Consistency program. The primary benefit is that the Navy interns gain an understanding and working knowledge of the federal consistency process, which results

in improved federal agency working relations. This most recent Navy intern took on a project during his three weeks with the Hawai'i CZM Program. The intern developed, in conjunction with CZM, a "de minimis" list of Navy activities that are expected to have negligible coastal effects. The CZM Program approved the de minimis list which will streamline the federal consistency process for both the Navy and OP.

- Coastal and Estuarine Land Conservation Plan

- Prepared and submitted for approval to the National Oceanic and Atmospheric Administration a plan for the identification and selection of priority coastal and estuarine lands to be protected through acquisition of easements, purchase, or donation throughout the State.

EG 2008 – Department of Business, Economic Development and Tourism – Office of Planning

- Conduct statewide planning activities to promote the orderly future growth and development of the State pursuant to Chapter 225M, HRS.

- Administer a comprehensive system of public planning on a statewide basis to enhance the overall effectiveness of the Hawai'i State Planning Act, Chapter 226, HRS.

- Brownfields

- Continue to promote reuse and redevelopment of contaminated or underutilized sites to contain growth and ease pressure on undeveloped land by: approving loans from the Brownfields Cleanup Revolving Loan Fund for the remediation or cleanup of contaminated sites statewide.

- State Comprehensive Economic Development Strategy – Planned for FY 08

- Continue to enhance rural economic development strategies by: conducting a survey of best practices for rural economic development that enhance and is consistent with host culture, low impact design, and rural planning principles.

- Continue to promote clean knowledge-based industries that increase job skills and job quality of residents by: providing planning assistance for master plan for University of Hawai'i film and media center.

EG 2008 – Department of Business, Economic Development and Tourism – Office of Planning [continued]

- Administer a State land use program that reflects public policies and concerns and presents guidance and recommendations before the State Land Use Commission for land use decisions affecting the development and growth of the State pursuant to Chapter 205, HRS.

- Carry out lead agency responsibilities for the Hawai'i Coastal Zone Management Program pursuant to Chapter 205A, HRS.

Department of Defense

EG 2007

- ⌘ Conservation. Continue endangered species recovery, noxious weed eradication and awareness training and education of Hawai'i's youth, Guard members and the public.
- ⌘ Compliance. Continue to monitor for regulatory compliance and implement pollution prevention initiatives, affirmative procurement actions and enhance waste stream diversion.
- ⌘ Land Management. Continue to implement restoration and geographic information system [GIS] projects and integrated training area management to protect and enhance the natural resources of ARNG training lands. Attain sustainability in our training lands. Improve in the way we design, manage and use our lands to ensure long-term sustainability.

EG 2008 – Department of Defense

- ⌘ Implement effective policies and practices that safeguard the environment and our quality of life in a manner that is expected of us. Our strategy is to sustain our resources [land, air & water] to secure our future. While continuing to implement our previous year's goals, we will enhance training of our Soldiers, members of the Department of Defense and our neighbors. We will integrate sustainability into all activities by using the ISO 14001, [Environmental Management Systems] to implement our strategy and to assist this department in attaining its goals. Our goals are to foster an ethic that takes us beyond environmental compliance to sustainability. Strengthen our operations by employing sustainable practices such as water conservation, and fuel and energy efficiency. Training land management by maintaining the resiliency and buffering needed to protect the environment and our surrounding communities from impacts of training. We will continue to favor environmentally sustainable products to reduce the introduction of pollutants. We will sustain our natural resources for our Soldiers, their families our workforce and our neighbors. Celebrate our heritage through responsible management of our cultural resources. Seize upon opportunities brought about by technological advancements. Continue to seek tools and solutions that improve efficiency and reduce cost while protecting our environment.

EA 2007

- ⌘ Measurable progress has been made in the areas of invasive species eradication while continuing to protect and recover endangered species while introducing native plant species. We continue to conduct awareness training via events such as National Public Lands Day, Earth Day and by working directly with Hawai'i's youth Ongoing projects to sustain and enhance our valuable training lands have increased this past year.
- ⌘ Training and implementation of the Affirmative Procurement Plan has been instituted this past year. Significant clean-up projects throughout the state have been conducted this past year. Continual monitoring has been programmed to sustain and enhance the compliance level. The integration of new pollution prevention methods and training is ongoing. Remediation of our training sites has begun and in one instance has been completed.

Department of Hawaiian Home Lands

EG 2007

- ⌘ Sustainable Growth. Develop self-sufficient and healthy communities by improving trust lands through building energy efficient/saving, "green" systems into its projects, forest-based economics, environmental and/or cultural preservation.
- ⌘ Partnering. Partner with government agencies, non-profit organizations, community groups and private land-owners to promote sustainable forestry, conservation and protection of natural and/or historic resources through prudent land stewardship practice.
- ⌘ Conservation. Improve trust lands by controlling invasive plants, removing feral ungulates, improving habitat of endangered species, and re-establishing the forest in degraded pastures. Prevent the destruction of natural or historic resources.

EA 2007

- ⌘ Sustainable Growth. In developing self-sufficient and healthy communities, we design communities that offer a high quality of life, promote pride of home ownership that ensures the safety of residents from natural or man-made hazards by incorporating energy efficient features, mitigating rockfalls, and removing boulders and other appurtenances. Through continued restoration of our koa forest lands and restoration of the lands ecosystem by mitigating invasive plant species endangered species, our forestry program adds to the agricultural sector by job creation with fencing, salvage harvesting, milling, tree plantings and providing wood to craftsmen.
- ⌘ Partnering. Working with Parker Ranch, DLNR, National Park Service, Department of Defense, U.S. Fish and Wildlife Service, the University of Hawai'i, community groups and private parties on projects to control

EG 2008 – Department of Defense [continued]

- ⌘ Barriers that prevented you from achieving any of your environmental goals and recommendations for removing the barriers. For 2006 through 2007 our major barrier has been human resource and funding constraints. We will strive to acquire and maintain 100% of our authorized manning. The reduction of administrative requirements will allow our staff more time to conduct field work.
- ⌘ Recommendations to change land use planning and management in Hawai'i to improve environmental quality.
- ⌘ Recommend that an environmental staff member who is knowledgeable in all environmental pillars be included through out the entire process to provide insight and recommendations.

- gorse and other invasive species, create fire plans, construct fire breaks, research projects to better understand the native ecosystem of a land, watershed and other partnerships, the Department seeks to achieve better and more sensitive resource management by integrating education, recreation, cultural and native plant propagation into stewardship programs.
- ⌘ Conservation. Degraded pasture, forest, and fallow sugar/pineapple lands are transitioning into forest and agricultural productive lands by fencing, removing feral ungulates, scarification, hand-planting, and salvaging and recycling wood products; improving watersheds through reduced use of herbicides; improving air quality by reduced burning in our invasive species management plan.

