The Environmental Council

THE 1997 ANNUAL REPORT OF THE ENVIRONMENTAL COUNCIL STATE OF HAWAII

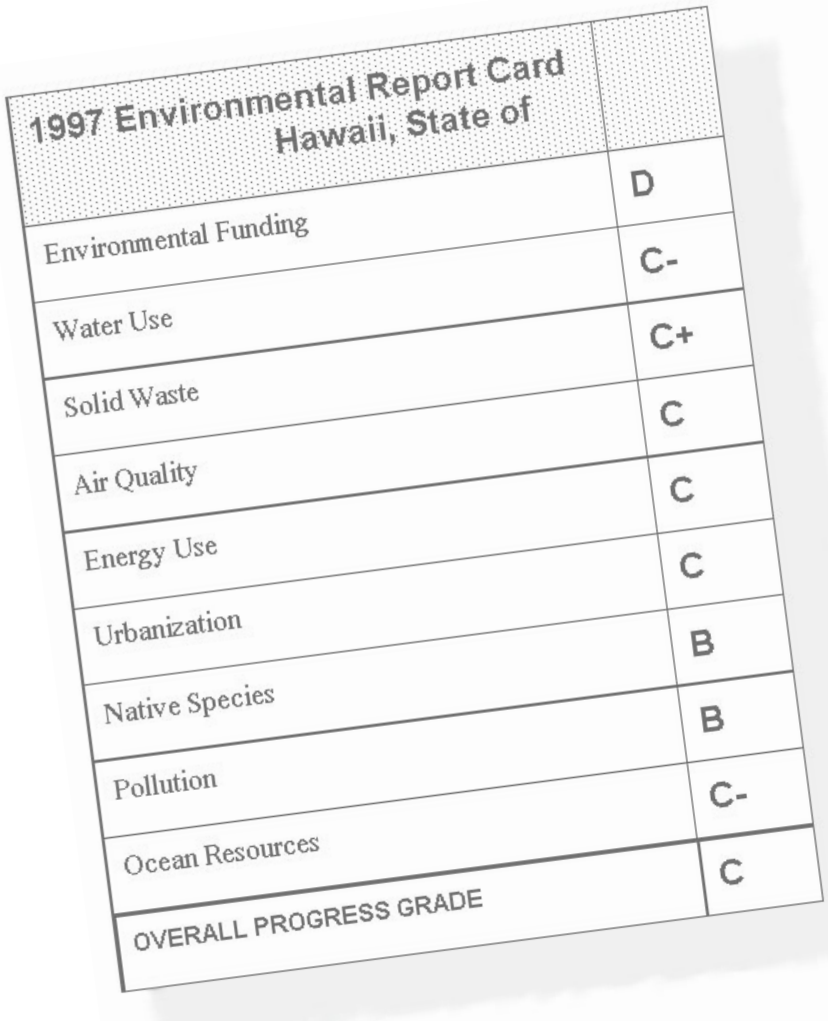
Environmental Report Card, 1997

An Assessment of Hawaii's Environmental Health

• 27 indicators of environmental progress and quality in Hawaii

• Student essays on Hawaii's environmental problems

• Agency progress report on meeting environmental goals



1997 Environmental Report Card Hawaii, State of	
Environmental Funding	D
Water Use	C-
Solid Waste	C+
Air Quality	C
Energy Use	C
Urbanization	C
Native Species	B
Pollution	B
Ocean Resources	C-
OVERALL PROGRESS GRADE	C

The Environmental Council
and the
Office of Environmental Quality Control
State of Hawai`i

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The Environmental Council

THE 1997 ANNUAL REPORT OF THE ENVIRONMENTAL COUNCIL STATE OF HAWAII

Environmental Report Card, 1997

ENVIRONMENTAL COUNCIL 1997

Harlan H. Hashimoto	Chair
Barbara M. Robeson	Vice-Chair
Roger Castro	
Tamar Chotzen	
Stephen T. Dye, Ph.D.	
Michael H. Furukawa	
Louis K. Kanae	
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William S. Petti	
Muriel B. Seto	
Raymond S. Tabata	
Patricia Tummons	
Gary Gill	Ex-Officio, Member

Benjamin J. Cayetano
Governor
Lawrence Miike
Director of Health
Gary Gill
Director, Office of Environmental Quality Control
Harlan H. Hashimoto
Chair, Environmental Council

Recommendations

The Environmental Council's Recommendations to the Governor and Legislature

1 **The Environmental Council promotes a human society that exists in relative balance with natural systems. The data collected and analyzed in this report card suggest that the state of Hawaii should focus on the following critical issues:**

- **state funding for environmental programs should be dramatically increased;**
- **potable water should be conserved through greater reuse of wastewater for irrigation and industrial applications;**
- **our state's dependence on fossil fuels must be radically reduced; and**
- **immediate action must be taken to protect Hawaii's fisheries.**

2 **To better monitor our state's progress toward protecting the environment and establishing a "sustainable" society, clear goals for improving environmental conditions listed in this report card should be adopted by appropriate agencies. Further, indicator data for the following areas of concern should be collected: coastal waters, streams, coral reefs, wetlands, sandy beaches, forests, pesticides and environmental education.**

3 **To close loopholes in the environmental review process and assure greater citizen participation, the Legislature should pass and the Governor sign the three bills approved by the Environmental Council's education/legislation committee. (See Chair's report on Page 5.)**

4 **To streamline the environmental review process, agency exemption lists (required by HRS Chapter 343) should be updated and standardized. This will help avoid needless bureaucratic procedures and provide greater certainty to the private sector, government and the public.**

5 **To assure the careful consideration of a development's impacts on the living culture of Hawaii's people, a comprehensive system of cultural impact assessment similar to the Council's new guidelines should be implemented. (For a copy of the Environmental Council's Guidelines for Assessing Cultural Impacts, contact OEQC.)**

Table of Contents

Introduction

This Annual Report

Each year the Environmental Council submits an annual report on environmental matters with recommendations for improvement to the Governor, the Legislature and the public.

In this report we expand and refine last year's comprehensive listing of Hawaii Environmental Indicators. Each year we update these data and track the environmental health of our islands on issues ranging from government funding to oil spilled into our waters. The environmental indicators are graphed and charted in this report. Students, policy makers and the public can use this document to gain an objective view of our state's progress in managing the natural and urban environment.

This report contains an updated Report Card. The Council, after considering the relevance of each indicator, grades our State's efforts to protect the environment. The methodology we used to create the Report Card is refined from last year's report to more accurately track progress toward an environmental goal for each subject area.

This year, the Environmental Council invited Hawaii high school students to submit essays describing our state's greatest environmental problem and how to solve it. Readers will get a glimpse at the concerns of our young people and their commitment to protect our environment.

The 1997 Annual Report also presents an overview of environmental action taken by government offices across the state. Each year, agencies are asked to list their environmental goals and any progress toward meeting these goals. This review of environmental activity helps policy makers and the public keep tabs on government environmental initiatives.

Introduction

The Environmental Council

The Environmental Council is a fifteen-member citizen board appointed by the Governor to advise the State on environmental concerns. The Council is responsible for making the rules that govern the Environmental Impact Statement (EIS) process for the State. The Council is also empowered to approve an agency's "exemption list" of minor activities that can be implemented without first preparing an Environmental Assessment (EA).

The Environmental Council was created in 1970 by the Hawaii State Legislature. The members of the Council represent a range of professional disciplines. The law instructs the Council to monitor the progress of state, county, and federal agencies' environmental goals and policies. In a report each year, the Environmental Council must advise state policy makers on important issues affecting Hawaii's environment. By law, all state and county agencies are directed to cooperate with the Council in this endeavor.

