



# Environmental Council

## 2007 Annual Report

State of Hawaii  
Department of Health  
Office of Environmental Quality Control



# Environmental Council

## 2007 Annual Report



Linda Lingle  
Governor

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Director  
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### ENVIRONMENTAL COUNCIL

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## **A MESSAGE FROM THE CHAIR**

The theme of this year's Annual Report is Environmental Justice. Many of us are only now learning what this is. What it means to our community has yet to be defined. The process is a large part of the goal. Seeking the unrepresented, unheard minority and questioning whether they have been unfairly impacted by development is the issue. We don't know how to do this today, but we are starting on the journey to find out.

Last year, our theme was Energy. Because of the impact locally and globally of our energy use, we felt it was imperative to expand our information on this issue. We have attempted to document progress (or lack thereof) on our goals from last year. It is apparent that we are also missing some important indicators, or have not presented the information we have in as useful a manner as possible. This effort to inspire and motivate positive actions by presenting clear and relevant data will continue. We encourage new participation to help us in meetings this goal.

We have started an extensive rules change through the public review process. Given the length of time anticipated to complete this process, more changes will be needed before these rules are even enacted.

One need only look to the recent news articles for evidence that systemic changes are needed to the Environmental Assessment (EA) and Environmental Impact Statement (EIS) process. The Hawaii SuperFerry fiasco is a prime example of flaws in our system. The very fact that the decision over the EIS landed in our courts demonstrates the inefficiency of our current method of applying our environmental monitoring program. While the Environmental Council creates the rules and regulations, it has no enforcement authority, and can do little more than give opinions in such cases, which it is rarely asked to do. Moving at the speed of the legal system, the final ruling comes so late that the developers of the project find themselves in an incredulous situation.

The Council and the Legislature needs a comprehensive review of the system, which was to be funded under Act 294, Session Laws of Hawaii 2006 in order to develop appropriate changes to this process.

Out of the chaos, we believe there have been lessons learned. If we are to have smart growth in which the meaning of "smart" indicates that the community has had its concerns addressed, then we must have the courage to make the changes necessary for a workable system. We must address environmental justice issues. We must address the global issues of climate change. And, if we are to preserve the beauty of our islands for future generations, we must protect our precious aina.

Sustainably yours,

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, Hawaii 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 Hawaii's environment. For more information on the Council go to [www.state.hi.us/health/oeqc/envcouncil.html](http://www.state.hi.us/health/oeqc/envcouncil.html).

## **MISSION STATEMENT**

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](http://www.state.hi.us/health/oeqc/index.html).

## **INTRODUCTION TO ENVIRONMENTAL JUSTICE**

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 development, 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.

**Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations 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.

The environmental justice definition and guidance document aim to assist agencies with this.

The 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 principles in Hawai'i. But more needs to be done. Results of Act 294 will be presented

in a report entitled “Hawaii Environmental Justice Initiative.” This report will address requirements to meet Act 294 and Hawaii laws that support the right for all people to live in a clean and healthy environment.

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

## **RECOMMENDATIONS TO THE GOVERNOR**

### Recommendations for Future Environmental Justice Efforts

1. That the State adopt the environmental justice guidance document as agency policy for use in the State environmental review process.
2. Once the efficacy and practical implications of the environmental justice guidance document have been evaluated, it is recommended that Ch. 343, HRS, be amended to incorporate the successful aspects of the environmental justice guidance document.



## Monitoring Actions Related to Recommendations in the 2006 Annual Report

In the years following each year's recommendations, the Environmental Council will report the status on any actions that contribute to fulfilling the recommendations. 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.*** Of the 21 officials who responded to our inquiries, the Director of the Department of Agriculture drives a hybrid car.

***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.*** 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 Manoa Library and Kohala Library, and a pilot retro-commissioning project at the State Capitol. For more information regarding State actions, see the Department of Accounting and General Services on page 32 of this report.

***Priority permitting processes for renewable-energy and energy-efficient projects be instituted, and that these processes emphasize public participation and community benefits.*** 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](http://www.honoluludpp.org).

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

***The State provide more resources at county level to ensure effective energy program implementation and locally-based solutions.*** We inquired in all counties. The county of Kauai responded, reporting that they requested and received a 3% increase in funding for the County Energy Office.

***Support reduction of greenhouse gas emissions with the publicly stated commitment to meet or exceed the goals of the Kyoto Protocol.***

The Governor signed the Global Warming Solutions Act of 2007 (HB 226, Act 234) into law on 30 June 2007. The law sets an enforceable greenhouse gas limit equal to the 1990 levels that must be achieved by 2020. While not mandating specific methods to achieve this goal, it creates a task force empowered to study solutions, including “direct emission reduction measures; alternative compliance mechanisms; market-based compliance mechanisms; and potential monetary and non-monetary incentives.” Rules for greenhouse gas emissions limits shall be adopted by 31 December 2011.

The mayors of all five counties signed *The U.S. Mayors Climate Protection Agreement* which strives to exceed the goals of the Kyoto Protocol. Please visit the following website for more information: <http://usmayors.org/climateprotection/documents/mcpAgreement.pdf>.

***The Environmental Council participate in the Hawaii Energy Policy Forum by becoming an ex-officio member.*** Council Member Shad Kane served on both the Environmental Council and the Hawaii Energy Policy Forum as a liaison between the organizations.

***The 10-Point Energy Plan from the Hawaii Energy Policy Forum.*** The Forum adopted a revision of the Ten-Point Plan in July 2007 ([www.hawaiienergypolicy.hawaii.edu/pages/tenpointplan.html](http://www.hawaiienergypolicy.hawaii.edu/pages/tenpointplan.html)).

**Preamble:**

Hawaii’s preferred energy future requires a comprehensive integrated approach. HEPF’s strategic initiatives strive to:

*Promote energy security and sustainability  
Enhance regulatory goals and protections  
Diversify energy sources*

*Reduce energy consumption  
Foster civic action and participation*

**Points:**

1. Expand Renewable Energy Opportunities
2. Promote Conservation and Energy Efficiency
3. Reduce Green House Gas Emissions in Hawaii
4. Foster Civic Action and Participation
5. Enhance Regulatory Goals and Protections
6. Encourage Culturally Appropriate and Sustainable Energy Planning
7. Improve Energy Efficiencies and Options in Transportation
8. Support research and development of alternative energy (hydrogen, wave energy, etc.)
9. Support sustainable development and use of biofuels
10. Ensure the security and reliability of energy supply and distribution

**ENVIRONMENTAL INDICATORS**

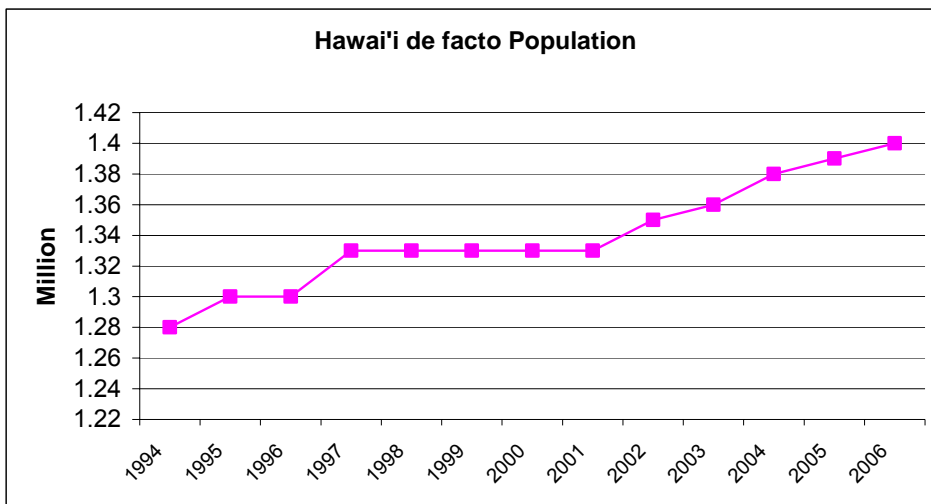
Environmental indicators are measurements that track environmental conditions over time. Each year, the Environmental Council collects data on several indicators of the quality of Hawai’i’s environment. These data are presented in text, tables and graphs. The indicators provide a wide look - from water 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:

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

### State Population

The stress of population growth adds pressure on our ecosystem. More people means 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 challenges as we try to balance the needs of our people and the health of our ecosystem. According to the Commission for Environmental Cooperation (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.

Year	de facto Population (in millions)
1994	1.28
1995	1.30
1996	1.30
1997	1.33
1998	1.33
1999	1.33
2000	1.33
2001	1.33
2002	1.35
2003	1.36
2004	1.38
2005	1.39
2006	1.40

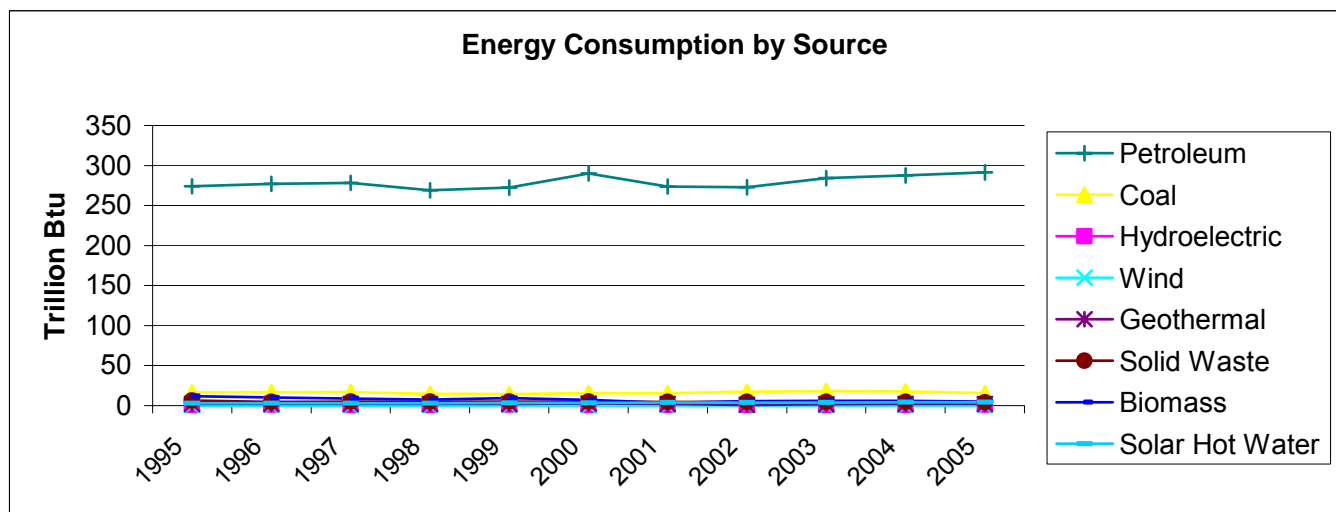


Source: State DBEDT, Databook 2006.