Department of Health

EG 2007

- ⌘ To ensure that Hawai'i's coastal waters are safe and healthy for people, plants and animals.
- ⌘ To protect and restore the quality of Hawai'i's streams, wetlands, estuaries and other inland waters for fish & wild-life, recreation, aesthetic enjoyment and other appropriate uses.
- ⌘ To protect Hawai'i's groundwater from contamination for drinking, irrigation, and other appropriate uses.
- ⌘ To protect Hawai'i's lands from pollutants that endanger people and the environment; and to rehabilitate contaminated lands.
- ⌘ To protect and enhance Hawai'i's indoor and outdoor air quality for the health of our people.

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• Safe and Healthy Coastal Waters
• Ala Wai Sewage Discharge The City and County of Honolulu [CCH] have completed the installation of a temporary by-pass sewer line after the failure of the Beachwalk force main DOH established a permit condition that the CCH conduct weekly sampling of the Ala Wai Canal for indicator bacteria to ensure that there is no leak from the newly installed by-pass sewer line. DOH continues its outreach programs with Surfrider Foundation-O'ahu Chapter, O'ahu Hawaiian Canoe Racing Association [OHCRA], Hui Wa'a, Na Opio, University of Hawai'i, John A. Burns School of Medicine [JABSOM], and others. These programs include surf site and shoreline monitoring for staph and indicator bacteria at Ala Moana Beach and Waikiki Beach DOH monitors three surf sites, three shoreline sites in Waikiki, and three shoreline sites at Ala Moana Beach Park as part

of a larger project with the JABSOM. While DOH looks at current indicator bacteria in relation to number of beach goers, surf height, and tidal cycle, JABSOM looks at staph bacteria issues.
• Vigorous Enforcement. DOH inspected 25 individual permit facilities, 30 general permit facilities, and 114 facilities without permits Nine Notices of Findings Violation and Order [NFVO], 73 Notices of Apparent Violation and 9 Requests for Information were issued Among the NFVO, one was issued to the CCH for wastewater from the Kualoa Regional Park restrooms going into the ocean DOH also partnered with the U.S. Environmental Protection Agency [EPA] to file in court a proposed interim settlement with the CCH on sewage force mains, including repairs to the Beachwalk Force Main that discharged into the Ala Wai Canal in March 2006.
• Extensive and New Monitoring DOH continues to increase the number of samples collected under the BEACH

monitoring program and coastal water monitoring in support of Polluted Runoff Control 319[h] projects In FY 2007,5114 bacterial samples and 75 chemistry samples were collected DOH with support from the U.S. Geological Survey [USGS] is developing a Wastewater and Nutrient Source Tracking methodology [the "Kualoa Protocol"] to determine whether high indicator bacterial levels are due to wastewater systems leaking into coastal waters. The protocol is being refined and will be used in support of BEACH Act and the On-Site Disposal Systems Program.
• Protect and Restore Inland Waters
• Total Maximum Daily Loads [TMDLs, which are pollution budgets for impaired waters] are progressing. EPA approved TMDLs for Kapaa Stream [O'ahu]; DOH completed draft TMDLs for Hanalei Stream and four estuaries [Hanalei, Waioli, Waipa, Waikoko] in the Hanalei Bay watershed [Kaua'i] DOH completed bioassessment sup-

porting TMDL development for Kaua'i and O'ahu streams.
• DOH is finalizing the Draft Water Quality Monitoring and Assessment Report for the federal 2006 reporting cycle, including proposed changes to the Clean Water Act Section 303[d] List of Impaired Waters. This report will be sent to EPA for approval of the 303 [d] list.
• DOH and USGS completed Year One [20 sites] and are finishing up the second [and final] year of sampling.
• EPA national Ecoregion Monitoring and Assessment Program [EMAP Wadeable Streams] project.
• DOH collaborated with the Department of Land and Natural Resources to initiate fish sampling for Phase 2 of Wahiawa Reservoir fish tissue toxicity screening.
• DOH initiated a collaborative monitoring program with the National Park Service and the University of Hawai'i Hilo to assess the water quality of streams in Haleakala National Park.
• Protect Groundwater

• Hawai'i's regulated drinking water systems met all health-based standards throughout the year for 97.5% of their customers.
• DOH loaned \$16.8 million to the counties for better drinking water systems in FY 2007.
• DOH has taken initial actions to develop and implement a stronger groundwater-monitoring program.
• DOH has been working with the counties to ensure source water protection planning remains a priority in the development of county water plans.
• DOH has initiated work to develop contracts to extensively test public school, private school and child care facilities' drinking water for lead.
• Protect and Rehabilitate Lands
• Arsenic Studies. DOH began development of a statewide Arsenic Strategy, completed its exposure monitoring project in Kea'au on Hawai'i Island, issued new cleanup guidance, and initiated a research partner-

ship with the University of Hawai'ito evaluate the feasibility of innovative remediation technologies to reduce soil arsenic risks.
• New Guidance for safe remediation and reuse of contaminated lands. DOH initiated a major revision of its Technical Guidance Manuals [TGMs] for the investigation of contaminated lands and Under-ground Storage Tanks. The new TGMs will be complete and available on-line to the public in 2008 In addition, DOH released updated Environmental Action Levels and individual guidance for:
• long term management of petroleum contaminated soils;
• investigating historic pesticide use on agricultural lands;
• addressing historic termiticide use in demolition of old homes;
• interim rules with guidelines for decontamination of clandestine methamphetamine drug labs; and
• updated Environmental Action Levels reflecting current scientific knowledge.

© EG 2008 – Department of Hawaiian Home Lands

• Sustainable Growth. Continue to develop self-sufficient and healthy communities by improving trust lands through building energy efficient/saving, "green" systems into its projects, forest based economics, environmental and/or cultural preservation.
• Partnering. Continue partnering with government agencies, non-profit organizations, community groups and private landowners to promote sustainable forestry, conservation and protection of natural and/or historic resources through prudent land stewardship practice.
• Conservation. Continue to improve trust lands through prudent land stewardship practice by controlling invasive plants, removing feral ungulates, improving habitats of endangered species, re-establishing the forest in degraded pastures and preventing destruction of natural or cultural resources.