The Office of Environmental Quality Control

The Office of Environmental Quality Control (OEQC) was established in 1970 to help stimulate, expand and coordinate efforts to determine and maintain the optimum quality of the environment of the State (HRS 341). The Office provides staff to the Environmental Council, supports environmental education, and fosters a working relationship with the University community through the Environmental Center at the University of Hawaii.

State law assigns to OEQC the job of implementing the Environmental Impact Statement law, HRS Chapter 343. Office planners review and comment on hundreds of environmental disclosure documents each year. Twice a month the 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. At the request of the Governor, the Director of the OEQC is empowered to coordinate and direct State agencies in matters concerning environmental quality.

Acknowledgments

This annual report could not have been completed without the participation and support of many people. Mr. Bill Petti, Chair of the Environmental Council Annual Report Committee and committee members Roger Castro, Tamar Chotzen, Stephen Dye, Louis Kanae, Raymond Tabata and Patricia Tummons gave their time and talents. Jeyan Thirugnanam, OEQC's lead planner, assisted with the research and production of the report. The Hawaii Environmental Education Association assisted by distributing this report to science teachers across the state.

Director's Report

The Office of Environmental Quality Control helped protect the health of Hawaii's environment in 1997. Here are a few highlights of our productive year.

New Guidebook

After amending the EIS rules last year, we updated our Guidebook for the Hawaii State Environmental Review Process. By designing and integrating new graphics, simplifying language and reorganizing content, we think we have made the document more understandable to the public. The EIS system depends upon the informed participation of citizens. Our new guidebook will help meet that standard.

Notice Improvements

We work hard to produce and improve *The Environmental Notice*. At the request of the public, we have added a listing of permits required before a project can be implemented. We have expanded our fax and e-mail publication services to make our information even more accessible.

New Guidance Documents

In addition to assisting the Environmental Council with the new Guidelines for Assessing Cultural Impacts, the Office has drafted Guidelines for Assessing Water Well Development Projects and is working on guidelines for biological surveys and sensitive architectural design. These documents are not rules or law. They are intended to assist planners in presenting clear and complete reviews of a project's potential significant impacts.

Documents Reviewed and Processed

Among the nearly 400 project documents that were reviewed and processed by the Office this year (see chart below), a few large and controversial developments should be noted. Staff spent considerable time and effort reviewing or coordinating Environmental Impact Statements for the Kahului Airport Improvements Project, the Queen's Beach Golf Course and the Kohala Water Transmission Line. Each of these projects received a great deal of public attention or legal challenge during the year.

Continued Funding Cuts

As the productivity of the Office continues to grow, we have been challenged to do more with less. Due to the State budget crunch, OEQC's operating funds continue to be reduced or restricted. Funding restrictions force the Office to limit printing costs and public education efforts.

In the past year we have been fortunate to receive support from volunteer student interns Marlyn Aquilar, Terri Choy, and Mike Stubbings. We are grateful as well for the input and support of our Notice subscribers. Thank you all.

Gary Gill
Director, Office of Environmental Quality Control

Environmental Documents Processed by OEQC in 1997

Type of Notice	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Draft EA	12	14	9	11	4	13	14	19	10	15	12	9	**142**
FONSI	13	7	18	17	12	10	6	11	12	9	11	16	**142**
EISPN	2	1	2	1	1	1	1	1	0	0	1	1	**12**
Draft EIS	1	0	1	1	1	0	0	1	0	1	1	0	**7**
Final EIS	2	1	3	1	0	1	0	0	0	4	1	0	**13**
EIS Acceptance	1	0	2	1	1	1	1	0	0	0	1	1	**9**
Withdrawals	0	0	0	0	0	0	0	0	0	2	1	0	**3**
NEPA Documents	3	4	1	3	6	5	2	7	3	3	2	2	**41**
Total	**34**	**27**	**36**	**35**	**25**	**31**	**24**	**39**	**25**	**34**	**30**	**29**	**369**

Chair's Report

As Chair of the Environmental Council, I wish to welcome our new members Roger Castro and Stephen Dye, Ph.D. and bid farewell to our outgoing members Roy Benham and Robin Wertzel. The active participation of our Council members has made possible the dramatic achievements of the year. Each of our Committees have produced real results and I include their reports below.

Communication and Education Committee

Committee members are working to produce "Environmental Flashcards" to distribute to elementary schools in the state. We will place "How to Plant A Native Hawaiian Garden" on the Web. We coordinated the student essays section of this report card. Members assisted staff with updating the OEQC Guidebook.

The Committee reviewed and recommended three bills be sent to the 1998 Legislature. The first bill seeks to codify recent improvements and expand the content of the Environmental Notice. The second bill establishes a new "trigger" in the EIS law to require an environmental review for projects such as oil refineries or private sewage treatment facilities which currently can "slip through" without a study. The last bill would establish the Council as an appeals board for agency determinations on EAs and their acceptance of EIS's.

Exemption List Committee

In 1997 one exemption list, from the Honolulu Board of Water Supply, was submitted for the Council's review and concurrence. Comments from the public were received and the Committee recommended amendments that were adopted by the full Council on November 19, 1997.

In an effort to encourage all affected agencies to maintain current exemption lists, the Committee enlisted the help of Dr. John Harrison of the University of Hawaii Environmental Center. Dr. Harrison began a comprehensive study of the status of exemption lists and found a wide range of agency compliance with the law. In 1998 the Exemption List Committee expects to focus on this area, work with agencies on updating, maintaining and, in some cases, developing exemption lists. We sincerely thank Dr. Harrison for his help to us.

The Committee was also asked to look into a permit given by the state to a private company for harvesting deep-water coral off Makapu'u. The Committee recommended that project data be made public through the Environmental Notice. The applicability of the EIS law to coral harvesting is under review by the Attorney General's office.

Cultural Impacts Committee

The Committee drafted guidelines recommending a methodology to assess the impact of proposed actions on cultural resources, including Native Hawaiian cultural resources, values, and beliefs. The guidelines also specify the contents of a cultural impact assessment.

To prepare the Guidelines, the Committee reviewed public testimony and solicited input from interested parties. Expertise from the DLNR's Historic Preservation Division as well as Federal regulations governing the "Protection of Historic Properties" were used to model the draft guidelines.

The draft cultural impact guidelines were published for review and comment in the Sept. 8 Environmental Notice, and over 20 letters were received. Relevant comments were incorporated into a final draft version of the guidelines, which were adopted as a policy document by the Environmental Council on November 19, 1997.

Rules Committee Report

This year's project is to amend and present the Environmental Council Rules of Practice and Procedure, Chapter 201, Title 11, Hawaii Administrative Rules. These Rules govern the meeting procedures of the Environmental Council to secure the just and speedy determination of our every proceeding. Final action on the draft Rules of Practice and Procedure will be deferred, pending legislative action on the bill that would establish additional appeals powers to the Environmental Council.

Annual Report Committee

The results of the Committee's actions are in your hands. Student essays, agency goals and achievements, updated environmental indicators and a better method of tracking progress toward environmental goals for the state are some of the fruits of our labors.

In 1997 the Environmental Council has helped to "stimulate, expand and coordinate efforts to determine and maintain the optimum quality of the environment of the State." [HRS Chapter 341] I personally thank the hard-working members of the Council for their selfless volunteerism and look forward to even greater achievements in the coming year.

Harlan Hashimoto
Chair, Environmental Council, State of Hawaii

Section I

Environmental Indicators

Each year, the Environmental Council collects data on important indicators of the health of Hawaii's environment. These data are presented in text, tables and graphs so that the public and policy makers can readily understand the status of Hawaii's environment today. The indicators provide a comprehensive look -- from water quality to native species -- at the many faceted task of keeping Hawaii clean and healthy. In this section, for the second time, the Environmental Council grades the status of Hawaii's environment. This year the Council adds and focuses on a new grading method to better measure progress towards annual goals. The Council hopes that this evaluation stimulates the public to learn about and take action to improve our environment.