## Energy Consumption by Source

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

Year	Petroleum	Hydro-electric	Coal	Wind	Geo-thermal	Solid Waste	Biomass	Solar Hot Water
1995	273.9	1.0	16.5	0.2	2.3	6.3	11.8	2.8
1996	277.1	1.1	16.9	0.2	2.3	4.6	10.3	3.1
1997	278.3	0.9	16.7	0.1	2.3	5.2	8.9	3.1
1998	269.1	0.7	14.7	0.2	2.2	5.0	7.5	3.1
1999	272.4	1.2	14.5	0.1	2.0	5.1	9.2	3.5
2000	290.2	0.9	15.4	0.1	2.5	5.1	7.1	3.5
2001	273.7	1.0	15.7	0.1	2.1	4.6	3.4	3.6
2002	272.8	1.0	17.1	0.1	0.7	4.7	5.5	4.0
2003	284.4	0.7	18.2	0.1	1.8	4.8	6.0	4.0
2004	287.7	0.9	17.8	0.0	2.1	4.8	6.1	4.3
2005	291.5	1.1	15.5	0.0	2.2	4.2	5.2	4.4

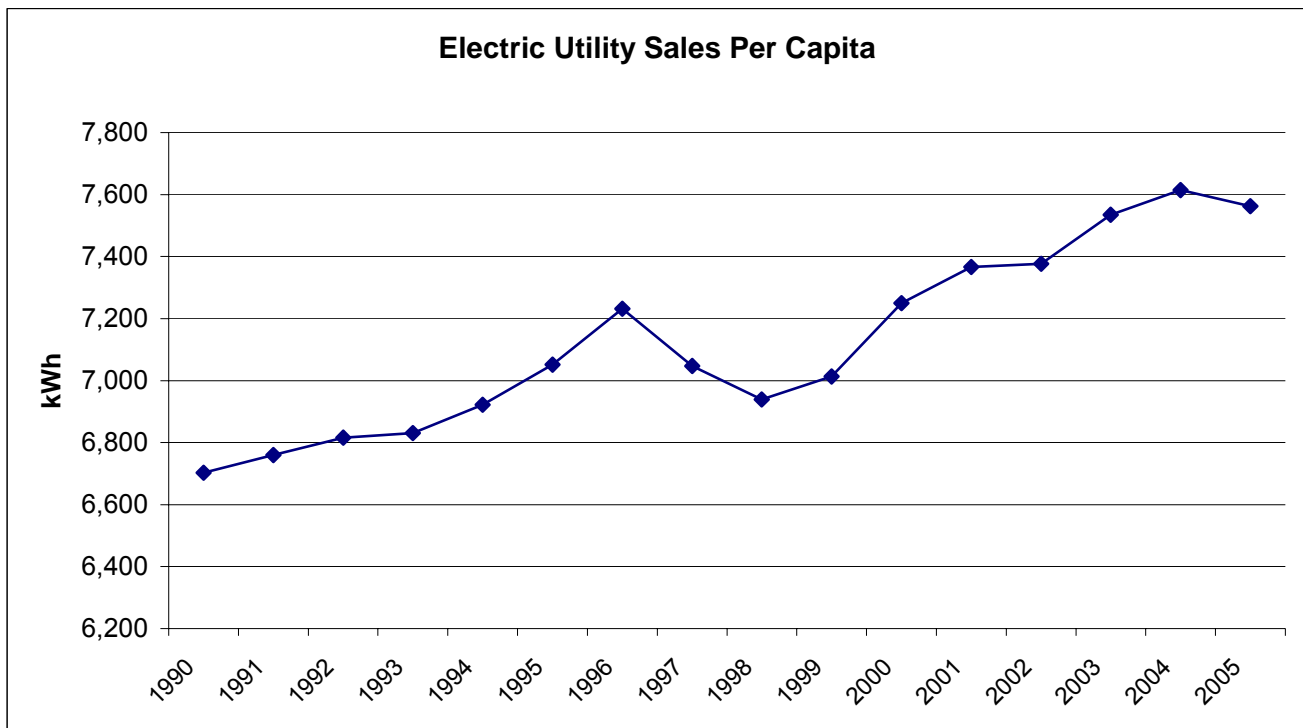


Source: State DBEDT, Databook 2006.

### Electric Utility Sales Per Capita

The table below depicts the electricity sales (all utilities, all islands) per capita of *de facto* population in Hawai'i.

Year	Electric Sales Per Capita (kWh)
1990	6,703
1991	6,760
1992	6,816
1993	6,831
1994	6,922
1995	7,051
1996	7,232
1997	7,047
1998	6,939
1999	7,013
2000	7,250
2001	7,366
2002	7,377
2003	7,535
2004	7,614
2005	7,563



Source: Utility FERC Form 1 and Annual Reports to PUC via DBEDT SID.

## Air Quality Measurements in Honolulu

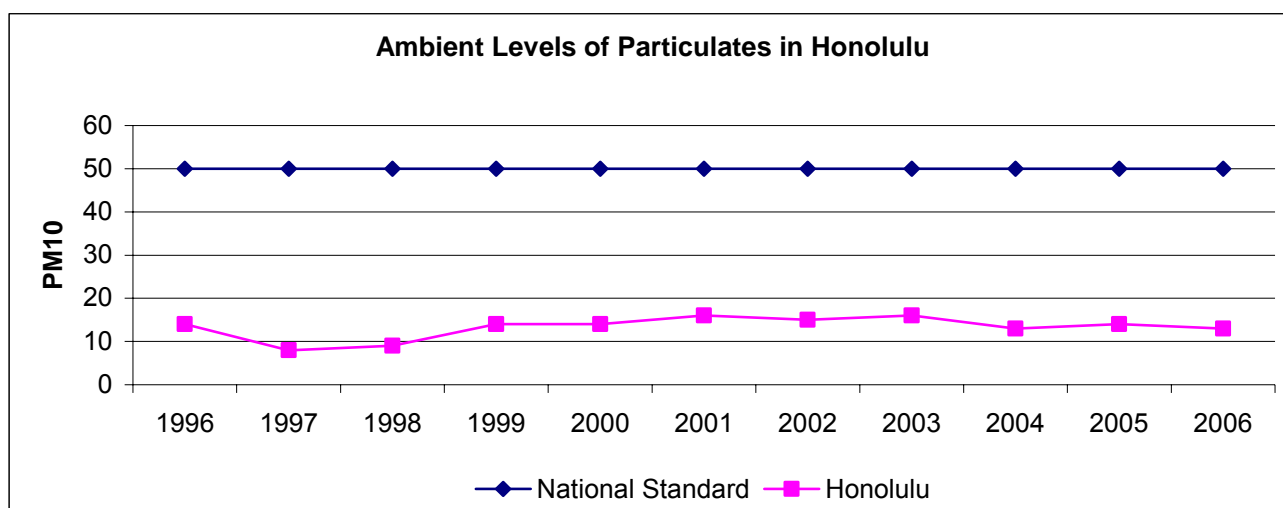
The EPA has set the annual average of small particulate matter, or PM<sub>10</sub>, at 50 micrograms/cubic meter. PM<sub>10</sub> is defined as particulates with an aerodynamic diameter less than or equal to 10 microns. At the Honolulu monitoring station, located in downtown, the annual average concentration of particulates varied from 14 to 16 micrograms/m<sup>3</sup>. At 16 µg/m<sup>3</sup> 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/m<sup>3</sup>. Concentrations of PM<sub>10</sub> are not significantly affected by sulfates from volcanic emissions carried over O'ahu by Kona winds.

For a statewide report on air: [www.hawaii.gov/health/environmental/air/cab/cabmaps/report.html](http://www.hawaii.gov/health/environmental/air/cab/cabmaps/report.html)

For real/near time monitoring data for Oahu and Hawaii: [www.hawaii.gov/don/air-quality/index.html](http://www.hawaii.gov/don/air-quality/index.html)

Year	Honolulu (PM <sub>10</sub> )	National Standard (PM <sub>10</sub> )
1996	14	50
1997	8	50
1998	9	50
1999	14	50
2000	14	50
2001	16	50
2002	15	50
2003	16	50
2004	13	50
2005	15	50
2006	13	50



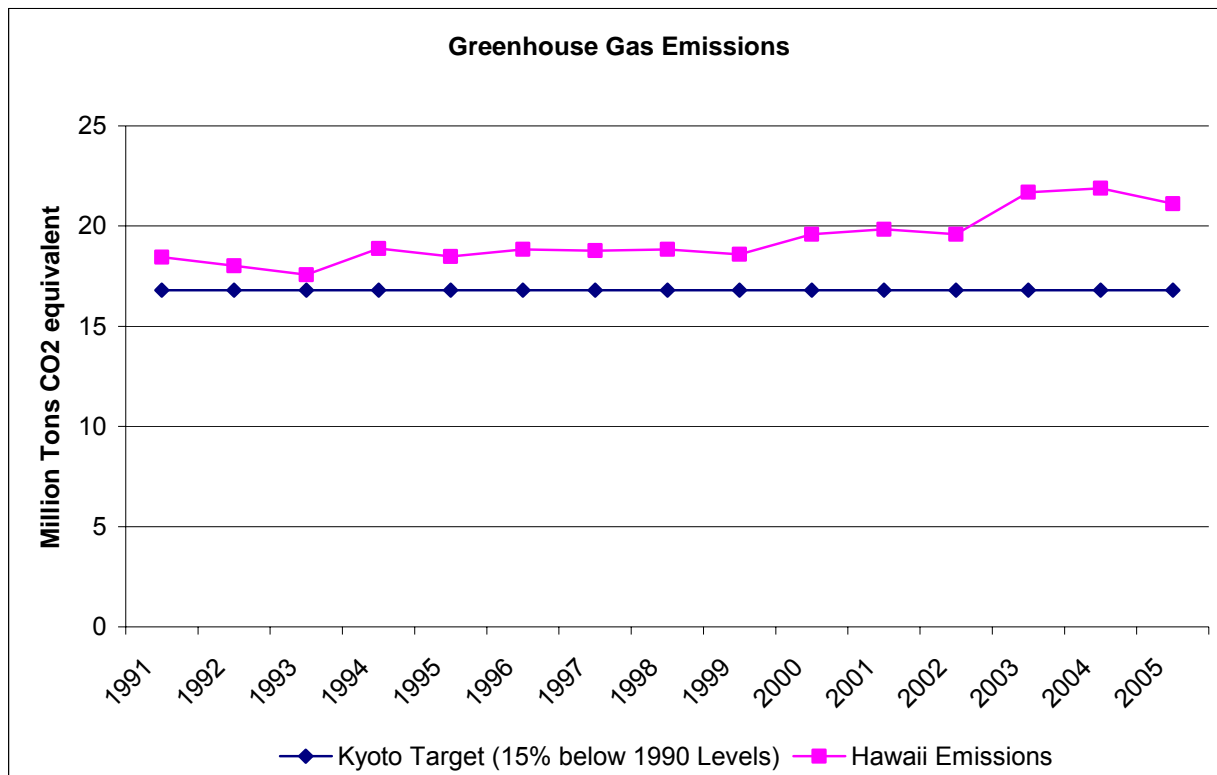
Source: Hawai'i Department of Health.

Notes: PM<sub>10</sub> are annual means.

### Estimated Greenhouse Gas Emissions

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 below shows the estimated greenhouse gas emissions in Hawai'i.

Year	Million Tons (CO2 equivalent)	Kyoto Target
1991	18.45	16.8
1992	18.02	16.8
1993	17.57	16.8
1994	18.88	16.8
1995	18.48	16.8
1996	18.84	16.8
1997	18.78	16.8
1998	18.83	16.8
1999	18.59	16.8
2000	19.59	16.8
2001	19.84	16.8
2002	19.59	16.8
2003	21.68	16.8
2004	21.88	16.8
2005	21.11	16.8

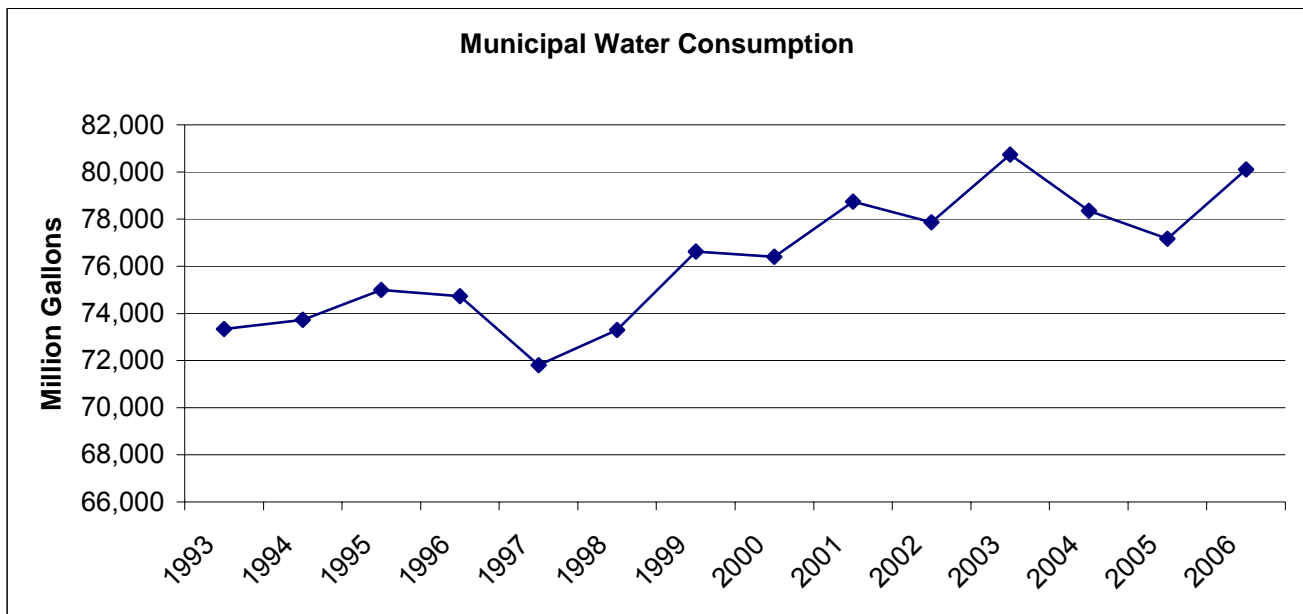


Source: DBEDT SID.