- Uniform Environmental Covenants Act [UECA]. The Governor [signed] this act on July 6, 2006, and it provides a framework for covenants that will be enforceable and, if needed, perpetual institutional controls on property where complete removal of contamination is not necessary or feasible. The first actual covenants are now in progress.
 - Honolulu Harbor. An enforceable agreement with a detailed cleanup schedule was signed between DOH and Iwilei Development Participating Parties [IDPP], the group of responsible parties who are conducting the investigation and cleanup of the area-wide petroleum contamination in the Iwilei District. Significant remedial work is underway at the site including pipeline tapping and draining, product removal, pilot testing and additional detailed characterization.
 - Affordable Housing in East Kapolei. DOH and the Office of Planning have completed two important environmental site investigations on

400 acres of land to assist the Department of Hawaiian Homelands with the development of approximately 2500 affordable housing units in East Kapolei. Except for a localized one-half acre contaminated site, the property meets all applicable standards regarding potential soil contaminants.

- Hazardous Waste. DOH conducted 179 inspections, issued 67 warning letters, issued 3 notices of violations, and assessed penalties of \$70,000 DOH also conducted compliance assistance audits at four military installations and two hotels. On the DOH website, the program highlighted four facilities that are examples of the RCRA Brownfields revitalization program and provided guidance for industries that deal with fluorescent bulbs, automobile repair, commercial painting, hotels, janitorial services, dentist, and commercial printing.
- Underground Storage Tank. On August 22, 2006, the Underground

Storage Tank Program received the FY2005 Government Performance and Results Act [GRPA] award from the U.S. EPA for achieving remediation of 53 leaking underground storage tank [LUST] sites. In FY 2007:

- DOH inspected 43 LUST sites undergoing cleanup and issued 61 no further actions letters.
- DOH conducted 501 inspections at operating facilities and 62 field citations were issued to the owners/operators [an overall compliance rate for facilities was nearly 88%].
- DOH developed a new UST database system called USTRAC that will assist the staff in monitoring UST activities statewide.
- DOH improved public access to cleanup reports from facilities with leaking USTs. Nearly 2,700 documents are now available in an electronic format.
- Deposit Beverage Container. Deposit Beverage Container program maintained a 68 percent redemption

rate, which resulted in the recycling of 634,410,034 deposit beverage containers total.

- Solid Waste. DOH received 104 applications and issued 96 permits, handled 267 complaints, issued 114 warning letters, and 3 notices of violations, assessing penalties of almost \$29,000.
- Protect and Enhance Indoor and Outdoor Air.
 - Overall air quality. Hawai'i's air quality remained far better than national and state standards.
 - Vog. Monitoring stations are being established in Pahala [operational] and Mountain View [will be operational by the end of the year]. Later, near-real-time data from these stations will be made available via the DOH website.
 - Permits and enforcement. DOH issued 90 air permits for stationary sources and 227 permits for agriculture burning. DOH conducted 1,443 complaint investigations and 545 air permit and agricultural burning permit

inspections DOH operated 13 monitoring stations statewide.

- Data. DOH is in the process of developing a statewide emissions inventory system and also completing the relational database for the permitting, compliance monitoring, and enforcement sections.
 - Indoor Air: Lanakila Elementary School has indicated interest in participating in the EPA "Tools for Schools" Program. If the school decides to participate, it would be the first school in Hawai'i under the assistance of the Indoor Air Quality Program.

Department of Land and Natural Resources – Commission of Water Resources Management

- EG 2007
 - Continue efforts of setting in-stream flow standards for Maui streams & other streams statewide.
 - Expand statewide deep monitor well

network in order to gather more data that can be analyzed to provide information on the sustainability of basal aquifer systems.

- EA 2007
 - In August 2006, the United States Geological Survey [USGS] conducted the last stakeholder group meeting in Wailuku, Maui, and presented the findings of the second USGS East Maui report entitled, Effects of Surface-Water Diversions on Habitat Availability for Native Macrofauna, Northeast Maui, Hawai'i. An earlier report entitled Median and Low-Flow Characteristics for Streams under Natural and Diverted Conditions, Northeast Maui, Hawai'i, was released in mid-2005. The Commission staff also provided a brief overview of the IPS process as part of the stakeholder group meeting. In December 2006, the Commission authorized staff to initiate and conduct public fact gathering to amend interim in stream flow standards [IPS], with

EG 2008 – Department of Land and Natural Resources – Commission of Water Resources Management

- Complete the update of the Water Resource Protection Plan component of the Hawai'i Water Plan. This important planning document identifies the Commission's policies, framework, and programs to protect and sustain resources, watersheds, and natural stream environments through a comprehensive study of occurrence, sustainability, conservation, augmentation, and other management measures.
- Continue interim IFS process for selected East Maui streams and initiate process for other priority surface water hydrologic units statewide.
- Complete and implement the use of an irrigation model that will help to establish reasonable and beneficial quantities necessary for irrigation. In conjunction with University of Hawai'i at Mānoa and the United States National Resources Conservation Service, staff has been working on an Irrigation Water Requirement Estimation Decision Support System irrigation model to support staff review of the updated water use permit application process. It is anticipated that this model can be additionally used by the public and by the Department of Agriculture in support of their planning activities for the Agricultural Water Use and Development Plan, which is a component of the Hawai'i Water Plan.

the intent to initiate the process for East Maui in late 2007. In considering a petition to amend an interim IFS, the Commission must weigh the importance of the present or potential in stream values with the importance of the present or potential uses of water for mainstream purposes, including the economic impact of restricting such uses. An interim IFS may be amended on a stream-by-stream basis or may consist of a general in stream flow standard applicable to all streams within a specified area. The process for setting interim IPS shall first involve the compilation and inventory of best available stream information through agency review and comments and incorporation of a public fact gathering process to amend interim IFS. The fact gathering process will include an agency interested persons review and the holding of a duly noticed public fact gathering meeting on the island of interest. The public meeting for

the interim IPS would not be a formal public hearing but rather an informal meeting to gather additional facts and input from interested persons in the affected area. The additional agency/interested persons review and opportunity for additional public participation will be beneficial in seeking out best available information necessary for setting measurable interim IPS statewide. Following this process, the staff will reevaluate all information in order to prepare a recommendation for Commission approval. The Commission anticipates initiating this process for selected streams in East Maui in October 2007. In addition, the Commission has initiated the Statewide Field Investigations Project to verify and inventory surface-water uses and stream diversions, and update existing surface water information. This is one of the key requisite steps towards establishing IFS statewide. A Notice to Proceed was issued to R.M. Towill in April 2007,

and initial work will focus on those surface-water hydrologic units affected by the pending IFS petitions for East Maui, Na Wai Eha [Waihee, Waiehu, Iao, and Waikapu Streams], and West Maui [Honokohau and Honolulu]. The completion of this project is not required to continue moving forward with the interim IPS process, however the verification of diversion and water use information may considerably impact future revisions to the interim IFS. **EG** 2007: Collected quarterly monitoring data from a network of 54 monitoring wells on the Big Island, Maui and O’ahu. Put out to bid, and selected a contractor, for the design and installation of a new deep monitoring well in Waihee, Maui.