Environmental Program Funding

1. State Environmental Expenditures

Environmental protection is one of the 11 primary objectives of the state government. Programs within the environmental protection structure include: Department of Health (Environmental Management, Environmental Health Administration, and Office of Environmental Quality Control); Department of Land and Natural Resources (Forestry & Wildlife, Commission on Water Resources Management, Conservation and Resources Enforcement, Natural Area Reserves, Aquatic Resources, Mineral Resources, and Conservation District); and Department of Agriculture (Pesticides).

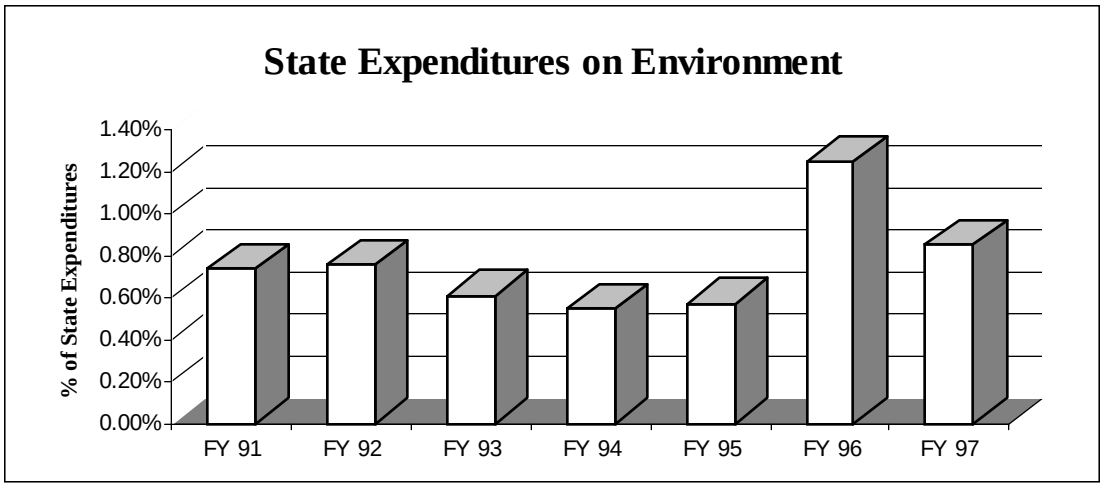
More funding to promote the goals of Hawaii's environmental programs will result in better overall state environmental quality. The portion of expenditures for environmental protection reflects the priority given towards environmental programs relative to other functions.

The table below shows the sum of money and the percentage of total state expenditures spent on environmental protection programs. The Environmental Council's year 2002 goal for the percentage of total state expenditures spent on environmental protection programs is 1.9%.

Table 1: State Expenditures on Environmental Protection Programs, FY 1991 to 1997.

Fiscal Year	90-91	91-92	92-93	93-94	94-95	95-96	96-97
Environmental Expenditures in FY 1991 Dollars (in millions)	25.3	27.8	23.9	24.0	25.8	51.9	37.7
% of State Expenditures	0.74%	0.76%	0.61%	0.55%	0.57%	1.25%	0.85%

Source: The Variance Report, State of Hawaii, compiled by the Department of Budget and Finance. This report is prepared annually and submitted to the state Legislature.
Note: Beginning with fiscal year 1996, environmental spending figures include the Water Pollution Control Revolving Fund that was not shown in previous years. Revolving fund expenditures fluctuate greatly from year to year.



Water Use and Management

2. Municipal Water Consumption

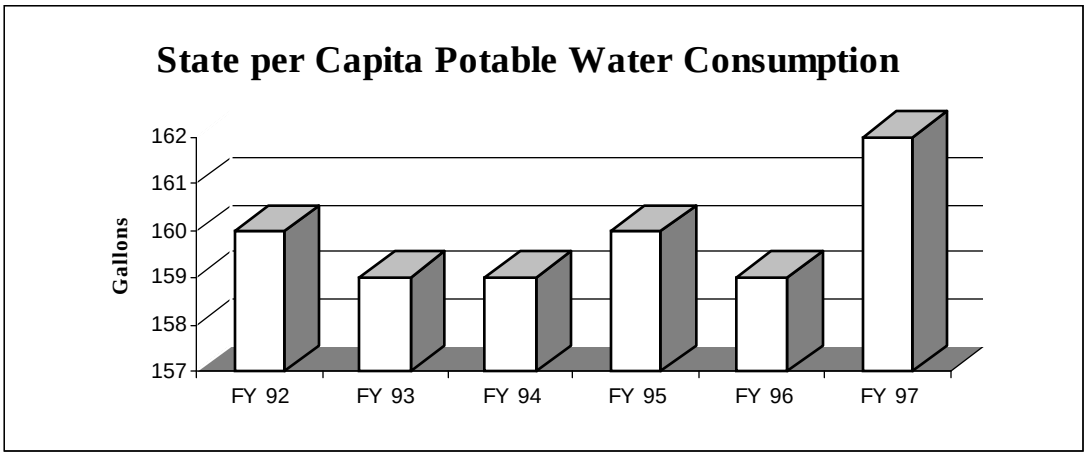
Good drinking water is one of Hawaii's greatest natural assets. The combination of a growing population and limited potable water resources is reducing the availability and quality of our drinking water.

The table below shows water consumption through the respective municipal (county) water distribution systems and water consumption per capita. The Council's year 2002 goal for per capita water consumption is 150 gallons per day.

Table 2: Municipal Water Consumption by County, Fiscal Years 1992 to 1997.

County	FY 91-92	FY 92- 93	FY 93-94	FY 94-95	FY 95-96	FY 96-97
Honolulu (MG)	51,241	51,033	50,407	51,006	50,682	53,188
Kauai (MG)	4,453	4,056	4,149	4,114	4,206	3,945
Hawaii (MG)	8,024	7,937	7,999	8,378	8,363	7,804
Maui (MG)	10,399	10,312	11,177	11,494	11,477	11,438
Total (MG)	**74,117**	**73,338**	**73,732**	**74,992**	**74,728**	**76,375**
State de facto Population	1,267,381	1,261,855	1,270,636	1,283,766	1,288,379	1,293,434
Daily per capita Consumption (Gallons)	**160**	**159**	**159**	**160**	**159**	**162**

Source: The State of Hawaii Data Book 1996 prepared by the Department of Business, Economic Development and Tourism; Honolulu Board of Water Supply; Hawaii County Department of Water Supply; Kauai Department of Water; and Maui Department of Water Supply.
Note: i) These figures include only municipal water supply. Military, private and plantation water systems are not included.
ii) Within the municipal distribution system, water is used for residential, agricultural, government, industrial and commercial use.
iii) The percentage of municipal water used for agricultural purposes varies by county. The following is a breakdown of agricultural use for FY 1996: Honolulu - 3%, Hawaii - 9%, Maui - 11%, Kauai - not available.
iv) MG = million gallons.
v) Data Book calendar year de facto population figures have been adjusted to reflect fiscal year numbers.