## Municipal Water Consumption

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 table below shows water consumption through the respective municipal (county) water distribution systems.

Year	Water consumption (million gallons)
1993	73,338
1994	73,732
1995	74,992
1996	74,728
1997	71,810
1998	73,301
1999	76,631
2000	76,401
2001	78,748
2002	77,868
2003	80,735
2004	78,345
2005	77,171
2006	80,106



Source: State of Hawai'i Data Book 2006. Note: These figures include only municipal water supply. Military, private and plantation water systems are not included.

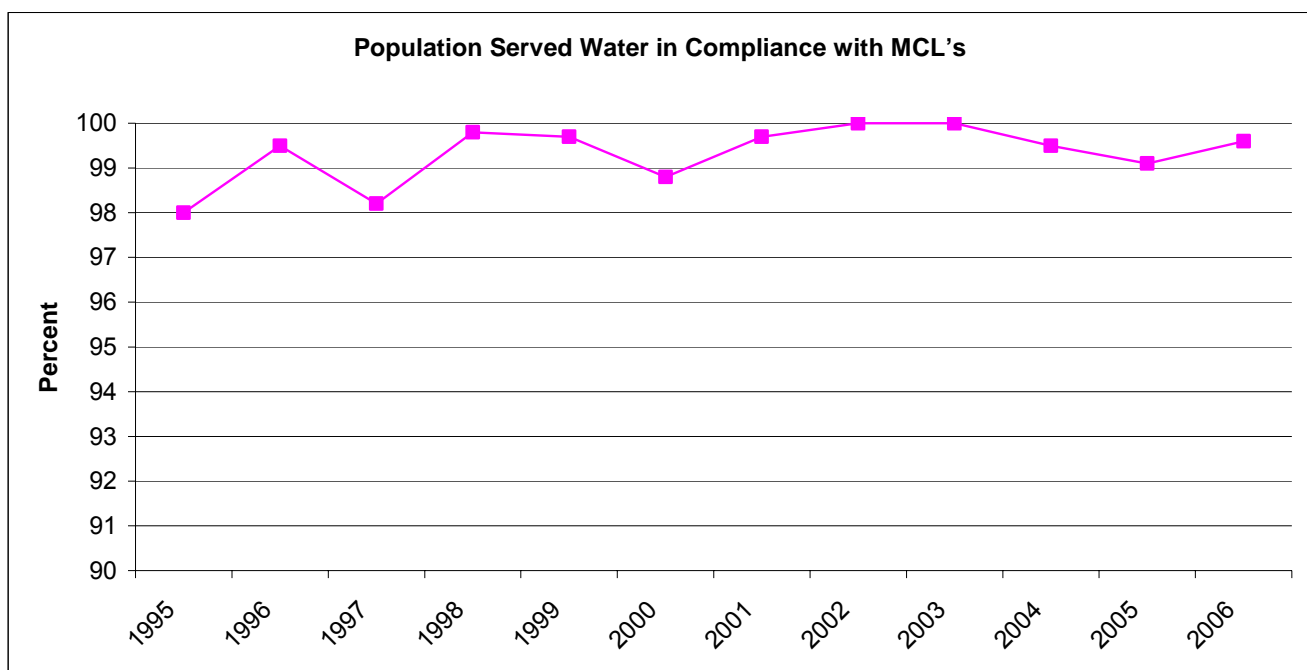


## Safe Drinking Water

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 Hawaii's residents and visitors were served drinking water that met all of the MCLs all year long. There were a small number of persons (5,501) in four water systems who were served water not in compliance with MCLs for part of the reporting year. This equals a non-compliance rate of 0.4% over Hawaii's population of 1,341,430 people.

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.

Year	Population Served Water in Compliance with MCL's (%)
1995	98.0
1996	99.5
1997	98.2
1998	99.8
1999	99.7
2000	98.8
2001	99.7
2002	100.0
2003	100.0
2004	99.5
2005	99.1
2006	99.6



Source: Hawai'i Department of Health.

## Number of Days Beaches Posted as Unsafe Due to Pollution

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 following table 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. The 2006 report also distinguishes days posted by different events: dry or wet weather sewage spills. Each day for each shoreline segment is counted.

There were 529 days of shoreline postings in 2006. The rise in sewage posting days corresponds to heavy rainfalls. There were 37 spill incidents during 2006 that needed postings. Over half of the spills (21) occurred between March 2nd and April 2nd, 2006 during heavy rains. For sewage spills, shorelines are first posted, then sampling occurs. The Clean Water Branch reviews bacteria data prior to allowing removal of the signs.

<b>Year</b>	<b>Number of Days Beaches Posted As Unsafe Due to Pollution</b>
1996	45
1997	28
1998	13
1999	26
2000	16
2001	20
2002	36
2003	0
2004	33
2005	121
2006	529

Source: Hawaii Department of Health.

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.

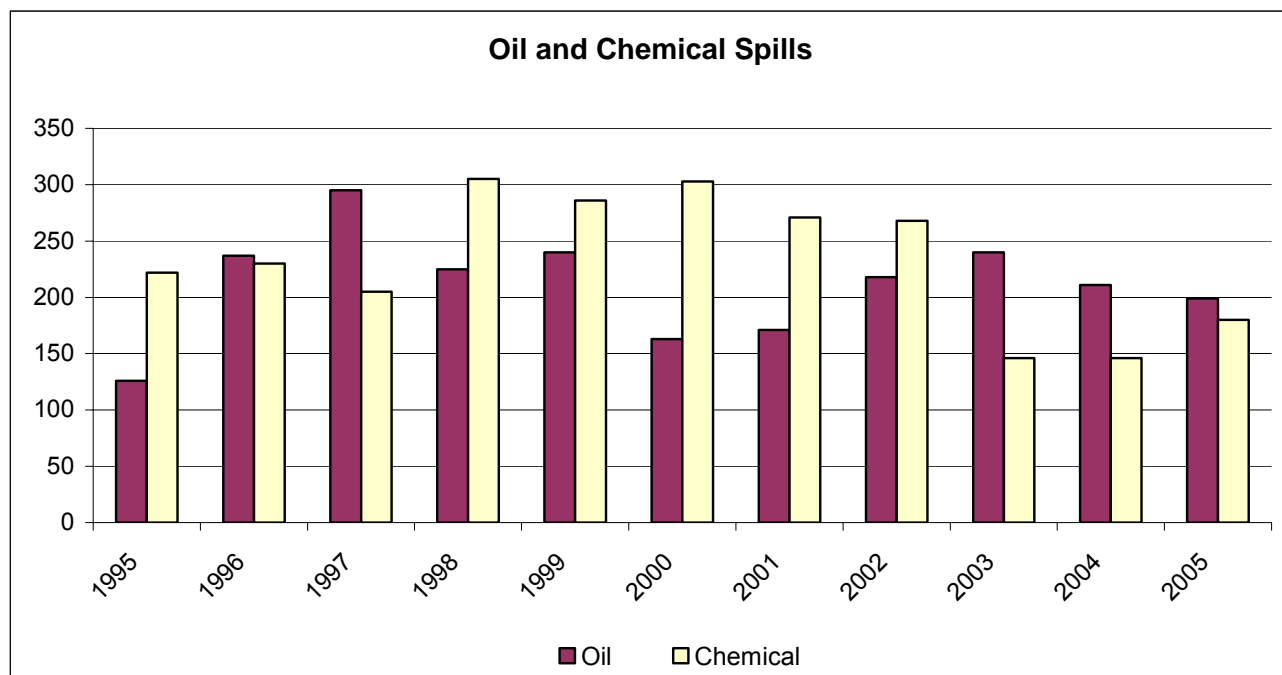
## Oil and Chemical Spills

Any releases of oil or chemicals must be reported to DOH. No clear trend exists in the number of oil and chemical releases from 2000 to 2004. 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. An increase in the number of releases does not necessarily correlate with an increase in damage to the environment. Future tracking and reporting will include volumes of spills in addition to numbers of spills.

## Oil and Chemical Spills

Year	Oil	Chemical
1995	126	222
1996	237	230
1997	295	205
1998	225	305
1999	240	286
2000	163	303
2001	171	271
2002	218	268
2003	240	146
2004	211	146
2005	199	180



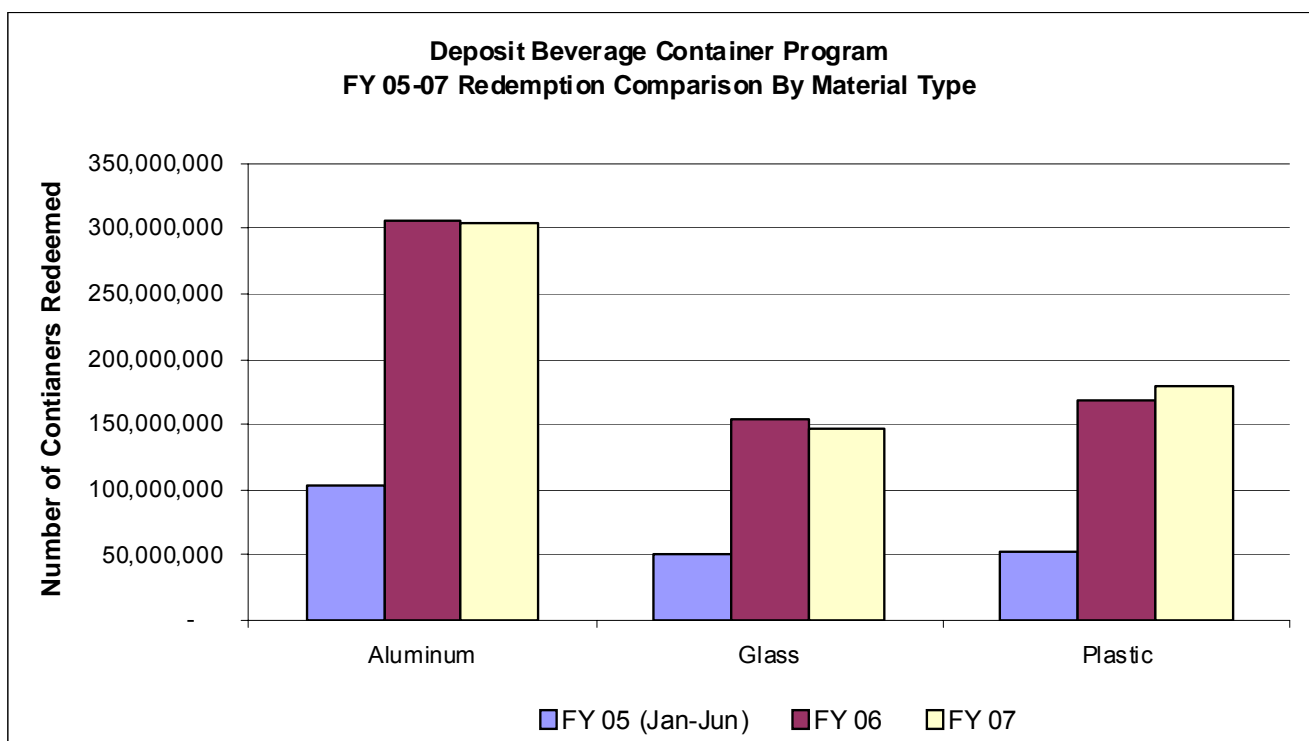
Source: Hawai'i Department of Health.