Department of Land and Natural Resources – Engineering Division

- Ⓞ **EG 2007**
- ⓘ Develop water and land resources to provide support to the programs

Ⓞ **EG 2008 – Department of Land and Natural Resources – Engineering Division**

- ⓘ Develop water and land resources to provide support to the programs which are designed to achieve the State’s economic, agricultural, environmental and social goals, with priority given to State-sponsored projects.
- ⓘ Provide engineering services to other divisions of the Department and other State agencies to execute Capital Improvements Program and/or operating, maintenance and repair projects, utilizing environmentally acceptable and sound engineering practices.
- ⓘ Protect people, property and natural resources from natural hazards through planning, management, mitigative efforts and regulatory programs.
- ⓘ Seek partnerships with Federal agencies to conduct projects that will improve watershed function, provide flood control measures and restore ecosystems.

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Ⓞ **EA 2007**

- ⓘ Provide engineering services to other divisions to provide individual wastewater system improvements at various DLNR facilities

within available capital improvement funding constraints. **EG** 2007: Provision of engineering services to other divisions to mitigate environmental hazards on State-owned lands. **EG** 2007: Entered agreement with the US Army Corps of Engineers for the Ala Wai Watershed project to identify and formulate potential alternative plans to improve water quality within the Ala Wai Watershed for recreational uses, address ecosystem restoration and flood mitigation.

Department of Land and Natural Resources – Division of Forestry and Wildlife

- Ⓞ **EG 2007**
- ⓘ Develop and implement a coordinated approach for invasive species management and control through an integrated program of prevention, response and control, research, and applied technology and public outreach.

EG 2007: Plan and administer commercial forest management activities on state land including resource inventory, forest product sales, and reforestation of commercial forest resources. Implement Waiakea management plan and issue timber permits and licenses on state land. **EG** 2007: Administer state and federal cost-sharing urban forestry and forest stewardship programs to landowners and residents of Hawai’i. **EG** 2007: Prevent and suppress forest and range fires on key watersheds in forest reserves, public hunting areas, and natural area reserves. **EG** 2007: Insure viable populations of native species and increase populations of endangered species by protecting and managing their natural habitats through a system of state and private cooperative agreements.

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Forest health monitoring and aerial surveys for invasive species, tree dieback, and forest species composition is necessary for resource managers to better prioritize management actions, but mapping these changes has always been a technical challenge. A pilot project is underway to test new technologies for conducting aerial surveys of Hawai'i's forested areas. The project is a multi-agency collaboration including DLNR, USDA Forest Service, USGS, and the Carnegie Institution. The project's objective is to evaluate these survey methods for effectiveness and affordability and to make recommendations for a long-term forest-monitoring program for Hawai'i. The Division closed the Manuka State Park and a portion of the Manuka Natural Area Reserve, on the island of Hawai'i's southwest side on March 2007 while crews implemented another round of aerial treatments for

coqui frogs. The parking lot was used as a staging area for helicopter operations while crews continue to treat the outer limits of the population in hopes of preventing further spread of the frogs, mauka and south of Hawaiian Ocean View Estates Active control of invasive species is a division's priority Since 2005, six treatments at Manuka have showed significant reductions of the coqui population in this area. It is necessary to continue controls of isolated populations of coqui in remote natural areas where the native ecosystem is threatened Further monitoring and spot treatment will follow. On June 22,2007, Board of Land and Natural Resources approved a timberland license to Hawai'i Island Hardwoods, LLC to harvest non-native timber in the Waiakea Timber Management Area, near Hilo, Hawai'i. About 1,100 acres of timber will be harvested with revenues of up to \$2 million over 5-10 years are anticipated

to help the division fund and sustain continued forest management in timber plantations and forest reserves across the State. Through considerable planning and diligence, the Division negotiated and closed on the purchase of over 25,000 acres of private land at Wao Kele O Puna on the Island of Hawai'i. Funding for the purchase came collectively from the Division, USDA, Forest Service's Forest Legacy Program and the Office of Hawaiian Affairs who will hold title to this property. The Division will provide initial technical management assistance to OHA up until a time where they will be able to develop their own resource management team to manage the area. Collaborative efforts between the Division, West Maui Mountain Watershed Partnership, East Molokai Watershed Partnership, and Olaa-Kilauea Partnership to develop a fire task force and fire management plans are continuing In February 2007, a stubborn

wild land fire scorched 1,350 acres on West Maui; twenty-nine [29] acres of the West Maui Forest Reserve and ninety-one [91] acres in the Pana'ewa section of the Natural Area Reserve. Another brush fire occurred in June and burned 2,600 acres near Olowalu; 400 acres burned in the Lihau section of the Natural Area Reserve Because of public safety concerns, local fire officials closed Honoapiilani highway, the main highway to resort areas of Lahaina, Kaanapali and Kapalua which literally shut down local businesses and commerce including the tourism industry on the west side. Lana'i Hawaiian Petrel. Project Last year a significant breeding population of the federally endangered Hawaiian Petrel [Pterodroma sandwichensis] was discovered in the remaining native forests of Lana'i. The Division and Pacific Cooperative Studies Unit have established a management and research program to protect this breeding colony.

Work includes predator control, efforts to enhance the visibility of structures [i.e., fences] that pose a collision risk to the petrels, mapping of the breeding colony, monitor breeding burrows to determine nest success, establishing artificial burrows, and providing information of the project to the residents of Lana'i. Researchers also placed satellite-tracking devices on two petrels from Lana'i of which the birds were tracked flying to the north central Pacific, traveling approximately 10,000 km in less than 2 weeks and then returning to Lana'i to care for their chicks. Dry Forest Restoration on Mauna Kea. As part of mitigation to offset the impacts of the re-alignment of Saddle Road through Palila [Loxioides bailleui] critical habitat, the Division and Pacific Cooperative Studies Unit successfully implemented forest restoration work in fenced parcels of the northern and western slopes of Mauna Kea totaling an estimated 2,500 ha. Volunteers

with the Division planted 8,000 native trees aimed at converting pastureland into native forest habitat for the palila and other rare and endangered plants and birds. Work will expand to include predator control and habitat restoration efforts in the "core population" area of western slope of Mauna Kea. This area supports nearly 100% of the Palila population found on the mountain.