3. Municipal Wastewater Treatment and Reuse

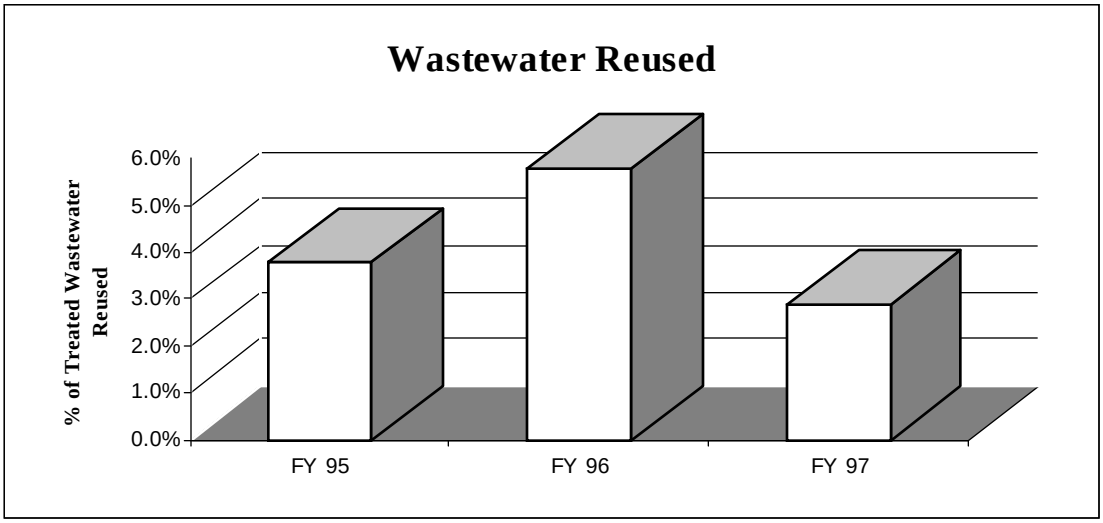
Promotion of wastewater management practices that protect, conserve and fully utilize water resources is vital for Hawaii. One way to achieve this objective is to use water reclaimed from wastewater treatment plants for irrigation.

The table below shows how much wastewater was treated and reused at municipal (county) wastewater plants. The Council's year 2002 goal for the percentage of treated wastewater reused is 25%.

Table 3: Municipal Wastewater Treatment and Reuse by County, FY 1995 to 1997.

County	FY 1995		FY 1996		FY 1997	
	Wastewater Treated (MG)	Reused /Percent Reused	Wastewater Treated (MG)	Reused /Percent Reused	Wastewater Treated (MG)	Reused /Percent Reused
Honolulu	43,174	732 (1.7%)	41,403	1,570 (3.8%)	43,511	63 (0.2%)
Maui	5,351	638 (11.9%)	5,307	725 (13.7%)	5,133	909 (17.7%)
Kauai	872	571 (65.5%)	907	568 (63.0%)	927	538 (58.0%)
Hawaii	1,772	0 (0%)	1,758	0 (0%)	1,898	0 (0%)
Total	**51,169**	**1,941 (3.8%)**	**49,375**	**2,863 (5.8%)**	**51,469**	**1,510 (2.9%)**

Source: Honolulu Department of Wastewater Management, Maui Wastewater Reclamation Division, Kauai Division of Wastewater Management, and Hawaii County Department of Public Works.
Note: i) These data include only municipal wastewater treatment and reuse. Military and private treatment plants are not included.
ii) 100% (450 MG in FY 1997) of wastewater treated at the Lihue Wastewater Treatment Plant is sent to Kauai Lagoons for golf course irrigation. Kauai Lagoons then manages the effluent, some of which is disposed of by injection well during inclement weather. The county assumes that all of the treated water is reused.
iii) Honolulu reused 63 million gallons, which is less than the previous fiscal year due to limited incineration of biosolids. One other reason for the decline was the discontinued use of chlorination at the Honouliuli WWTP, which negated the reuse throughout the facility.



Solid Waste

4. Solid Waste Generation and Diversion

Wise management of solid waste through programs of waste prevention, energy resource recovery, and recycling reduces human impact on the environment. Waste minimization, recycling and composting also reduce the amount of solid waste that we send to our landfills. It is the goal of the state to reduce the solid waste stream prior to disposal by 50% by January 1, 2000.

The following table shows the total amount of municipal solid waste generated and the amount recycled and composted. The Council's year 2002 goal for the amount of municipal solid waste generated per capita is 4.3 pounds per day.

Table 4: Solid Waste Generation and Diversion by County, Fiscal Years 1994 to 1997.

County	FY 93-94		FY 94-95		FY 95-96	
	Municipal Solid Waste (in tons)	Waste Diversion Rate	Municipal Solid Waste (in tons)	Waste Diversion Rate	Municipal Solid Waste (in tons)	Waste Diversion Rate
Oahu	1,508,000	17.0%	1,561,000	21.0%	1,667,000	24.0%
Maui	193,000	24.0%	212,000	24.0%	203,000	25.0%
Kauai	92,000	15.0%	90,000	22.0%	81,000	15.0%
Hawaii	159,000	9.0%	160,000	7.0%	181,000	17.5%
Total	**1,952,000**	**17.0%**	**2,023,000**	**20.0%**	**2,132,000**	**23.0%**
De facto Pop.	**1,270,636**	**NA**	**1,283,766**	**NA**	**1,288,379**	**NA**
Daily per capita (in lbs)	**8.4**	**NA**	**8.6**	**NA**	**9.1**	**NA**

Source: DOH, Office of Solid Waste Management
Note: NA = Not applicable

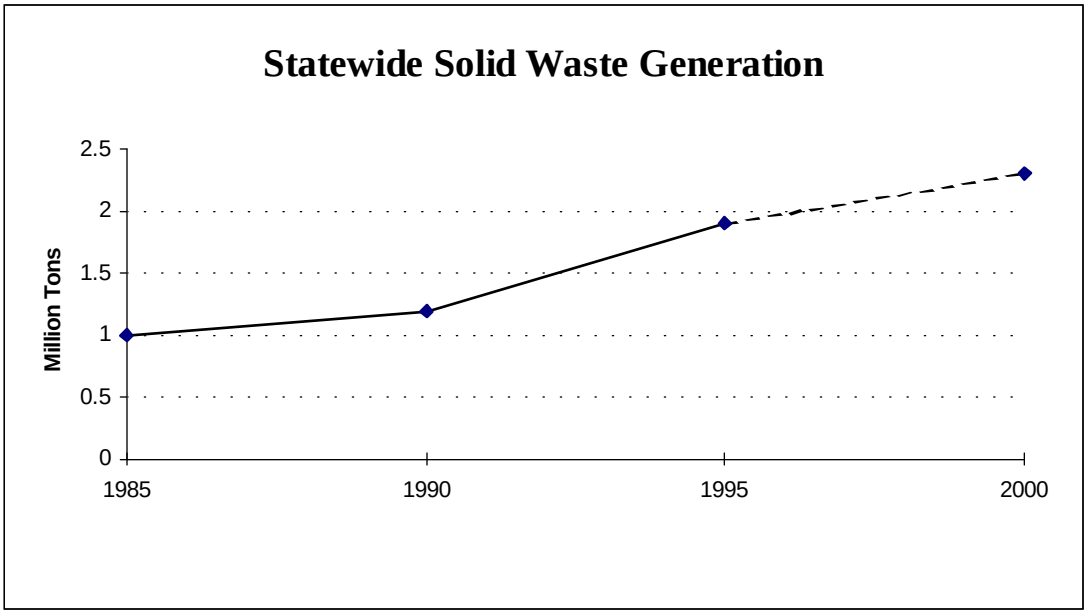
5. Statewide Solid Waste Generation

The table below shows the amount of solid waste generated in Hawaii for 1990, 1995 and the estimated figure for 2000. The amount of materials discarded into Hawaii's waste stream is expected to keep increasing.

Table 5: Statewide Solid Waste Generation, 1990 to 2000.