## Number and Type of Deposit Beverage Containers Recycled

Each year, approximately 900 million beverage containers are sold in Hawaii. 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 Hawaii 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 Hawaii's recycling infrastructure. A unique feature of Hawaii's bottle bill is that beverage distributors pay a 1- to 1.5-cent fee per container. The fee is used to help fund the redemption centers.

Based on redemption center reports, the redemption rate last fiscal year was 68%, thereby helping to reduce litter and conserve resources. The table below shows that there was a three-fold increase in the number and type of beverage containers recycled over a two year period.

Year	Aluminum	Glass	Plastic
FY 05 (Jan-Jun)	104,332,358	50,754,239	52,770,560
FY 06	305,505,271	153,889,934	168,757,194
FY 07	304,916,891	147,096,713	179,775,037



Source: Department of Health.

## Wastewater Treatment and Reuse

Wastewater recycling (or 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 Mideast. In 2006, there was an increase of about 1 mgd, primarily due to the implementation of the wastewater reuse at the US Navy's Barber's Point golf course. DOH has plans to encourage reuse to about 30 mgd, or about 20%, by 2015.

Year	Wastewater Treated (mgd)	Wastewater Reused (mgd)	Reused (%)
2002	150	24.0	16.0
2003	150	23.5	15.7
2004	150	23.5	15.7
2005	150	23.5	15.7
2006	150	24.6	16.4



Source: Hawai'i Department of Health.

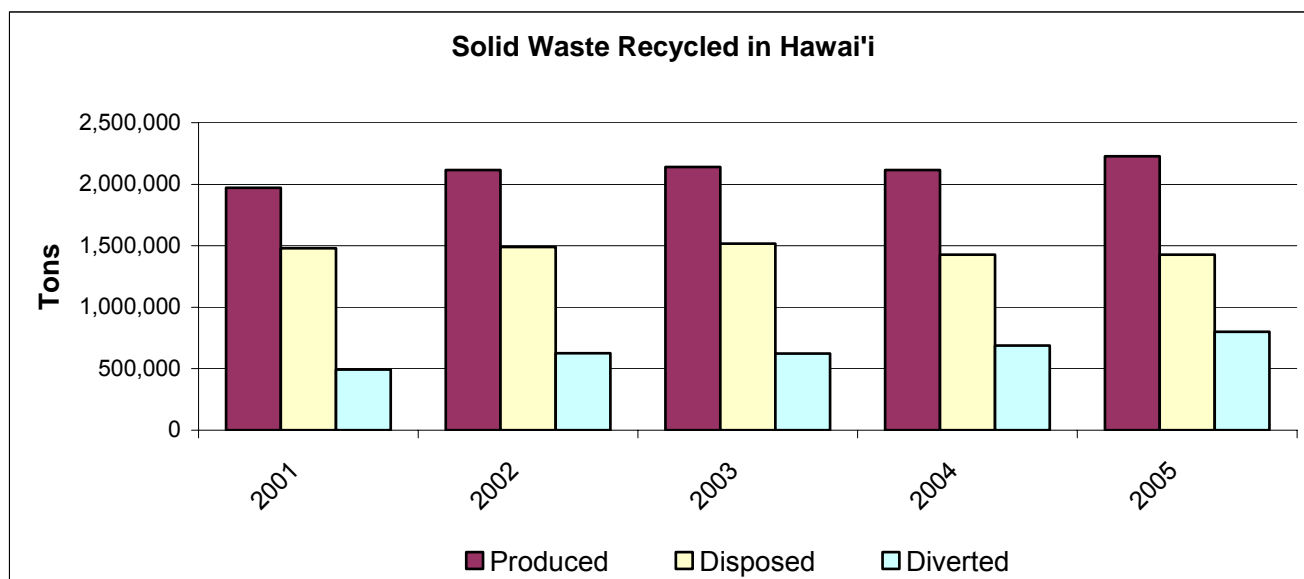
## Solid Waste Generation and Diversion

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 Hawaii 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 Hawaii'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 Hawaii, also continues to challenge recyclers.

Year	Produced Statewide	Disposed Statewide	Diverted Statewide	Diverted (%)
2001	1,971,336	1,478,668	492,668	25.0
2002	2,115,313	1,489,974	625,339	29.6
2003	2,140,648	1,517,915	622,733	29.1
2004	2,116,724	1,427,904	688,820	32.5
2005	2,227,124	1,425,752	801,373	36.0



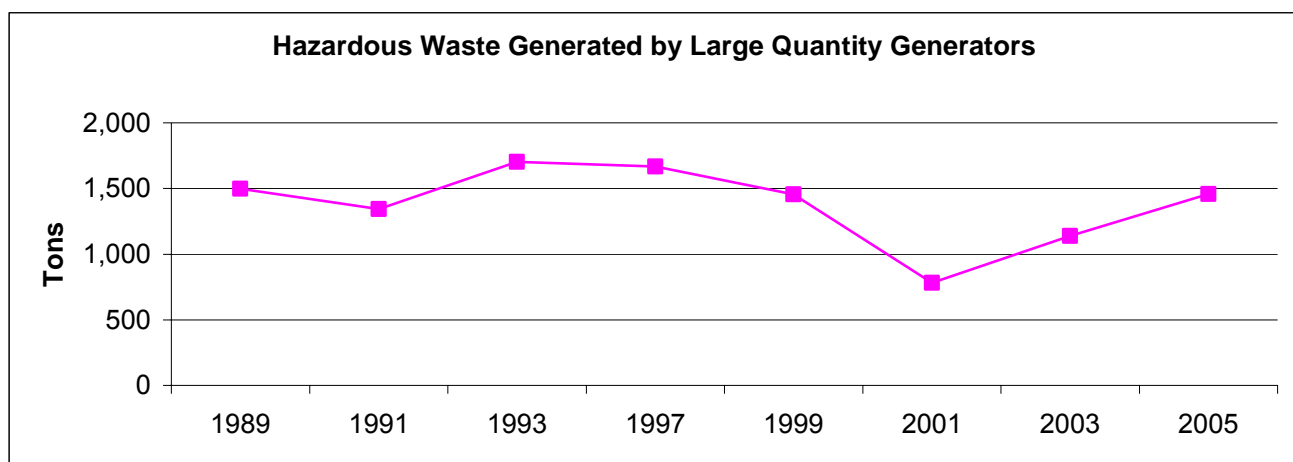
Source: Hawai'i Department of Health.

## Hazardous Waste Generated

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](http://www.epa.gov)). Overall, the quantity of waste generated has ranged from about 780 to 1700 tons annually during the period from 1997 to 2005. Hazardous wastes in wastewater have been 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.

Year	Waste Generated (tons)
1989	1,499
1991	1,343
1993	1,702
1997	1,669
1999	1,456
2001	781
2003	1,139
2005	1,458



Source: Hawai'i Department of Health.

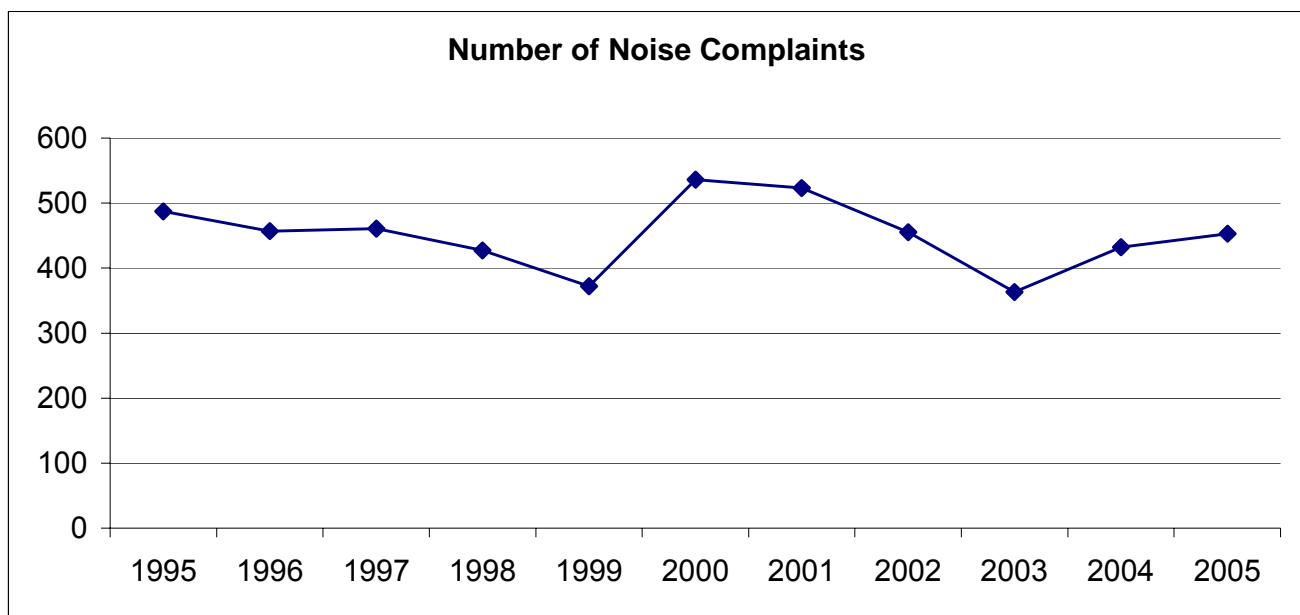
Note: 1995 is not included because the data collected by the Department of Health includes both **large and small** quantity generators.

## Noise Complaints

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, increase in urbanization results in more noise.

The following table shows the number of noise complaints received by the Department of Health.

Year	Noise Complaints
1995	487
1996	457
1997	461
1998	427
1999	372
2000	536
2001	523
2002	455
2003	363
2004	432
2005	453



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



### Number of Bicycles and Mopeds

Year	Hawaii	Maui	Lanai	Molokai	Oahu	Kauai
2004	1,223	1,750	15	21	176,848	264
2005	1,485	1709	44	35	200,240	437
2006	1,357	3540	30	19	229,135	278

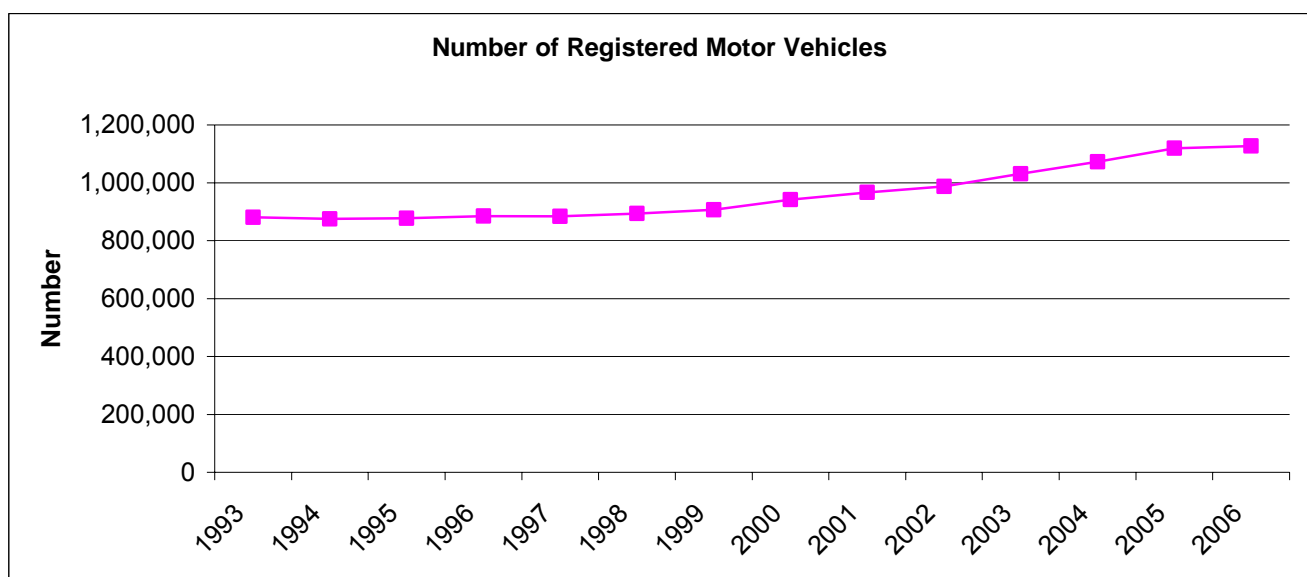
Source: State Data Book, 2006.