City and County of Honolulu – Board of Water Supply

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Water Conservation: Develop a program to pilot the top three most effective water conservation measures and best practices as part of the water conservation program development study. Continue to expand our year-round media campaign on conservation methods, messages, surveys and educational outreach. Alternative Resource Development:

© EG 2008 – City and County of Honolulu – Board of Water Supply

- Water Conservation:
 - Complete the Water Conservation Program study. Initiate work on the program implementation plan including the top three water conservation pilot programs and eventual rollout of these programs on a broader scale. Obtain approval of the Water Conservation Section organizational plan and fill needed positions.
- Alternative Resource Development:
 - Expand new recycled water users in Ewa including the Ocean Pointe District Park, Department of Hawaiian Home Land projects in East Kapolei and extend a pipeline to the proposed University of Hawai'i West O'ahu Campus.
 - Review and approve non potable water master plans for the East Kapolei Hoopili Development and the Campbell Properties Harborside and West Kapolei developments. With this master plan, the entire Ewa district will have a dual water system, providing drought-resistant irrigation water and extending our potable water resources to meet projected growth.
 - Continue the design of the Wahiawa/Central O'ahu Recycled Water System to reduce use of potable water for irrigation and complete the Memorandum of Agreement between the State Department of Health, City Department of Environmental Services and BWS Funding for a design/build contract is scheduled for FY 2010.

Expand recycled and brackish water use in Ewa and advance planning for reuse in Central O'ahu to reduce use of potable water for irrigation. Expand seawater district cooling in Ko Olina as a water and energy conservation measure and business development program

☞ **Watershed Management Planning:**

- ☛ Seek new opportunities for Watershed Management Planning such as partnerships, education and forestry management projects using in-kind services.
- ☛ Secure funding for the Ko'olaupoko and the North Shore Watershed Management Plans to fulfill the next increment of the O'ahu Water Management Plan.

☉ **EA 2007**

☞ **Water Conservation:**

- ☛ The water conservation program development study is progressing. Water efficiency measures and drought strategies for O'ahu have been identified. Several pilot programs have been

developed but have not been implemented Phase II of the water conservation study has been funded to develop a benefit cost model to evaluate new programs and provide a program implementation plan.

☛ Our infrastructure conservation program to reduce water loss within the existing Board of Water Supply [BWS] distribution system is continuing with the acquisition of new leak detection and advanced metering equipment to assist field crews.

☞ **Alternative Resource Development:**

- ☛ The Hono'uliuli Water Recycling Facility continues to expand. BWS has partnered with Haseko [Hawai'i], Inc., and Gentry Companies to construct new pipelines along Geiger Road, Kapolei Parkway and Keaunui Street to expand our distribution system to Fort Weaver Road, increasing flows and pressures to existing and new developments. The Ocean Pointe Golf Course and the City of Kapolei should be using recycled wa-

ter by the end of the year. Design to connect the reverse osmosis demineralized system to Hawaiian Electric Company Kahe Plant and the proposed Campbell Industrial Park power plants have started. Contracts are being prepared.

☛ BWS funded the design of the Wahiawa/Central O'ahu Recycled Water System and a consultant is being procured. This project will provide 2 million gallons per day of recycled water to Central O'ahu Regional Park and the Waiawa Golf Courses while reducing discharge of treated effluent into Wahiawa Reservoir.

☛ The Ko Olina seawater cooling project has been cancelled; however, Ko Olina Development has drilled a deep seawater well and is master-planning its use in their development.

☞ **Watershed Management Planning:**

- ☛ The Waianae and Ko'olaupoko Watershed Management Plans have obtained the endorsement of the neighborhood boards and will initiate the final approval process with the City

Council and the Commission on Water Resource Management.

☛ The BWS and the Army Corps of Engineers completed their joint Central O'ahu Watershed Study identifying several watershed protection projects for groundwater, surface water and land management. This watershed study will provide the basis for the Ewa and Central O'ahu Watershed Management Plans scheduled for appropriation in FY 2011.

☛ The BWS appropriated partial funding to initiate the North Shore and Ko'olaupoko Watershed Management Plans.

City and County of Honolulu – Department of Parks and Recreation

☉ **EG 2007**

☞ Complete upgrading of all remaining cesspool and cavitette wastewater systems at beach parks.

☞ Plan, design and construct improvements at park facilities to ensure compliance with the requirements of

the National Pollution Discharge Elimination System.

☉ **EA 2007**

☞ The Department continued closing cesspools and upgrading the wastewater systems at beach parks. The few remaining parks with existing cesspools are either in the final stages of design and or under construction. Money to design and or construct upgraded wastewater systems at Kualoa Regional Park with an existing cavitette wastewater systems in the City's Capital Budget and is under design.

☞ The City has worked closely with the State Department of Health in developing a City wide Storm Water Management Plan and Spill Prevention, Control and Countermeasure Plans as necessary for specific sites. In addition, the City has trained hundreds of personnel in best management practices related to the NPDES.

City and County of Honolulu – Department of Planning and Permitting

☉ **EG 2007**

☞ To support the Board of Water Supply in the preparation of the O'ahu Water Use and Development Plan.

☞ To participate in the O'ahu Metropolitan Planning Organization planning process, in particular, to assure coordination of transportation planning with county land use and population planning.

☞ To develop community and neighborhood plans that help to promote adopted regional plans and meet specific neighborhood goals.

☉ **EA 2007**

☞ – ☞ We have met this goal.

☉ **EG 2008 – City and County of Honolulu – Board of Water Supply [continued]**

☞ **Watershed Management Planning:**

- ☛ Secure the remaining funds and continue the North Shore and Ko'olaupoko Watershed Management Plans to fulfill the next increment of the O'ahu Water Management Plan required by the State Water Code.

☉ **EG 2008 – City and County of Honolulu – Department of Parks and Recreation**

☞ Purchase and distribution of spill prevention kits and related materials as required by the NPDES to applicable Island wide park sites.

☞ Implement pilot project where the Department will permit recycling companies to place portable, HI 5 reverse vending machines in 3 to 4 park sites during the day Monday thru Friday. In exchange for providing greater accessibility to encourage the public's participation in recycling beverage containers, the recycling companies will also be placing recycling containers in these parks for other recyclable products and will be responsible for the maintenance and emptying of the containers.

☉ **EG 2008 – City and County of Honolulu – Department of Planning and Permitting**

☞ The above-mentioned goals are the same and continue for the period from July 2007 to June 2008.

City and County of Honolulu – Department of Transportation Services

EG 2007

- ☞ To promote programs to reduce dependence on the use of automobiles
- ☞ To evaluate the social, economic, and environmental impact of additions to the transportation system prior to construction.
- ☞ To improve the safe and efficient operation of City transportation and other facilities under the jurisdiction of the department.