Year	1990	1995	2000
Solid Waste Generation	**1.2 Mton**	**1.9 Mton**	**2.3 Mton**

Source: DOH, Office of Solid Waste Management
Note: Mton = Million Tons



6. Municipal Solid Waste Landfill Capacity

The table below shows how much longer county landfills can accept waste at the current disposal rate. Solid waste minimization and diversion is critical in Hawaii because at our present disposal rate, county landfills (except Hawaii County) will reach capacity in 10 years or less.

Table 6: Solid Waste Landfill Life Remaining for Municipal Landfills in Hawaii.

County	Location	Landfill Life Remaining
Oahu	Waimanalo Gulch, MS WLF	4 years
Maui	Central Maui, MS WLF all phases	4 years
Molokai	Naiwa, MS WLF	10 years
Lanai	Lanai, MS WLF	3-5 years
Kauai	Kekaha, MS WLF phase III	2 years
Hawaii	Hilo MS WLF West Hawaii MS WLF	1 year 40 years

Source: DOH, Office of Solid Waste Management
Note: MSWLF = Municipal Solid Waste Landfill

Air Quality

7. Registered Motor Vehicles in Hawaii

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 Hawaii. The Council's year 2002 goal for the number of motor vehicles per capita is 0.61.

Table 7: Number of Registered Motor Vehicles In Hawaii, 1991 to 1996.

Year	1991	1992	1993	1994	1995	1996
Motor Vehicles	897,193	885,761	880,152	875,144	877,756	884,617
De facto Population	1,270,648	1,264,113	1,259,597	1,281,675	1,285,856	1,290,901
Vehicles per Person	**0.71**	**0.70**	**0.70**	**0.68**	**0.68**	**0.69**

Source: Statewide data provided by the City and County of Honolulu, Department of Finance, Motor Vehicles and Licensing Division.
Note: i) Carbon monoxide is a colorless, odorless and tasteless gas.
ii) Ozone is a poisonous form of pure oxygen. It is pungent smelling and faintly bluish.
iii) De facto population obtained from State Data Book.

8. Air Quality in Honolulu

Breathing polluted air can cause health problems ranging from difficulties in breathing to aggravation of asthma, to cancer and even death. Air pollution can also damage buildings and trees.

The table below shows measurements of total suspended particulates and sulfur oxides in Honolulu. The sampling was conducted on the roof of the State Department of Health Building, 1250 Punchbowl Street. The Council's year 2002 goal for total suspended particulates is 18 micrograms per cubic meter.

Table 8: Air Quality Measurements in Downtown Honolulu, 1985 to 1996.

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Total Suspended Particulates	24	25	26	26	30	30	30	28	21	21	20	23
Sulfur Oxides	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Source: Hawaii State Department of Health, Clean Air Branch.
Note: i) The figures shown are the annual arithmetic mean, in micrograms per cubic meter, for total suspended particulates and sulfur oxides.
ii) Particulates are tiny specks of soot, dust and unburned fuel in the air.
iii) Sulfur oxides include sulfur dioxide, sulfur trioxide, their acids and the salts of their acids. Sulfur dioxide, the most important of these as an air pollutant, is a colorless and irritating gas with a strong odor.

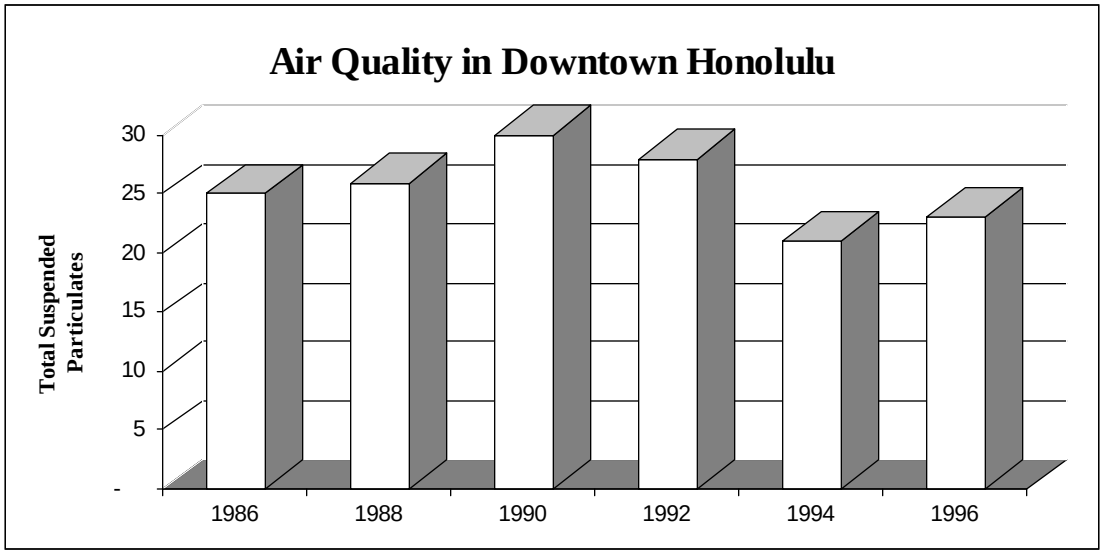
9. Air Quality at Various Locations

The Department of Health has been monitoring ambient air quality for the state since 1957. At that time and up until 1971, there was only one monitoring site. Today, the air quality monitoring network has been expanded. The following table shows air quality data for six different locations.

Table 9: Air Quality Measurements at Specified Locations Statewide, 1994 to 1996.

Sampling Station	PM-10 Measurements			Sulfur Dioxide Measurements		
	1994	1995	1996	1994	1995	1996
Oahu:						
Kapolei	31	24	19	1	2	2
Makaiwa	NA	NA	NA	NA	3	1
Pearl City	15	14	14	NA	NA	NA
Waimanalo	19	16	16	NA	NA	NA
West Beach	17	16	18	1	2	2
Kauai:						
Lihue	21	17	20	NA	NA	NA

Source: Hawaii State Department of Health, Clean Air Branch.
Note: i) The data, shown in micrograms per cubic meter, are obtained from 24-hour sampling at the specified locations.
ii) PM10 = Particulate matter which is 10 microns or less in diameter.