### Registered Motor Vehicles

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 below shows the total number of registered motor vehicles in Hawai'i.

#### Year Registered Motor Vehicles

1993	880,152
1994	875,144
1995	877,756
1996	884,617
1997	884,267
1998	893,427
1999	906,935
2000	941,242
2001	967,146
2002	987,598
2003	1,030,845
2004	1,072,211
2005	1,119,838
2006	1,127,467



Source: DBEDT Databook 2006.

## Inventory of Bikeways

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.

<b>Island</b>	<b>Signed Shared Road Length (mi.)</b>	<b>Bike Lane Length (mi.)</b>	<b>Shared Use Path Length (mi.)</b>	<b>All Facilities Length (mi.)</b>
<b>Kauai</b>	10.7	1.2	6.5	18.4
<b>Oahu</b>	34.1	40.0	37.6	111.7
<b>Maui</b>	37.9	21.6	3.8	63.3
<b>Hawaii</b>	15.0	3.3	5.6	23.9
<b>Statewide</b>	<b>97.7</b>	<b>66.1</b>	<b>53.5</b>	<b>217.3</b>

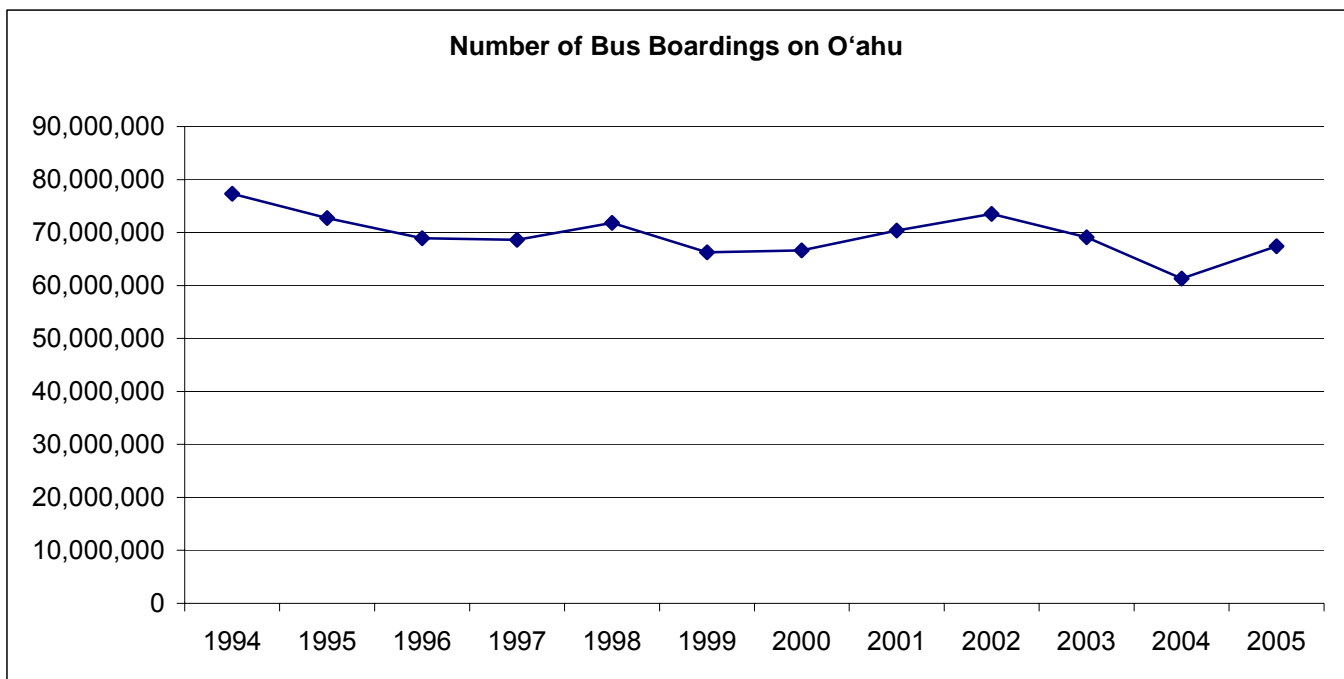
Notes:

- 1) Bikeway miles are those within State and County jurisdiction.
- 2) 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 of Bus Boardings on O'ahu

The data below are estimates of 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.

Year	Number of Boardings
1994	77,338,147
1995	72,745,086
1996	68,923,459
1997	68,634,884
1998	71,822,553
1999	66,236,147
2000	66,602,820
2001	70,384,025
2002	73,524,474
2003	69,100,627
2004	61,297,980
2005	67,406,827



Source: DBEDT Databook 2005.

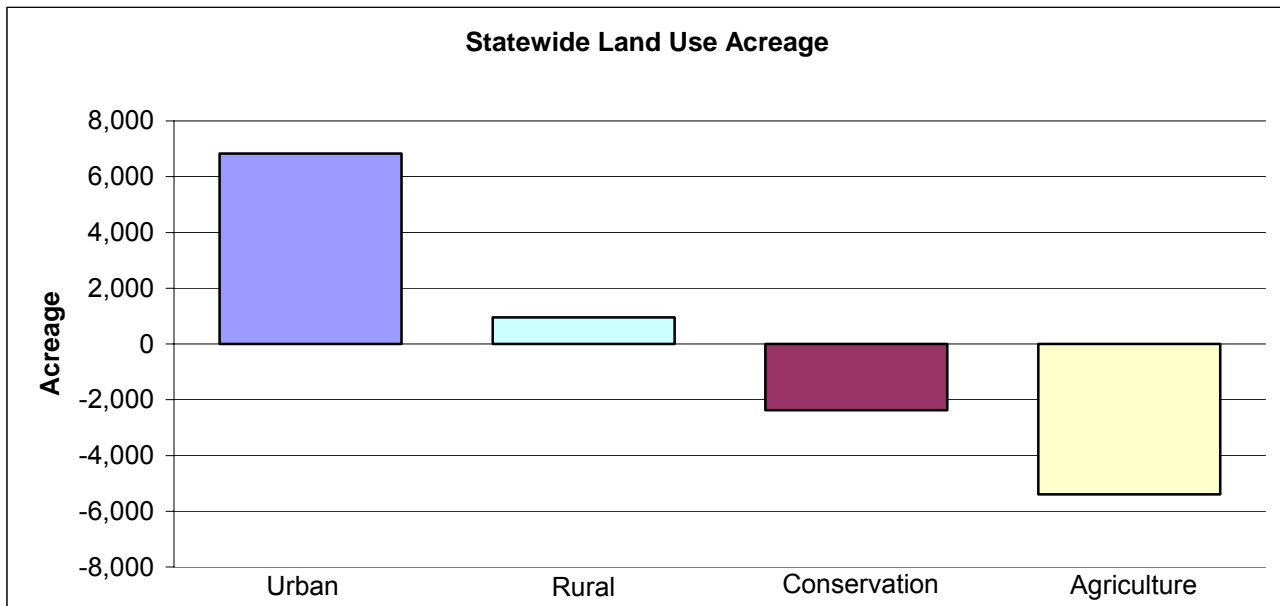
Note: i) Figures include residents and visitors.

ii) The figures are calendar year estimates of total passengers for TheBus calculated from reports to the American Public Transit Association.

### Statewide Land Use District Acreage

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.

Year	Urban	Rural	Conservation	Agricultural
1995	190,257	9,918	1,976,016	1,936,197
1996	191,941	9,927	1,974,994	1,935,526
1997	192,158	9,931	1,974,994	1,935,305
1998	193,001	9,970	1,974,994	1,934,423
1999	194,592	10,010	1,974,994	1,932,792
2000	193,308	10,010	1,976,004	1,933,066
2001	194,556	10,039	1,974,106	1,933,687
2002	195,495	10,058	1,973,973	1,932,862
2003	196,215	10,108	1,973,636	1,932,429
2004	196,991	10,383	1,973,636	1,931,378
2005	197,085	10,870	1,973,636	1,930,797



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

The table below shows the acreage in public and private forest land, 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	Acreage of State Parks	Acreage of National Parks
1996	622,339	328,742	122,703	26,784	247,349
1997	643,134	328,742	109,164	26,554	247,349
1998	643,134	328,742	109,164	26,814	247,349
1999	643,134	328,742	109,164	26,815	249,001
2000	643,134	328,742	109,164	26,815	249,001
2001	643,134	328,742	109,164	27,626	249,001
2002	643,134	328,742	109,164	27,626	249,042
2003	643,134	328,742	109,164	28,002	365,830
2004	643,134	328,742	109,164	27,116	365,830
2005	643,134	328,742	109,164	27,164	365,830
2006	643,134	328,742	109,164	27,164	364,999

Source: State of Hawai'i Data Book 2006.

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
Natural Area Reserves System	NARS were created to preserve and protect representative samples of the Hawaiian biological ecosystems and geological formations. In 1937, 1,027,299 acres were in forest reserves

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

Year	Streets and Highways	City and County Parks
2001	141,237	106,179
2002	135,712	102,380
2003	142,915	95,276
2004	142,837	95,224
2005	141,999	94,666
2006	141,480	94,230

Source: State of Hawai'i Data Book 2006.