EA 2007

- ☞ Awarded contract for ferry demonstration project to provide two ferry vessels to perform three trips in the morning and three trips in the afternoon between Kalaeloa and Aloha Tower Pier 9. Completed and submitted Honolulu High-Capacity Transit Corridor Project Alternatives Analysis Report to City Council for use in deci-

sion making to proceed with planning and engineering of a fixed guideway transit system between Kapolei, and UH-Mānoa and Waikiki. Conducted community meetings as part of the Bus Service Improvement Plan. Construction of Mililani Transit Center and Waianae Transit Center commenced. TheBus provided special services for the Mayor’s Memorial Day Service at Punchbowl, Easter Sunrise Service, Great Aloha Run, Veteran’s Day Service, Aloha Stadium Football Express for all UH home games, and the Pro Bowl football game. Constructed Waialae Kahala Bicycle Staging Area and miscellaneous bikeway improvements-Meheula Parkway, Waialae Avenue, Kapahulu Avenue, Dole Street and Wilder Avenue Purchased and distributed various bicycle safety education materials to the public, including bicycle rental agencies in Waikiki. Conducted four bicycle traffic safety training sessions with new TheBus drivers. Served

as grant manager for Hawai’i Bicycling League’s Bike Ed Program for 4th graders Purchased, relocated, replaced and/or installed 15 bike racks.

- ☞ Reviewed, coordinated and processed approximately 43 environmental impact and assessment documents
- ☞ Initiated work on the environmental impact statement for the Honolulu High-Capacity Transit Corridor Project. Administered the contract for professional services to prepare environmental documents for the North-South Road Project. Completed environmental documentation for the Waipio Point Access Road Study and final EA from Kamokila Boulevard Extension Project. Procuring contract to complete planning and conduct environmental documentation for Makakilo Drive Extension Project. Planning and preparation of EA for new Joint Traffic Management Center continuing.
- ☞ As part of pedestrian safety initiative, at various locations, countdown

pedestrian signals installed, signal timing adjusted to provide longer crossing times and high visibility [fluorescent yellow green] pedestrian crossing signs installed. Administered contract for City traffic management, planning and public information project [Drive Aka-mai], which intended to help minimize traffic impacts of major construction projects in the Downtown Honolulu/Waikiki area. Procured nine fixed route 60-foot low-floor articulated buses and 20 TheHandi-Van vehicles. Took delivery of 40 40-foot low-floor hybrid electric buses and 32 paratransit vehicles. Constructed Kaimuki Business District Parking Improvements, Lualualei Homestead Road/Leihoku Street Improvements, Kaonohe Street/Moanalua Road Intersection Improvements, Kaahale Street Restriping, Kipapa Drive Bulbout Modification, Kamehameha Highway Safety Improvements, Traffic Calming Improvements at Various Locations.

- ☞ Makakilo, Mānoa, Palolo, Foster Village and Salt Lake Roundabout. Waianae Coast Emergency Access Road [WCEAR] - Helelua Place Extension, WCEAR - Paakea Road, and Moanalua Road/Kuala Street/Waimano Home Road Improvements under construction. Transportation. Improvements at various locations—Harding, 5th and 11th Avenues, Manana Traffic Maintenance Building, Kamokila Boulevard Extension, Moanalua/Kaahumanu Freeway Ramp Extension, Waipio Point Access Road, Tantalus Roundtop Topographic Study, and Metcalf Street Improvements being planned and designed. Kalihi-Palama Bus Facility Improvements continuing and construction of Middle Street Intermodal Center underway. Full Computer Aided Dispatching and Automatic Vehicle Location for the paratransit fleet being added. A review of City bus stop spacing and removal of several mid-block bus stops initiated. Removed and refurbished 25 bus shelters; demolished

four shelters; repaired or replaced seven shelters; and major repair/replacement of four bus shelter roofs. Phase III construction for ADA Bus Stop Accessibility Project completed; plans for Phase IV being reviewed.

City and County of Honolulu – Fire Department

EG 2007

- ☞ To obtain the National Pollution Discharge Elimination System [NPDES] Municipal Storm Sewer System [MS4] permit.
- ☞ Continue to explore environmentally sound business practices, such as continued retrofitting of solar water heaters in the fire stations and practicing energy conservation by reinforcing HFD energy conservation procedures.

EA 2007

- ☞ Completed the Foam Disposal Project as of March 2007.
- ☞ The Small MS4 was incorporated

EG 2008 – City and County of Honolulu – Department of Transportation Services

- ☞ To promote programs to reduce dependence on the use of automobiles.
- ☞ To evaluate the social, economic. and environmental impact of additions to the transportation system prior to construction.
- ☞ To improve the safe and efficient operation of City transportation and other facilities under the jurisdiction of the department.

EG 2008 – City and County of Honolulu – Fire Department

- ☞ Assist in the elimination of greenhouse gas emissions and other destabilizing climate impacts.
- ☞ Design future fire stations to include Storm Water Pollution Prevention construction, energy efficient lighting, and solar water heating.
- ☞ Work with City agencies to implement the NPDES, Storm Water Management Program [SWMP], Spill Prevention, Control and Countermeasures Plan [SPCC], Storm Water Pollution.
- ☞ Control Plan [SWPCP], and Best Management Practices [BMP].
- ☞ Provide pollution spill control kits for all fire stations.
- ☞ Provide chemical storage cabinets with secondary containment compartments for all fire stations.
- ☞ Implement department-wide training for awareness and compliance with the SWMP, SPCC, SWPCP, and BMPs.
- ☞ Assist in the elimination of air toxins, criteria pollutants, and persistent bio accumulative toxins.
- ☞ Ensure safe drinking water at all fire stations and related fire facilities.

into the City's Large MS4 permit and filed in March 2007.

☞ A Memorandum of Agreement was reached with other City agencies to consolidate the Small MS4 and Industrial Permits into the Large MS4 [March 2007].

☞ Continue to install solar water heating systems in all renovated and newly constructed fire stations.

☞ Continue to enforce the Department's energy conservation program with motion detection lighting systems, energy saving bulbs, and alternative fuel usage such as bio-diesel and ethanol.

County of Kaua'i – Department of Planning

☉ EG 2007

☞ Environmental stewardship and sustainability is an overarching goal of this department carried out in line with the community values and vision stated in our General Plan;

- ☞ Community Values:

- ☞ Protection, management, and enjoyment of our open spaces, unique natural beauty, rural lifestyle, outdoor recreation and parks

- ☞ Conservation of fishing grounds and other natural resources, so that individuals and families can support themselves through traditional gathering and agriculture activities.