Energy Use

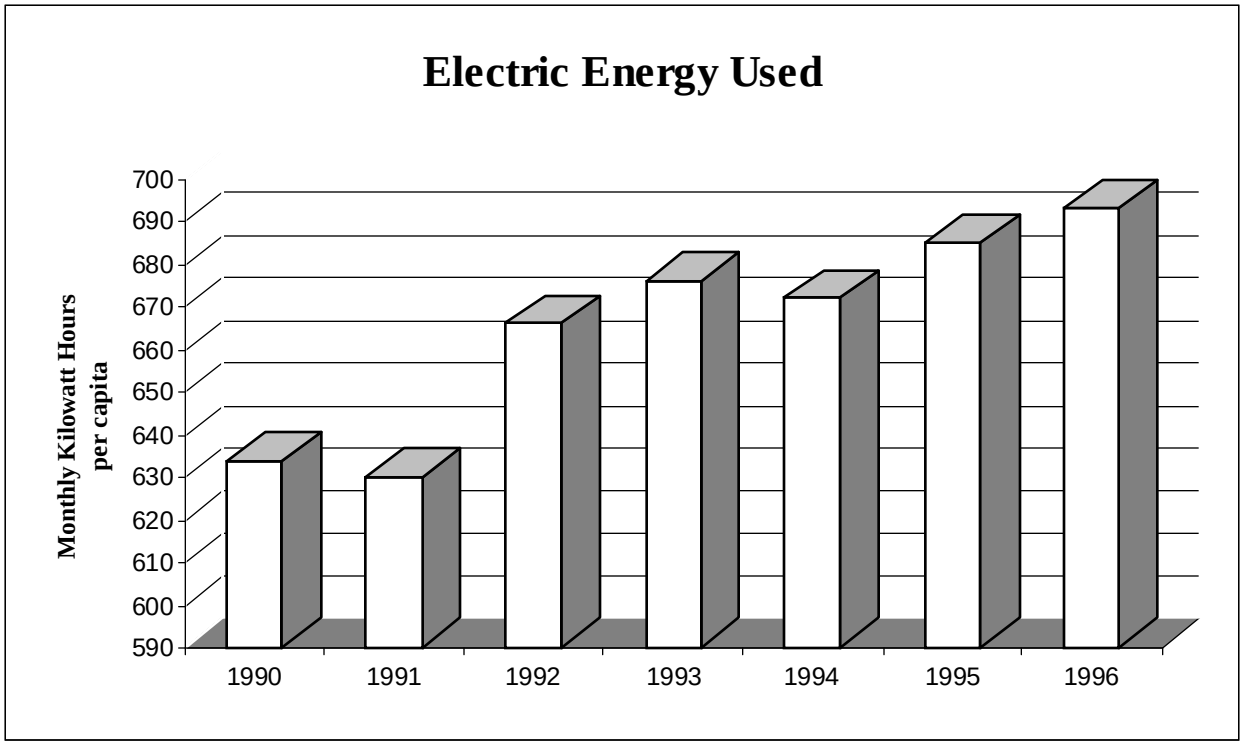
10. Total Electric Energy Used

Hawaii depends on imported oil and coal for about 93% of its energy. Energy production from fossil fuels is a major source of air pollutants. Additionally, petroleum shipping and handling pose risks to our fragile environment. Displacing petroleum fuels with alternate or renewable forms of energy and improving energy efficiency will improve our environmental quality. We can help reduce per capita energy use by conserving energy and improving energy efficiency. A solar water heater can reduce water heating costs by 90%. The table below shows the total electric energy used in Hawaii. The Council's year 2002 goal for per capita electric energy used is 617 kilowatt hours per month.

Table 10: Total Electric Energy Used in Hawaii, 1990-96.

Year	1990	1991	1992	1993	1994	1995	1996
Total Electric Energy Used (Million KWH)	9,566	9,610	10,104	10,219	10,341	10,563	10,740
State de facto Population	1,256,746	1,270,648	1,264,113	1,259,597	1,281,675	1,285,856	1,290,901
Per capita Used per month (KWH)	634	630	666	676	672	685	693

Source: State DBEDT, Energy Division, Energy Data Services.



11. Energy Produced in Hawaii

One of Hawaii's goals is to replace energy produced from fossils fuels with alternate and renewable sources such as solar power. The table below shows the amount of energy produced by source.

Table 11: Total Energy Produced in Hawaii by Source, 1994 to 1996.

Resources	1994		1995		1996	
	Energy Produced in Trillion BTU	Percent	Energy Produced in Trillion BTU	Percent	Energy Produced in Trillion BTU	Percent
Petroleum	270.8	86.6	280.0	87.2	278.9	87.8
Biomass	16.1	5.2	11.8	3.7	10.2	3.2
Solar hot water	2.3	0.7	2.8	0.9	3.1	1.0
Hydro-electric	1.5	0.5	1.1	.3	1.1	0.4
Coal	13.6	4.3	16.5	5.1	16.9	5.3
Wind	0.2	0.1	0.2	0.1	0.2	0.1
Geothermal	1.8	0.6	2.3	.7	2.4	0.7
Solid Waste	6.2	2.0	6.4	2.0	4.7	1.5
Total	**313.0**	**100.0**	**321.2**	**100.0**	**317.5**	**100.0**

12. Fossil Fuel Imported to Hawaii

Fossil fuels are coal, oil and natural gas which formed inside the earth from the remains of plants and animals that lived many years ago. These fuels are burned to provide energy for making electricity, powering vehicles and cooking.

The table below shows the amount of imported fossil fuel by type. The Council's year 2002 goal for imported fossil fuel into Hawaii is 280 trillion Btu.

Table 12: Total Imported Fossil Fuel into Hawaii by Type, 1994 to 1996.

Type of Imported Fuel	1994	1995	1996
Crude Oil	323.9	298.2	301.9
Distillates	1.9	0	.6
Jet Fuel	6.1	4.6	20.3
Residual Fuel	2.6	5.7	6.7
Other	0	3.4	3.7
Coal	14.2	16.5	16.1
Total	**348.7**	**311.9**	**349.3**

Source: State DBEDT, Energy Division, Energy Data Services.
Note: Figures in trillion British thermal units (TBtu).

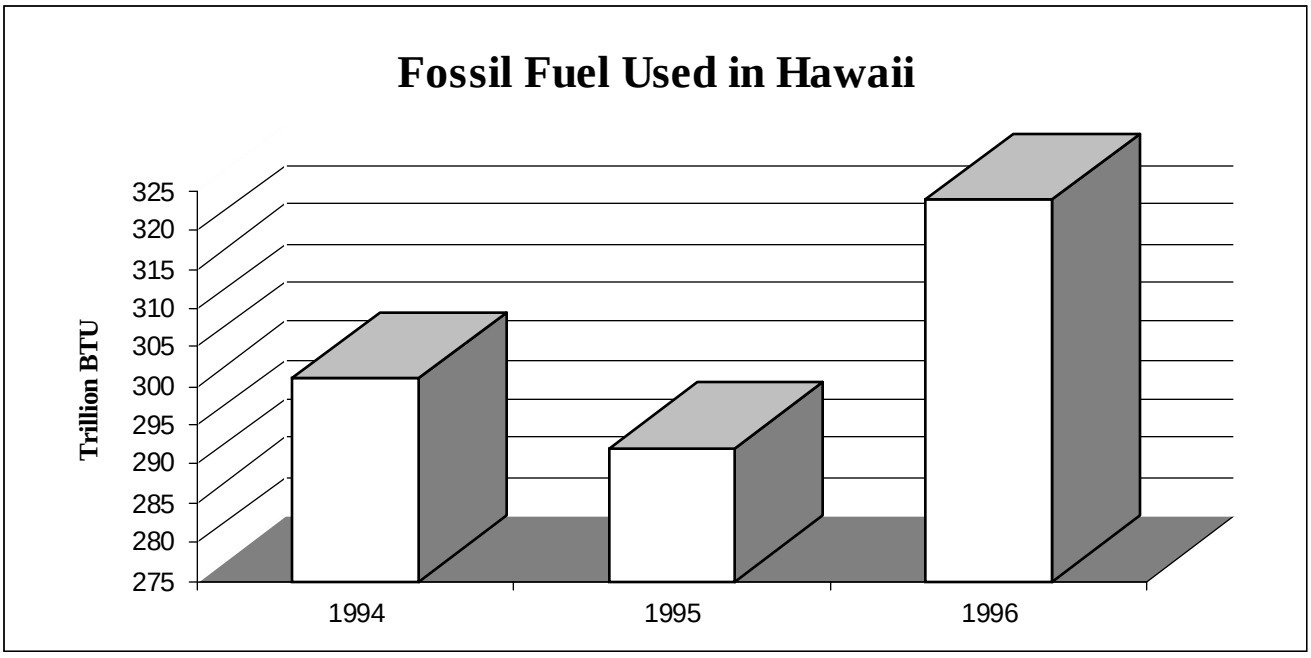
13. Fossil Fuel Used in Hawaii

Hawaii's over dependence upon imported oil is a major concern. In the event of a disruption in the world oil market, Hawaii's economy and way of life would be adversely affected. Environmentally destructive oil spills are always a possibility during the transport of petroleum products. The table below shows the amount of fossil fuel used by category.