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## Watershed Partnerships

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 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 Department of Health  
Department 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

### **Lanai Watershed Partnership (3,580 acres)**

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

### **Ola'a-Kilauea Watershed Partnership (420,000 acres)**

Kalani Correctional Facility - State, Public Safety  
Puu Maka'ala NAR - State, DLNR DOFAW  
Kamehameha Schools  
USDI - Hawaii 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  
Department of Hawaiian Homelands  
Department of Land and Natural Resources

### **Kaua'i Watershed Alliance (75,000 acres)**

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

Source: DLNR, DOFAW

### **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.  
Department of Land and Natural Resources  
The County of Maui

### **East Maui Watershed Partnership (100,000+ acres)**

State Department 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 ac.)**

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

### **Ko'olau Watershed Partnership (50,000+ acres)**

Kamehameha Schools  
Department of Land and Natural Resources  
Department 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

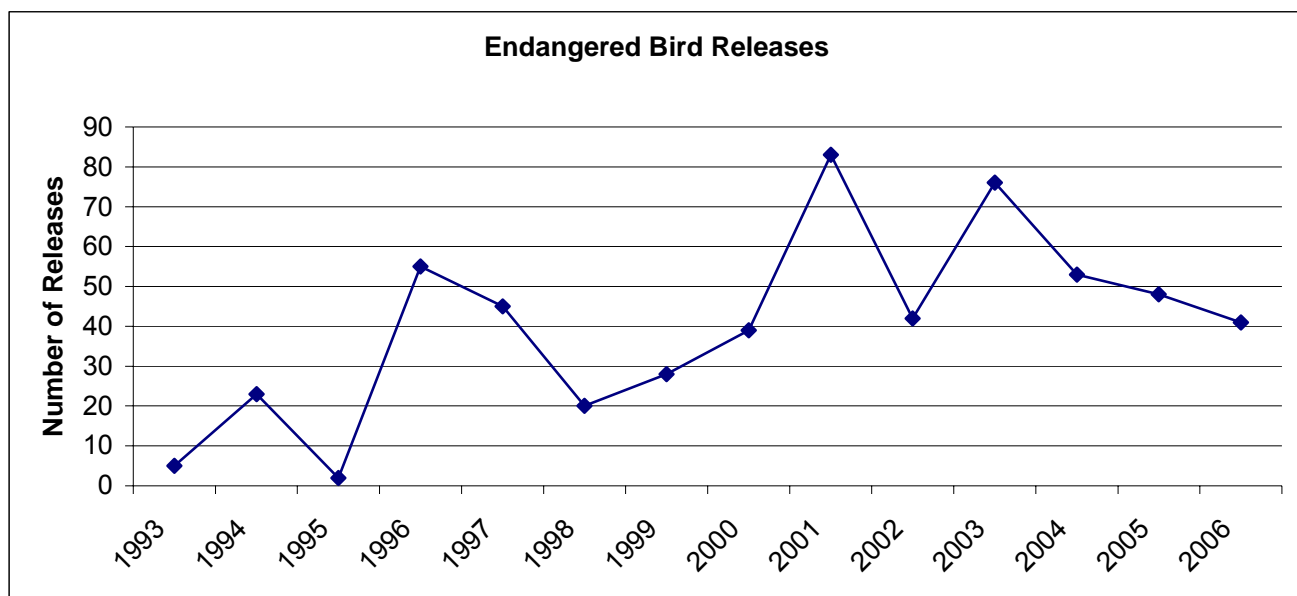
## Hawai'i Endangered Bird Conservation Program

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 montane 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 DOFAW 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.

### Endangered Bird Releases

Year	Alala	Amakihi	Omao	Iiwi	Nene	Puaiohi	Palila	Totals
1993	5							5
1994	7	16						23
1995			2					2
1996	4			2	49			55
1997	8		23		14			45
1998	3				17			20
1999					14	14		28
2000					34	5		39
2001					68	15		83
2002					34	8		42
2003					48	18	10	76
2004					31	17	5	53
2005					24	17	7	48
2006					20	21		41
Totals	27	16	25	2	353	115	22	560

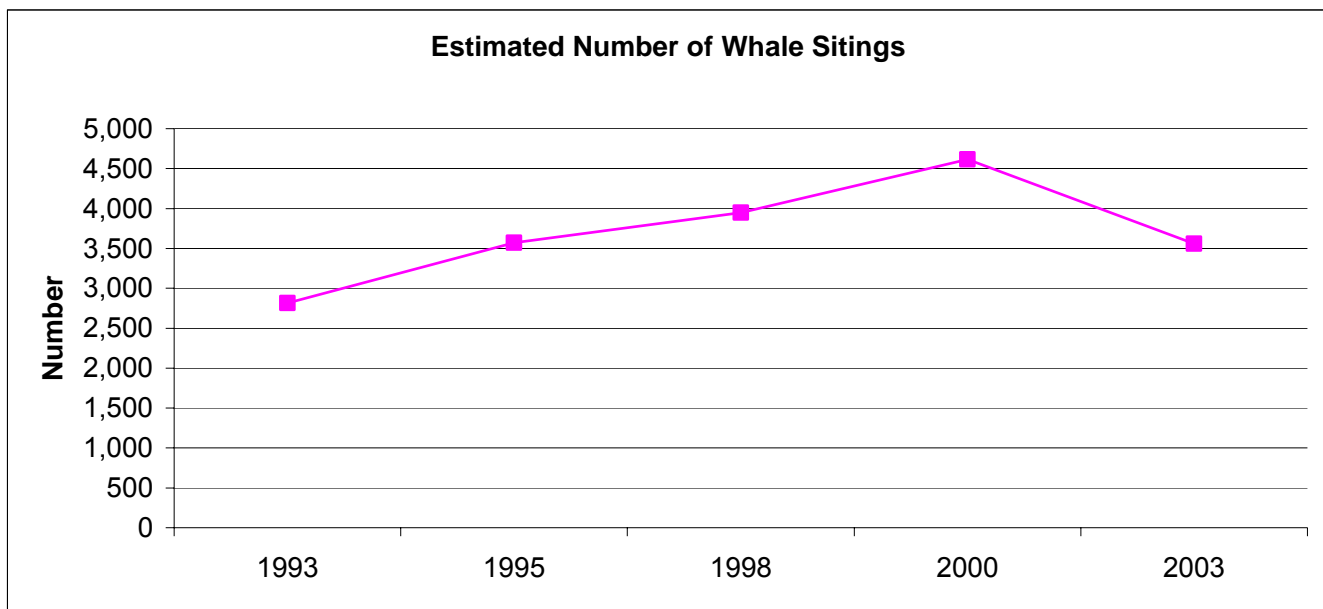
Source: DLNR, DOFAW.



### Estimated Number of Humpback Whale Sitings in Hawaiian Waters

The following Humpback whale abundance estimates were based on corrected densities for 1993-2003 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 current 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 was simply an anomalous estimate. More surveys are needed to determine the robustness of this trend.

Year	Estimated Abundance
1993	2,815
1995	3,570
1998	3,946
2000	4,615
2003	3,558



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

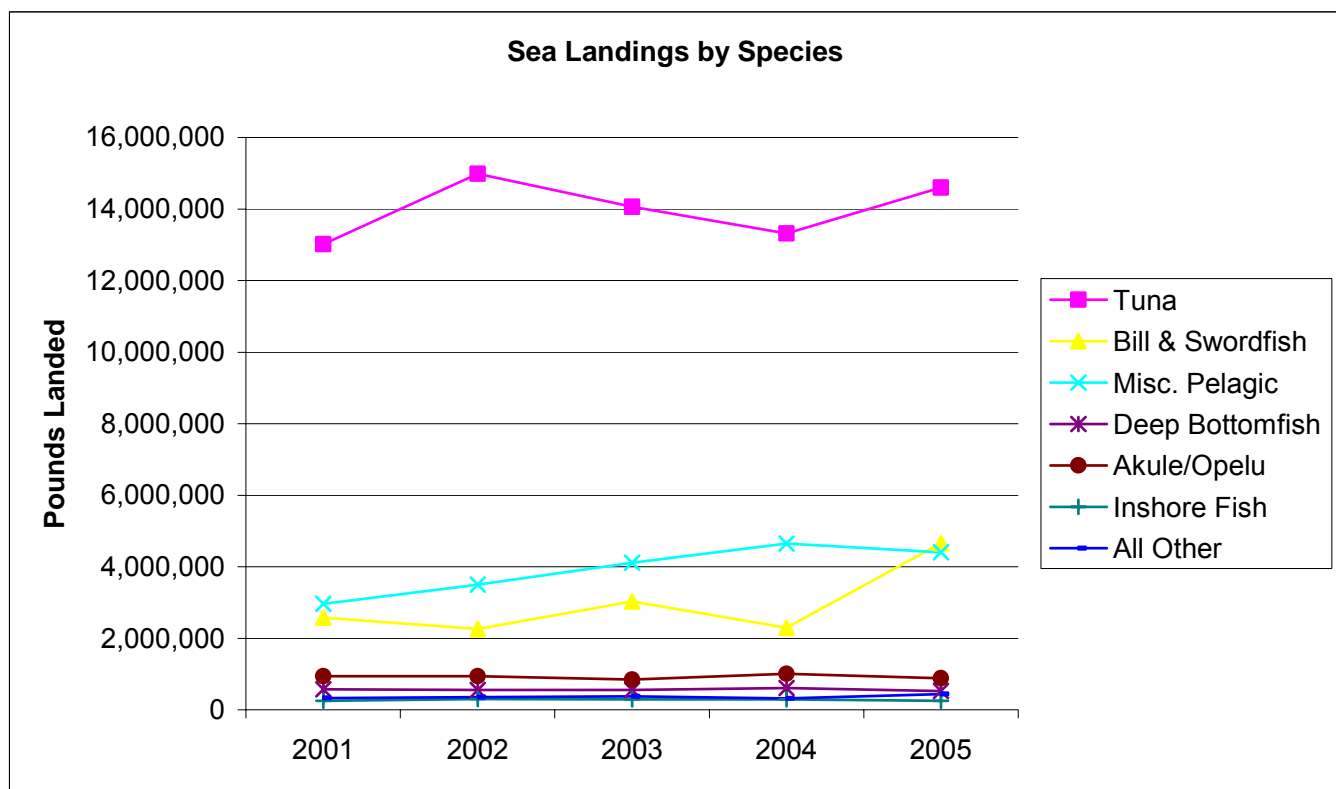


## Commercial Fisheries

Commercial fishers are required to obtain commercial marine licenses and submit fishing reports to DLNR-DAR. 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)

SPECIES	2001	2002	2003	2004	2005
<b>Tuna</b>	13,012,132	14,984,882	14,059,039	13,314,259	14,596,986
<b>Bill &amp; Swordfish</b>	2,577,817	2,263,181	3,030,082	2,295,488	4,655,440
<b>Misc. Pelagic</b>	2,966,447	3,501,554	4,110,796	4,645,777	4,405,774
<b>Deep Bottomfish</b>	573,815	557,084	558,601	613,374	522,797
<b>Akule/Opelu</b>	944,260	939,372	847,465	1,003,583	887,225
<b>Inshore Fish</b>	258,277	301,162	295,184	296,418	256,586
<b>All Other</b>	332,419	359,674	380,083	321,160	446,259
<b>TOTAL</b>	20,665,167	22,906,909	23,281,250	22,490,059	25,771,067

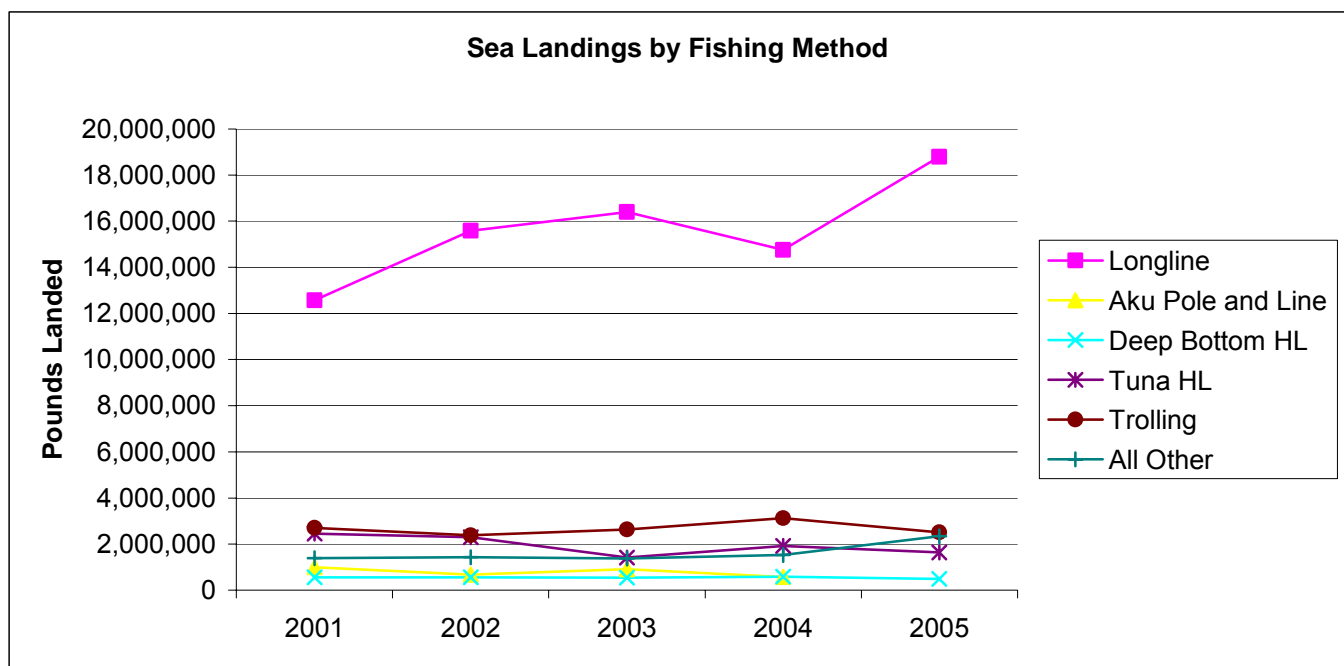


Source: Commercial Marine Landings Summary Report, 2005. DLNR, DAR

### Sea Landings by Fishing Method (in Pounds)

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.