- ☞ Access to and along shorelines, waterways and mountains for all. However, access should be controlled where necessary to conserve natural resources and to maintain the quality of public sites for fishing, hunting, recreation and wilderness activities valued by the local community.

- ☞ Recognition that our environment IS our economy, our natural capital, the basis of our economic survival and success.

- ☞ Balanced management of our built environment, clustering new development around existing communities and maintaining the four-story height limit.

- ☞ Balanced economic growth de-

velopment promoting providing good jobs and a strong economy, without sacrificing our environment and our quality of life.

- ☞ Vision:

- ☞ a "garden island" of unsurpassed natural beauty;

- ☞ a rural environment of towns separated by broad open spaces;

- ☞ a rural place whose population size and economy have been shaped to sustain Kauai's natural beauty, rural environment and lifestyle;

- ☞ a community which cares for its land and waters, leading the way with best management practices in the development of roads and other public facilities and in its land development and environmental regulations;

- ☞ an agricultural center, producing a wide range of crops, food, and forest products for local consumption and export.

☉ EA 2007

☞ Lihue Town Core Development Plan [In final draft]

- ☞ Redefines Lihue as a connected pedestrian oriented destination town

- ☞ Is the seed project for the General Plan goal of concentrating population growth and appropriate services in Lihue, thus reducing sprawl and commuter patterns of settlement.

- ☞ Design Guidelines calling for street landscaping for a greening of the urban environment.

☞ Kapa'a Wailua Development Plan [In visioning process]

- ☞ Strengthen identity of traditional Ahupua'a boundaries much of which have been lost through strip highway development. Although there is no true physical ecosystem tie in, it is hoped that the re-establishment of these boundaries will raise awareness of the watershed system and help people place themselves ecologically.

- ☞ Identifies important Open Space areas for scenic, recreational and ecological purposes.

- ☞ Wailua River

- ☞ Nonou Mountain

- ☞ Middler Lands waterfowl preserve

- ☞ Kapa'a Stream

- ☞ Open Space near Kapa'a for wet land to clean canal

- ☞ Encourages areas targeted for growth to be mixed use in order to minimize automobile trips.

- ☞ Encourages the establishment of alternative transportation networks.

☞ Comprehensive Zoning Ordinance Update [In Department Review]

- ☞ Evaluating the benefits of emerging green building technologies and what incentives can be offered for their implementation.

- ☞ Green roofs

- ☞ Photovoltaic power

- ☞ Height allowances and proper zoning for wind farms.

- ☞ Limiting proliferation of "gentlemen farms" on Agricultural and Open zone lands.

- ☞ Managing the heat sinks created by large commercial parking lots

☞ Shoreline Erosion Study - provides scientific erosion database on which to base makai setbacks.

☞ Implement GIS database so that cumulative impacts of development can be more readily analyzed. A very basic example would be to coordinate with engineering how much land is currently under construction or grading so that issuance of building permits can be timed so that watersheds are not subject to heavy runoff.

☞ Implement computerized intake and management system so that permitting becomes virtually paperless.

☞ Incorporate native and endemic plants.

☞ Incorporate Green building strategies.

County of Hawai'i – Department of Environmental Management

Ⓞ **EG 2007**

- ☞ Continue to move forward with large capacity cesspool [LCC] closure efforts and work closely with US EPA.
- ☞ Continue to plan and design for sewer and effluent reuse infrastructure in North Kona in anticipation of growing development.
- ☞ Begin construction on Komohana Heights LCC closure project.
- ☞ Complete preliminary engineering for a new onsite and offset sewer collection system for Queen Lili'uokalani LCC closure project.
- ☞ Report findings of North Kona and Kilohana Improvement District projects to County Council.
- ☞ Present possible sewer alternatives for Kapoho wastewater treatment feasibility study.
- ☞ Rehabilitation of current permitted County Solid Waste convenience

- ☞ centers with existing general funds and CIP funds.
- ☞ Increase opportunities for recycling through County Diversion Grant Program.
- ☞ Enforce illegal dumping regulations against violators.
- ☞ Increase landfill diversion rate by 2 percentage points, to 28%.

Ⓞ **EA 2007**

- ☞ Continued infiltration/inflow reduction to the Kealakehe Wastewater Treatment Plant to reduce chloride concentrations in effluent. This allows further upgrades of effluent to R-1 quality.
- ☞ Completed preliminary engineering for new sewer collection and treatment systems for Naalehu, Pahala and Honoka'a LCC closure projects.
- ☞ Secured County funding for sewer and effluent reuse infrastructure project [Phase I] to be installed in conjunction with the State Department of Transportation's Queen Kaahumanu Highway widening project [Phase II].

- ☞ Working with financial consultants to determine optimal method of financing for North Kona and Kilohana Improvement District projects.
- ☞ Secured services of engineering consultant to begin work on the Kapoho wastewater treatment feasibility study.
- ☞ Design and funding in place for the upgrade to the Hilo Solid Waste Transfer Station. Construction began early 2007.
- ☞ Landfill diversion rate fell to 22.7%. In FY 2002 it was 12.65%, in FY 2003 it was 15.2%, in FY 2004 it was 15.6%, in FY 2005 it was 20.0%, in FY 2006 it was 25.8%. The decrease in diversion is primarily due to mechanical problems with a tub grinder. The addition of a second grinder is anticipated to help increase green waste diversion rates in 2008.
- ☞ Continued the Derelict Vehicle Amnesty disposal program. This allows vehicle owners to have up to 2 vehicles on private property properly disposed with

Ⓞ **EG 2008 – County of Hawai'i – Department of Environmental Management**

- ☞ Continue to move forward with closure of large capacity cesspool [LCC] projects.
- ☞ Continue to move forward with improvement district projects for North Kona and Kilohana.
- ☞ Continue with planning and designing efforts for sewer and effluent reuse infrastructure in North Kona.
- ☞ Begin construction of sewer and effluent reuse infrastructure project [Phase I] in Queen Kaahumanu Highway.
- ☞ Continue rehabilitation of our system of solid waste transfer stations [convenience centers].
- ☞ Secure site and funding, and complete permitting and EIS for South Kona/Ka'u solid waste transfer station.
- ☞ Secure illegal dumping inspector to work with Police and communities on enforcement, primarily evidence collection that will allow penalties to be enforced through the courts.
- ☞ Undertake two Sewer Master Plan projects of large areas in Kailua-Kona where growth is occurring and expected to increase in the future.
- ☞ Assist residents and businesses with LCC compliance by expanding sewer systems or partnering to create new wastewater treatment systems.
- ☞ Begin the Update to our Solid Waste Management Plan.