Table 13: Amount of Fossil Fuel Used in Hawaii by Category, 1994 to 1996.

Sector	1994		1995		1996	
	Fossil Fuel Used in Trillion BTU	%	Fossil Fuel Used in Trillion BTU	%	Fossil Fuel Used in Trillion BTU	%
Electricity Production	95.8	32%	95.1	33%	101.1	31%
Transportation (Ground & Water)	81.5	27%	82.1	28%	75.9	23%
Transportation (Air)	90.0	30%	96.5	33%	102.4	32%
Other Sectors	17.7	6%	9.3	3%	15.1	5%
Exports	16.4	5%	8.8	3%	29.4	9%
Total	**301.4**	**100%**	**291.7**	**100%**	**323.9**	**100%**

Source: DBEDT, Energy Division, Energy Data Services.



Urbanization

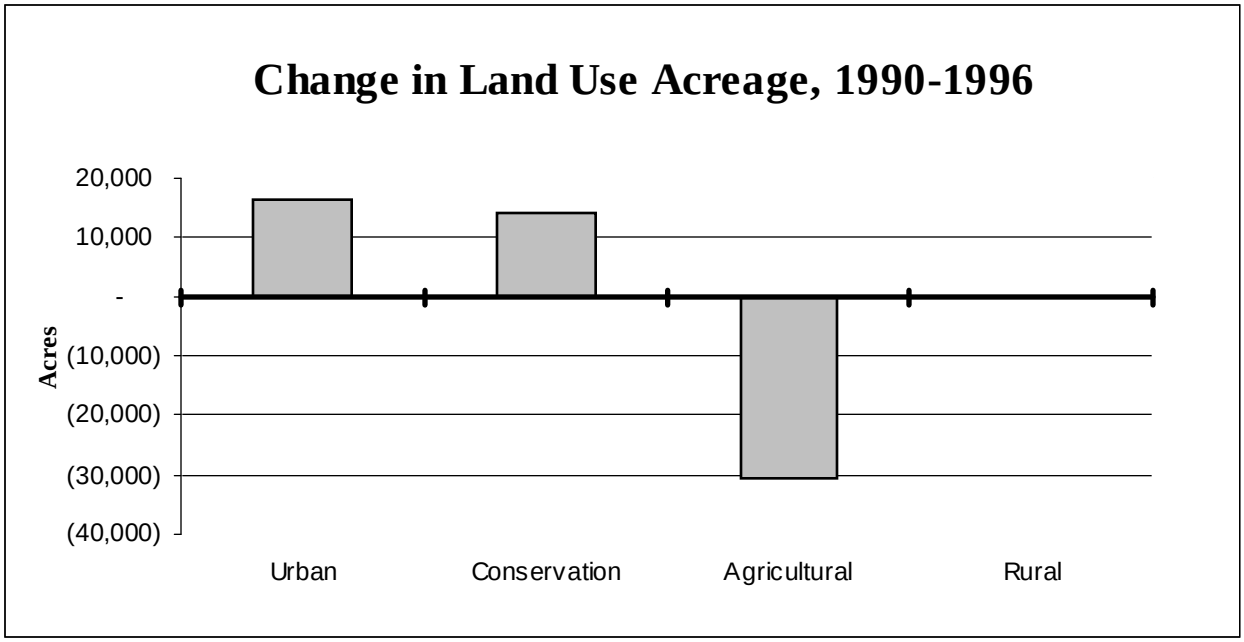
14. Statewide Land Use District Acreage

There are four land use districts in which all lands in the state are placed: urban, rural, agricultural, and conservation. With the decline of sugar cane and pineapple, there may be less productive agricultural land in Hawaii. The following table shows that since 1990, about 30,000 acres of agricultural land have been converted to Urban and Conservation designation. The Council's year 2002 goal for conservation land area is 2,110,000 acres.

Table 14: State Land Use District Acreage 1990 to 1996.

Year	Land Area in Thousand Acres			
	Urban	Conservation	Agricultural	Rural
1990	175	1,961	1,966	10
1991	178	1,961	1,963	10
1992	181	1,960	1,961	10
1993	181	1,961	1,961	10
1994	188	1,959	1,956	10
1995	190	1,976	1,936	10
1996	192	1,975	1,936	10

Source: State Land Use Commission, Department of Business, Economic Development and Tourism.



15. State Land Use District Acreage by Island

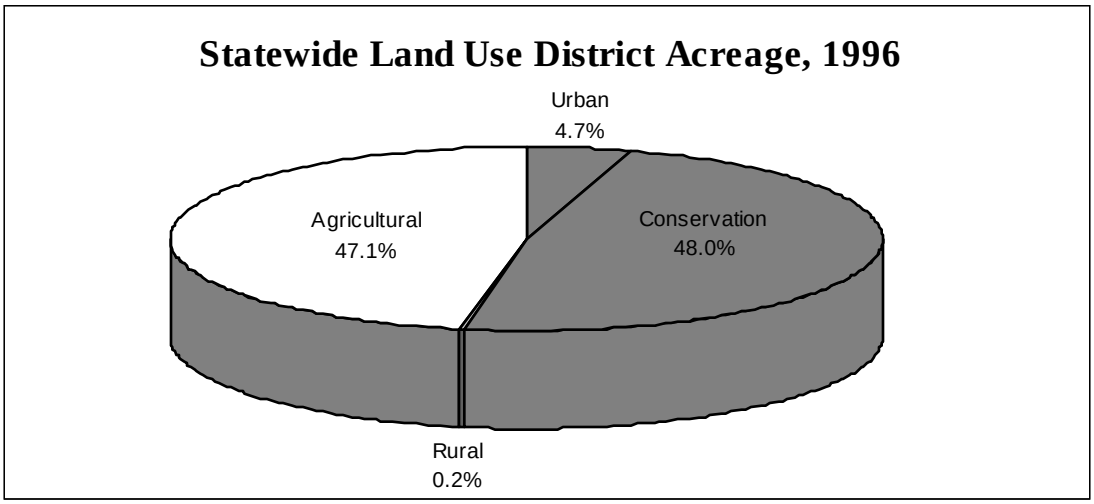
Precious resources have a better chance of being protected if they are located in or classified as conservation lands. Protection of conservation lands is accomplished under regulations administered by the Department of Land and Natural Resources.

The following table shows how much land is designated under the four land use categories on each island.

Table 15: Statewide Land Use District Acreage by Island.

Island	Land Area in Thousand Acres				
	Urban	Conservation	Agricultural	Rural	Total
Hawaii	53	1306	1214	1	**2573**
Maui	21	195	246	4	**466**
Kaho`olawe	------	29	------	------	**29**
Lana`i	3	38	47	2	**91**
Moloka`i	3	50	112	2	**166**
O`ahu	98	157	131	------	**386**
Kaua`i	14	199	140	1	**354**
Ni`ihau	-----	------	46	------	**46**
Kaula/Lehua	------	0.4	------	------	**0.4**
Other (Northwest Hawaiian Islands)	------	2	------	------	**2**
Statewide	**192**	**1975**	**1936**	**10**	**4112**

Source: State Land Use Commission, Department of Business, Economic Development and Tourism.