Fishing Method	2001	2002	2003	2004	2005
<b>Longline</b>	12,570,081	15,580,447	16,396,779	14,759,339	18,793,030
<b>Aku Pole and Line</b>	990,621	675,754	905,939	578,171	
<b>Deep Bottom HL</b>	558,545	557,038	546,468	587,689	496,822
<b>Tuna HL</b>	2,454,367	2,292,894	1,419,894	1,914,037	1,632,844
<b>Trolling</b>	2,700,032	2,376,941	2,638,362	3,129,947	2,505,381
<b>All Other</b>	1,391,521	1,423,835	1,373,808	1,520,876	2,342,990
<b>Total</b>	20,665,167	22,906,909	23,281,250	22,490,059	25,771,067



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

## State Environmental Expenditures

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 Fire 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 below 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.

### State Expenditures on Environmental Protection Programs by Fiscal Year

Fiscal Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
State Expenditures (million \$)	5,395	5,315	5,538	6,175	6,700	7,198	7,367	7,564	8,293	9,212
Environmental Expenditures (million \$)	60	69	69	51	64	66	56	85	201	249
Environmental Spending as % of State Expenditures	1.11	1.30	1.24	0.83	0.95	0.92	0.76	1.12	2.42	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 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.

1. Environmental goals for fiscal year FY 2007 (July 1, 2006 to June 30, 2007).
2. Environmental achievements in fiscal year FY 2007 (July 1, 2006 to June 30, 2007).
3. 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 indicated with an asterisk (\*).

### State Agencies

Department of Accounting and General Services\*  
Department of Agriculture  
Department of the Attorney General  
Department of Business, Economic Development and Tourism\*  
Department of Defense\*  
Department of Education  
Department of Hawaiian Home Lands\*  
Department of Health\*  
Department of Land and Natural Resources\*  
Department of Public Safety  
Department of Transportation

### City and County of Honolulu

Board of Water Supply\*  
Department of Design and Construction  
Department of Environmental Services  
Department of Facility Maintenance  
Department of Parks and Recreation\*  
Department of Planning and Permitting\*  
Department of Transportation Services\*  
Honolulu Fire Department\*  
Oahu Civil Defense Agency

### County of Kauai

Department of Planning\*  
Department of Public Works  
Department of Water  
Fire Department  
Office of Economic Development

### County of Hawaii

Department of Environmental Management\*  
Department of Parks and Recreation  
Department of Public Works  
Department of Water Supply  
Fire Department  
Office of Housing and Community Development  
Planning Department\*

### County of Maui

Department of Fire Control  
Department of Housing & Human Concerns  
Department of Parks and Recreation  
Department of Planning  
Department of Public Works and Env. Management\*  
Department of Water Supply

## Department of Accounting and General Services - Central Services Division

1. Environmental goals for FY 2007
    - a. Implement energy conservation measures as provided for in Act 96 and the Governor's Executive Directive No. 06-01.
    - b. Convert to the use of environmentally preferable custodial cleaning products, herbicides, pesticides and fertilizers.
    - c. Complete the retrofit of restroom toilet flush valve and basin valves with automatic sensor valves.
    - d. Replace conventional light switches with occupancy sensors to conserve electricity.
    - e. Increase the awareness of building occupants on steps that they as individuals can conserve energy in the workplace.
    - f. Improve the quantity of recycled material collected from state office buildings.
  
  2. Environmental achievements in FY 2007
    - a. 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.
    - b. Designated "retro-commissioning (R-Cx) pilot projects" for selected State Office Buildings on Oahu, Hawaii, Maui and Kauai. 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.
    - c. 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 Oahu with the new Super T-8 lighting ballasts and lamps.
    - d. Initiated repair and renovation upgrade projects for the landscape irrigation systems in the downtown civic center (on Oahu) 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.
    - e. Initiated a project to install a "non-chemical filter system" for the air-conditioning (A/C) 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 A/C waters for other purposes.
    - f. 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%.
    - g. Researched the availability of environmentally friendly products for landscape maintenance application.
    - h. Continued to purchase paper and other products that are recycled or have a recycled-content whenever such products are available.
  
  3. Environmental goals for FY 2008
    - a. Initiate repair and renovation upgrade projects for landscape irrigation systems (similar to what is being done for the downtown civic center) for DAGS managed State buildings outside of the downtown civic center on Oahu.
    - b. 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.
-

- c. Install sensor-type flush valves and faucets in public restrooms (starting FY07-08).
- d. Investigate the feasibility of alternative water conservation measures, such as the installation of waterless urinals in public restrooms.
- e. 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.

## **Department of Accounting and General Services - Public Works Division**

### 1. Environmental goals for FY 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 Manoa Library and Kohala Library, and a pilot retro-commissioning project at the State Capitol.

### 2. Environmental achievements in FY 2007

- a. 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).
- b. 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.
- c. Started design phase work for the following DAGS designated "LEED pilot projects":
  - Kamamalu Building, Asbestos Removal and Renovation DAGS Job No. 12-10-935.
  - Manoa Public Library, Expansion and Site Improvements DAGS Job No. 12-36-6364.
  - Kohala Public Library DAGS Job No. 11-36-6367.
- d. 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 Oahu applying for available HECO rebates on energy-efficiency or energy-conservation measures. This program will be expanded to the neighbor islands.
- e. 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-8lamps.
  - DAGS designated "retro-commissioning (R-Cx) pilot projects" for the State Capitol Building and Keelikolani Building on Oahu; Lihue State Office Building on Kauai; Hilo State Office Building on Hawaii; and Wailuku State Office Building on Maui.

- f. Incorporated sustainable design criteria ("LEED like" process) during the design phase of the Kapolei Judiciary Complex project within the project funding constraints.
- g. 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 Paki 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.
- h. 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.
- i. 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.

### 3. Environmental goals for FY 2008

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 Manoa Library and Kohala Library, and a pilot retro-commissioning project at the State Capitol.

## **Department of Business, Economic Development and Tourism - Office of Planning**

- 1. Environmental goals and achievements for FY 2007
    - a. Conduct statewide planning activities to promote the orderly future growth and development of the State pursuant to Chapter 225M, HRS.
    - b. Administer a comprehensive system of public planning on a statewide basis to enhance the overall effectiveness of the Hawaii 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 Oahu, and conducting community 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 Oahu.
- 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.
- c. 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 patterns, 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.
- d. Carry out lead agency responsibilities for the Hawaii Coastal Zone Management Program pursuant to Chapter 205A, HRS.
  - Hawaii Ocean Resources Management Plan (ORMP)
    - Act 104, Session Laws of Hawaii (SLH) 1995, provided for the integration of the Hawaii 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 Hawaii 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 existing 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 24<sup>th</sup> session of the State Legislature and is available on the CZM website at [www.hawaii.gov/dbedt/czm/](http://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 Hawaii, 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 Hawaii 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 Hawaii Coastal Zone Management Program objectives and policies in fiscal year 2007.
  - The Hawaii CZM Program hosted an intern from the Naval Facilities Engineering Command Pacific. The Navy's intern program is intended to give Navy 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 Hawaii 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.

2. Environmental goals for FY 2008

- a. Conduct statewide planning activities to promote the orderly future growth and development of the State pursuant to Chapter 225M, HRS.
- b. Administer a comprehensive system of public planning on a statewide basis to enhance the overall effectiveness of the Hawaii 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 Hawaii film and media center.
- c. 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.
- d. Carry out lead agency responsibilities for the Hawaii Coastal Zone Management Program pursuant to Chapter 205A, HRS.

**Department of Defense**

1. Environmental goals for FY 2007

- a. Conservation. Continue endangered species recovery, noxious weed eradication and awareness training and education of Hawaii's youth, Guard members and the public.
- b. Compliance. Continue to monitor for regulatory compliance and implement pollution prevention initiatives, affirmative procurement actions and enhance waste stream diversion.
- c. 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.

2. Environmental achievements for FY 2007

- a. 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 Hawaii's youth. Ongoing projects to sustain and enhance our valuable training lands have increased this past year.

- b. 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.

3. Environmental goals for FY 2008

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.

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 Hawaii 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.

### **Department of Hawaiian Home Lands**

1. Environmental goals for FY 2007

- a. 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.
  - b. Partnering. Partner 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.
-

- c. 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.

2. Environmental achievements for FY 2007

- a. 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.
- b. Partnering. Working with Parker Ranch, DLNR, National Park Service, Department of Defense, U.S. Fish and Wildlife Service, the University of Hawaii, community groups and private parties on projects to control 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.
- c. 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.

3. Environmental goals for FY 2008

- a. 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.
- b. 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.
- c. 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.

**Department of Health**

1. Environmental goals for FY 2007

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

2. Environmental achievements for FY 2007

a. 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-Oahu Chapter, Oahu Hawaiian Canoe Racing Association (OHCRA), Hui Wa'a, Na Opio, University of Hawaii, 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.

b. 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 (Oahu); DOH completed draft TMDLs for Hanalei Stream and four estuaries (Hanalei, Waioli, Waipa, Waikoko) in the Hanalei Bay watershed (Kauai). DOH completed bioassessment supporting TMDL development for Kauai and Oahu 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 for the
  - 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 Hawaii-Hilo to assess the water quality of streams in Haleakala National Park.
- c. Protect Groundwater
- Hawaii'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.
- d. 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 partnership with the University of Hawaii to 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 Underground 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.
  - Uniform Environmental Covenants Act (UECA). The Governor 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
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- 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.
- e. Protect and Enhance Indoor and Outdoor Air
- Overall air quality. Hawaii'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 Hawaii under the assistance of the Indoor Air Quality Program.

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

1. Environmental goals for FY 2007
    - a. Continue efforts of setting in-stream flow standards for Maui streams & other streams statewide.
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- b. 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.

2. Environmental achievements for FY 2007

- a. 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, Hawaii*. An earlier report entitled *Median and Low-Flow Characteristics for Streams under Natural and Diverted Conditions, Northeast Maui, Hawaii*, 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 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 Honolua). 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.
- b. Collected quarterly monitoring data from a network of 54 monitoring wells on the Big Island, Maui and Oahu. Put out to bid, and selected a contractor, for the design and installation of a new deep monitoring well in Waihee, Maui.

3. Environmental goals for FY 2008

- a. Complete the update of the Water Resource Protection Plan component of the Hawaii 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.
- b. Continue interim IFS process for selected East Maui streams and initiate process for other priority surface water hydrologic units statewide.
  - c. 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 Hawaii at Manoa 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 Hawaii Water Plan.

### **Department of Land and Natural Resources – Engineering Division**

1. Environmental goals for FY 2007
    - a. 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.
    - b. 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.
    - c. Protect people, property and natural resources from natural hazards through planning, management, mitigative efforts and regulatory programs.
    - d. Seek partnerships with Federal agencies to conduct projects that will improve watershed function, provide flood control measures and restore ecosystems.
  2. Environmental achievements for FY 2007
    - a. Provision of engineering services to other divisions to provide individual wastewater system improvements at various DLNR facilities within available capital improvement funding constraints.
    - b. Provision of engineering services to other divisions to mitigate environmental hazards on State-owned lands.
    - c. 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.
  3. Environmental goals for FY 2008
    - a. 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.
    - b. 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.
    - c. Protect people, property and natural resources from natural hazards through planning, management, mitigative efforts and regulatory programs.
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- d. Seek partnerships with Federal agencies to conduct projects that will improve watershed function, provide flood control measures and restore ecosystems.