- ☞ most elements recycled. 119 vehicles were removed through this program in addition to the 2,286 vehicles removed on public property under the current Abandoned Vehicle Program.
- ☞ Modified the biotower pumps, No. 3 water pumps and SCADA systems at the Hilo Wastewater Treatment Plant.
- ☞ Modified the motor control center at the Puakaa Wastewater Pump Station.
- ☞ Replaced the influent flow meter at the Hilo Wastewater Treatment Plant.
- ☞ Prepared emergency response procedures in the event of catastrophic failure of Wailoa Wastewater Pump Station and force main or the collapse of the Kalaniaoale Interceptor due to corrosion.

County of Hawai'i – Planning Department

Ⓞ **EG 2007**

- ☞ Define the most desirable use of land within the County that achieves an ecological balance providing residents and

- ☞ visitors the quality of life and an environment in which the natural resources of the island are viable and sustainable.
- ☞ Maintain and, if feasible, improve the existing environmental quality of the island.
- ☞ Control pollution.

Ⓞ **EA 2007**

- ☞ Sustainability and Ecological Balance
 - ☞ Advise the public of environmental conditions and research undertaken on the island's environment.
 - ☞ Encourage the State to establish air and water quality monitoring stations in areas of existing and potential urban growth.
 - ☞ Participate in watershed management projects to improve stream and coastal water quality and encourage local communities to develop such projects.
 - ☞ Require golf courses to implement best management practices to limit leaching of nutrients to groundwater in

- ☞ areas where they may affect streams or coastal ecosystems.
- ☞ Maintain/Improve Environmental Quality
 - ☞ Take positive action to further maintain the quality of the environment.
 - ☞ Encourage the concept of recycling agricultural, industrial, and municipal waste material.
 - ☞ Review the County grading and grubbing ordinances to ensure that they adequately address potential erosion and runoff problems.
 - ☞ Control Pollution
 - ☞ Reinforce and strengthen established standards where it is necessary, principally by initiating, recommending, and adopting ordinances pertaining to the control of pollutants that affect the environment.
 - ☞ Encourage the State to continue aircraft noise abatement strategies at Hilo International Airport and the Kona International Airport at Keahole.
 - ☞ Work with the appropriate agencies to adopt appropriate measures and

Ⓞ **EG 2008 – County of Hawai'i – Department of Environmental Management EG 2008 [continued]**

- ☞ Continue to increase opportunities for recycling through County Diversion Programs at all transfer stations including green waste diversion, white goods holding areas and 2-stream recycling bins.
- ☞ Plan for Disaster Debris sites at both South Hilo Sanitary Landfill and West Hawai'i Landfill.
- ☞ Move forward to increase the life of the South Hilo Sanitary Landfill in close collaboration with the State Department of Health.
- ☞ Continue to execute the repair and maintenance plan for the Wastewater Division.
- ☞ Continue to monitor the high hydrogen sulfide concentration and corrosion within Kalaniaoale Interceptor and the Hilo Wastewater Treatment Plant Develop interim plans to extend the life of the existing infrastructure until more permanent Capital Improvement Projects can be completed.
- ☞ Continue to monitor the high influent biochemical oxygen demand [BOD] for Kealakehe and Hilo Wastewater Treatment Plants Sources of the high BOD concentrations were suspected to be from overflowing grease traps at restaurants, liquid sludge from private treatment plants and septage from private haulers. Develop short-term and long-term plans to manage the sources of the high BOD concentrations.
- ☞ Determine which of the Wastewater Division structures the Building Division is willing to maintain.

provide incentives to control point and nonpoint sources of pollution.

- ▣ Support programs to prevent harmful alien species from becoming established.

- Require implementation of the management measures contained in Hawai'i's coastal Nonpoint Pollution Control Program as a condition of land use permitting.

- ▣ Pollution shall be prevented, abated, and controlled at levels that will protect and preserve the public health and well being, through the enforcement of appropriate Federal, State and County standards.

- ▣ Incorporate environmental quality controls either as standards in appropriate ordinances or as conditions of approval.

- ▣ Federal and State environmental regulations shall be adhered to.

**County of Maui –
Department of Public Works and
Environmental Management**

⊙ **EG 2007**

- ▣ The development of the Lahaina Watershed Flood Control project which is being done in partnership with the U. S. Department of Agriculture, Natural Resources Conservation Service. The project will divert flood waters around Lahaina town and include desilting basins to reduce the impact to near shore waters.

- ▣ Develop the construction documents for modifications to the Lahaina Wastewater Reclamation Facility to reinstate the original design capacity and improve reliability.

- ▣ Improve the recycling programs to divert more waste away from the landfills.

⊙ **EA 2007**

- ▣ The Department has completed design and secured County funding for this goal. The project is currently working to secure the necessary rights-of-way to start construction.

- ▣ The Wastewater Reclamation Division has performed an in-house evaluation of the Lahaina Wastewater Reclamation Facility to reinstate the original design capacity. Using maintenance funds, much of the non-functional infrastructure will be reinstated.

- ▣ The Solid Waste Division has initiated the project to update the Integrated Solid Waste Master Plan. As part of the update, recycling programs will be planned for future improvements.

⊙ **EG 2008 – County of Hawai'i – Planning Department**

- ▣ To continue to define the most desirable use of land within the County that achieves an ecological balance providing residents and visitors the quality of life and an environment in which the natural resources of the island are viable and sustainable.

- ▣ To continue to maintain, and if feasible, improve the existing environmental quality of the island.

- ▣ To continue to control pollution.

⊙ **EG 2008 – County of Maui – Department of Public Works and Environmental Management**

- ▣ Continue the development of the Lahaina Watershed Flood Control project which is being done in partnership with the U. S. Department of Agriculture, Natural Resources Conservation Service. After securing the necessary rights-of-way, the project will be prepared for construction bidding. The project will divert flood waters around Lahaina town and include desilting basins to reduce the impact to near shore waters.

- ▣ Adopt construction code amendments that require permanent best management practices to control post construction storm water quality. The proposed code amendments have been approved by the State Health Department and the Environmental Protection Agency. The Development Services Administration and the Department of the Corporation Counsel are currently drafting a Bill to adopt the proposed code amendments.

- ▣ To complete design and initiate construction contract to install drainage grease traps for County highway baseyard facilities. The grease traps will retain oils from equipment repair areas before it has a chance to discharge into offsite drainage facilities.

Na ke kanaka mahi'ai
ka imu ōnui

The well-filled imu belongs to the man who tills the soil.

Words of Wisdom/Olelo No'eau

*[All food mile data was taken from
information on food packaging.]*