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

#### 1. Environmental goals for FY 2007

- a. 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.
- b. 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.
- c. Administer state and federal cost-sharing urban forestry and forest stewardship programs to landowners and residents of Hawaii.
- d. Prevent and suppress forest and range fires on key watersheds in forest reserves, public hunting areas, and natural area reserves.
- e. 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.

#### 2. Environmental achievements for FY 2007

- a. 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 Hawaii'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 Hawaii.

The Division closed the Manuka State Park and a portion of the Manuka Natural Area Reserve, on the island of Hawaii'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.

- b. On June 22, 2007, Board of Land and Natural Resources approved a timberland license to Hawaii Island Hardwoods, LLC to harvest non-native timber in the Waiakea Timber Management Area, near Hilo, Hawaii. 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.
  - c. 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 Hawaii.
-

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.

- d. 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.
- e. Lanai 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 Lanai. 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 Lanai. Researchers also placed satellite-tracking devices on two petrels from Lanai 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 Lanai 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**

- 1. Environmental goals for FY 2007
  - a. 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.
  - b. Alternative Resource Development: Expand recycled and brackish water use in Ewa and advance planning for reuse in Central Oahu 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
  - c. 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 Oahu Water Management Plan.

2. Environmental achievements in FY 2007

a. Water Conservation:

- The water conservation program development study is progressing. Water efficiency measures and drought strategies for Oahu 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.

b. Alternative Resource Development:

- The Hono'uliuli Water Recycling Facility continues to expand. BWS has partnered with Haseko (Hawaii), 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 water 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 Oahu Recycled Water System and a consultant is being procured. This project will provide 2 million gallons per day of recycled water to Central Oahu 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.

c. 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 Oahu 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 Oahu 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.

3. Environmental goals for FY 2008

a. 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.
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- b. 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 Hawaii West Oahu 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 Oahu 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.
- a. 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 Oahu Water Management Plan required by the State Water Code.

### **City and County of Honolulu - Department of Parks and Recreation**

1. Environmental goals for FY 2007
    - a. Complete upgrading of all remaining cesspool and cavitette wastewater systems at beach parks.
    - b. Plan, design and construct improvements at park facilities to ensure compliance with the requirements of the National Pollution Discharge Elimination System.
  2. Environmental achievements in FY 2007
    - a. 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.
    - b. 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.
  3. Environmental goals for FY 2008
    - a. Purchase and distribution of spill prevention kits and related materials as required by the NPDES to applicable Island wide park sites.
    - b. 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.
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### **City and County of Honolulu - Department of Planning and Permitting**

1. Environmental goals for FY 2007
  - a. To support the Board of Water Supply in the preparation of the Oahu Water Use and Development Plan.
  - b. To participate in the Oahu Metropolitan Planning Organization planning process, in particular, to assure coordination of transportation planning with county land use and population planning.
  - c. To develop community and neighborhood plans that help to promote adopted regional plans and meet specific neighborhood goals.
2. Environmental achievements in FY 2007
  - a.- c. We have met this goal.
3. Environmental goals for FY 2008
  - a. 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**

1. Environmental goals for FY 2007
  - a. To promote programs to reduce dependence on the use of automobiles
  - d. To evaluate the social, economic, and environmental impact of additions to the transportation system prior to construction.
  - e. To improve the safe and efficient operation of City transportation and other facilities under the jurisdiction of the department.
2. Environmental achievements for FY 2007
  - a. 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 decision making to proceed with planning and engineering of a fixed guideway transit system between Kapolei, and UH-Manoa 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 Hawaii Bicycling League's Bike Ed Program for 4th graders. Purchased, relocated, replaced and/or installed 15 bike racks.
  - b. 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 for 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.
- c. 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 Akamai), 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, Kaonohi Street/Moanalua Road Intersection Improvements, Kaahele Street Restriping, Kipapa Drive Bulbout Modification, Kamehameha Highway Safety Improvements, Traffic Calming Improvements at Various Locations - Makakilo, Manoa, 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.

3. Environmental goals for FY 2008

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

**City and County of Honolulu - Fire Department**

1. Environmental goals for FY 2007

- a. To obtain the National Pollution Discharge Elimination System (NPDES) Municipal Storm Sewer System (MS4) permit.
- b. 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.

2. Environmental achievements in FY 2007

- a. Completed the Foam Disposal Project as of March 2007.
- b. The Small MS4 was incorporated into the City's Large MS4 permit and filed in March 2007.
- c. A Memorandum of Agreement was reached with other City agencies to consolidate the Small MS4 and Industrial Permits into the Large MS4 (March 2007).
- d. Continue to install solar water heating systems in all renovated and newly constructed fire stations.
- e. 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.

3. Environmental goals for FY 2008

- a. Assist in the elimination of greenhouse gas emissions and other destabilizing climate impacts.
- b. Design future fire stations to include Storm Water Pollution Prevention construction, energy efficient lighting, and solar water heating.
- c. 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).
- d. Control Plan (SWPCP), and Best Management Practices (BMP).
- e. Provide pollution spill control kits for all fire stations.
- f. Provide chemical storage cabinets with secondary containment compartments for all fire stations.
- g. Implement department-wide training for awareness and compliance with the SWMP, SPCC, SWPCP, and BMPs.
- h. Assist in the elimination of air toxins, criteria pollutants, and persistent bio accumulative toxins.
- i. Ensure safe drinking water at all fire stations and related fire facilities.

**County of Kauai - Department of Planning**

1. Environmental goals for FY 2007

- A. 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.
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- Balanced management of our built environment, clustering new development around existing communities and maintaining the four-story height limit
- Balanced economic growth development promoting providing good jobs and a strong economy, without sacrificing our environment and or 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;

2. Environmental achievements in FY 2007

- A. Lihue Town Core Development Plan (In final draft)
    - 1. Redefines Lihue as a connected pedestrian oriented destination town
    - 2. 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.
    - 3. Design Guidelines calling for street landscaping for a greening of the urban environment.
  - B. Kapa'a Wailua Development Plan (In visioning process)
    - 1. 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.
    - 2. Identifies important Open Space areas for scenic, recreational and ecological purposes.
      - a) Wailua River.
      - b) Nonou Mountain
      - c) Middler Lands waterfowl preserve
      - d) Kapa'a Stream
      - e) Open Space near Kapa'a for wetland to clean canal
    - 3. Encourages areas targeted for growth to be mixed use in order to minimize automobile trips
    - 4. Encourages the establishment of alternative transportation networks
  - C. Comprehensive Zoning Ordinance Update (In Department Review)
    - 1. Evaluating the benefits of emerging green building technologies and what incentives can be offered for their implementation
      - a) Green roofs
      - b) Photovoltaic power
      - c) Height allowances and proper zoning for wind farms
    - 2. Limiting proliferation of "gentlemen farms" on Agricultural and Open zone lands
    - 3. Managing the heat sinks created by large commercial parking lots
  - D. Shoreline Erosion Study - provides scientific erosion database on which to base makai setbacks.
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- E. 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.
- F. Implement computerized intake and management system so that permitting becomes virtually paperless.
- G. Incorporate native and endemic plants.
- H. Incorporate Green building strategies.

## **County of Hawaii - Department of Environmental Management**

### **1. Environmental goals for FY 2007**

- a. Continue to move forward with large capacity cesspool (LCC) closure efforts and work closely with US EPA.
- b. Continue to plan and design for sewer and effluent reuse infrastructure in North Kona in anticipation of growing development.
- c. Begin construction on Komohana Heights LCC closure project.
- d. Complete preliminary engineering for a new onsite and offset sewer collection system for Queen Lili'uokalani LCC closure project.
- e. Report findings of North Kona and Kilohana Improvement District projects to County Council.
- f. Present possible sewer alternatives for Kapoho wastewater treatment feasibility study.
- g. Rehabilitation of current permitted County Solid Waste convenience centers with existing general funds and CIP funds.
- h. Increase opportunities for recycling through County Diversion Grant Program.
- i. Enforce illegal dumping regulations against violators.
- j. Increase landfill diversion rate by 2 percentage points, to 28%.

### **2. Environmental achievements for FY 2007**

- a. 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.
- b. Completed preliminary engineering for new sewer collection and treatment systems for Naalehu, Pahala and Honokaa LCC closure projects.
- c. 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).
- d. Working with financial consultants to determine optimal method of financing for North Kona and Kilohana Improvement District projects.
- e. Secured services of engineering consultant to begin work on the Kapoho wastewater treatment feasibility study.
- f. Design and funding in place for the upgrade to the Hilo Solid Waste Transfer Station. Construction began early 2007.
- g. 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.
- h. Continued the Derelict Vehicle Amnesty disposal program. This allows vehicle owners to have up to 2 vehicles on private property properly disposed with 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.

- i. Modified the biotower pumps, No. 3 water pumps and SCADA systems at the Hilo Wastewater Treatment Plant.
- j. Modified the motor control center at the Puakaa Wastewater Pump Station.
- k. Replaced the influent flow meter at the Hilo Wastewater Treatment Plant.
- l. Prepared emergency response procedures in the event of catastrophic failure of Wailoa Wastewater Pump Station and force main or the collapse of the Kalaniana'ole Interceptor due to corrosion.

3. Environmental goals for FY 2008

- a. Continue to move forward with closure of large capacity cesspool (LCC) projects.
- b. Continue to move forward with improvement district projects for North Kona and Kilohana.
- c. Continue with planning and designing efforts for sewer and effluent reuse infrastructure in North Kona.
- d. Begin construction of sewer and effluent reuse infrastructure project (Phase I) in Queen Kaahumanu Highway.
- e. Continue rehabilitation of our system of solid waste transfer stations (convenience centers).
- f. Secure site and funding, and complete permitting and EIS for South Kona/Ka'u solid waste transfer station.
- g. 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.
- h. Undertake two Sewer Master Plan projects of large areas in Kailua-Kona where growth is occurring and expected to increase in the future.
- i. Assist residents and businesses with LCC compliance by expanding sewer systems or partnering to create new wastewater treatment systems.
- j. Begin the Update to our Solid Waste Management Plan.
- k. 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.
- l. Plan for Disaster Debris sites at both South Hilo Sanitary Landfill and West Hawai'i Landfill.
- m. Move forward to increase the life of the South Hilo Sanitary Landfill in close collaboration with the State Department of Health.
- n. Continue to execute the repair and maintenance plan for the Wastewater Division.
- o. Continue to monitor the high hydrogen sulfide concentration and corrosion within Kalaniana'ole 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.
- p. 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.
- q. Determine which of the Wastewater Division structures the Building Division is willing to maintain.

## County of Hawaii - Planning Department

1. Environmental goals for FY 2007
  - a. 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.
  - b. Maintain and, if feasible, improve the existing environmental quality of the island.
  - c. Control pollution.
  
2. Environmental achievements in FY 2007
  - a. 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.
  - b. 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.
  - c. 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 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 Hawaii'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.

3. Environmental goals for FY 2008
  - a. 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.
  - b. To continue to maintain, and if feasible, improve the existing environmental quality of the island.
  - c. To continue to control pollution.

### **County of Maui - Department of Public Works and Environmental Management**

1. Environmental goals for FY 2007
  - a. 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.
  - b. Develop the construction documents for modifications to the Lahaina Wastewater Reclamation Facility to reinstate the original design capacity and improve reliability.
  - c. Improve the recycling programs to divert more waste away from the landfills.
2. Environmental achievements in FY 2007
  - a. 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.
  - b. 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.
  - c. 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.
3. Environmental goals for FY 2008
  - a. 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.
  - b. 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.
  - c. 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.