16. Bikeway Miles

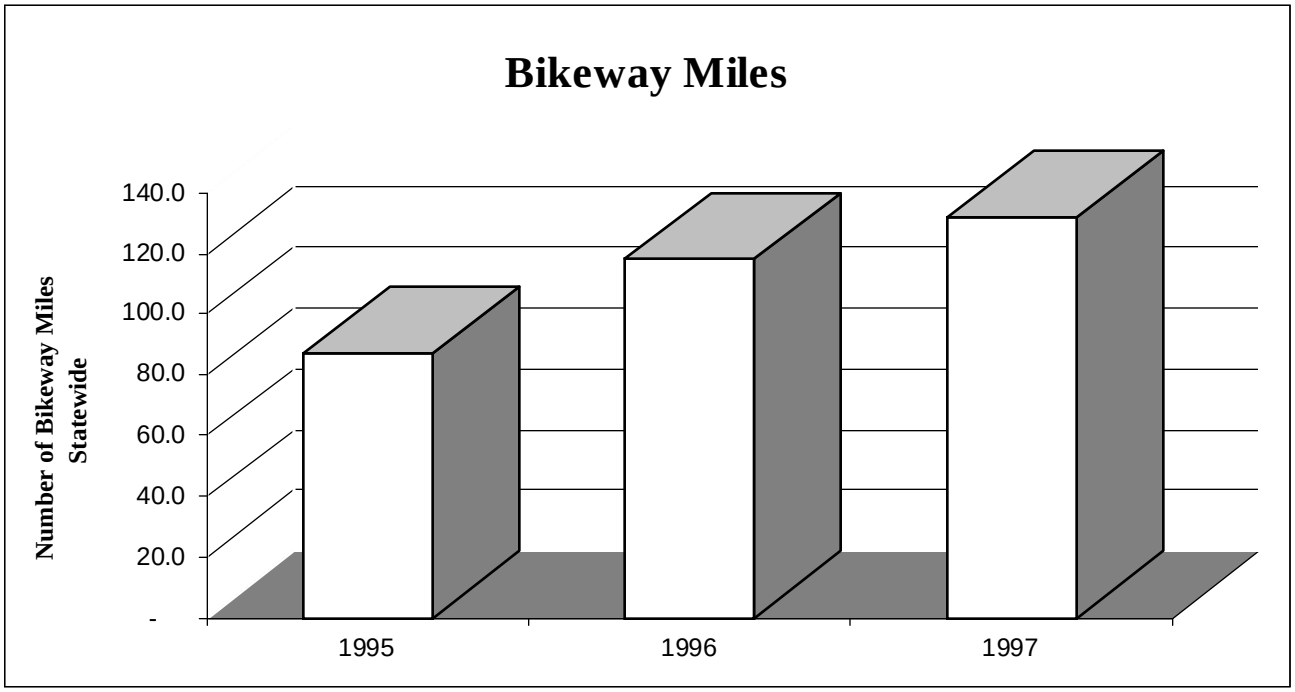
Alternate transportation programs such as bikeways and transit systems conserve energy, alleviate traffic congestion, reduce air pollution, support physical fitness and recreation, and provide green corridors. Overall, they improve environmental quality and the urban landscape.

The next table shows the total miles of bikeways in Hawaii by island. The Council's year 2002 goal for total miles of bikeways is 327.

Table 16: Miles of Bikeways in Hawaii, 1994 and 1997.

Island	Bikeway Miles		
	1995	1996	1997
Kauai	3.8	3.8	6.8
Oahu	55.4	66.1	56.6
Maui	19.6	40.0	40.8
Hawaii	8.2	8.2	27.8
Statewide	**87.0**	**118.1**	**132.0**

Source: State Department of Transportation, Highways Division
Note: i) Bikeway miles are provided only for bikeways that are designated as such through signing. 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 routes.



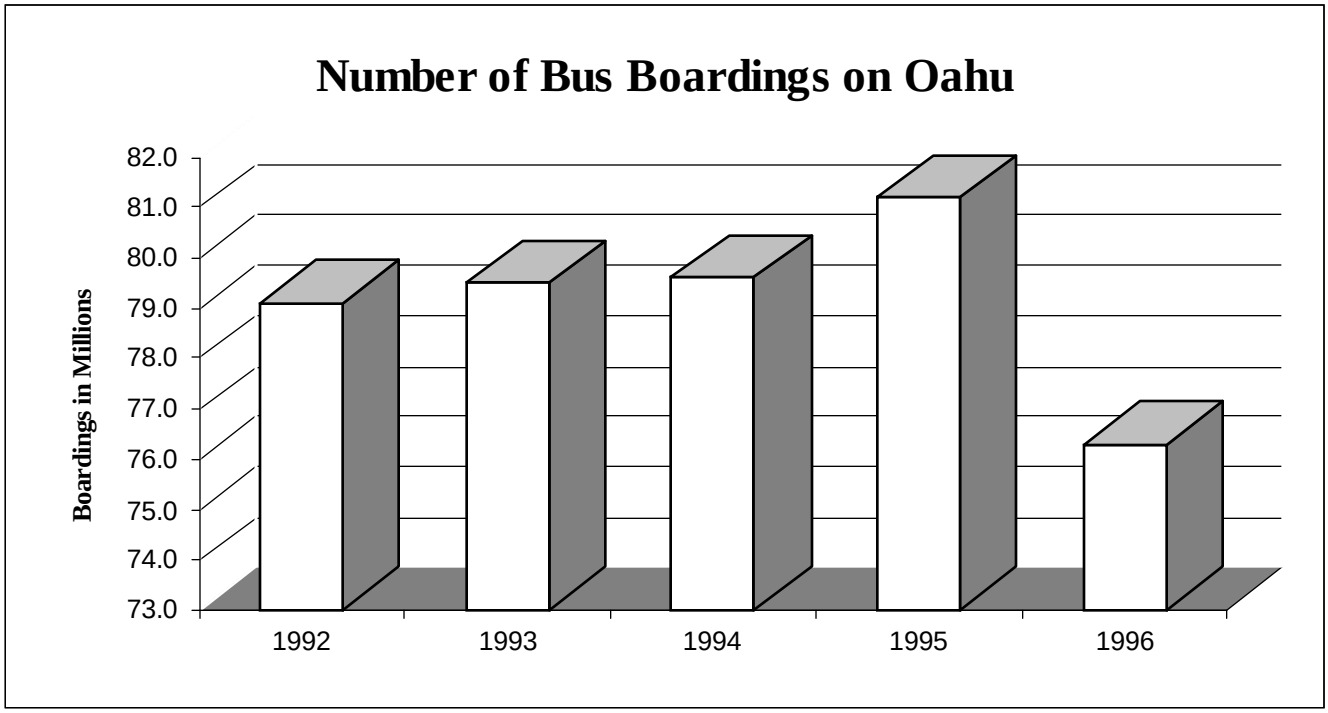
17. Number of Bus Boardings on Oahu

The data below are estimates of the number of boardings on Oahu 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. The Council's year 2002 goal for bus boardings on Oahu is 89 million.

Table 17: Number of Bus Boardings on Oahu, 1992 to 1996.

Year	1992	1993	1994	1995	1996
Total Number of Bus Boardings (in millions)	79.1	79.5	79.6	81.2	76.3

Source: Public Transit Division of the Department of Transportation Services.
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.



18. Noise Complaints Received by the Health Department

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 (by category) received by the Department of Health. The Council's year 2002 goal for the number of noise complaints is 365.

Table 18: Number of Noise Complaints Received by the Department of Health, 1992 to 1996.

Type of Complaint	Noise Complaints in 1992	Noise Complaints in 1993	Noise Complaints in 1994	Noise Complaints in 1995	Noise Complaints in 1996
Agriculture	5	2	1	3	1
Aircraft	8	9	12	11	5
Commercial	0	0	21	6	3
Construction	166	164	157	142	140
Industrial	6	19	6	2	3
Miscellaneous	31	22	17	12	12
Refuse Collection	72	36	41	35	41
Stationary	100	85	93	112	109
Unreasonable: Animal	42	34	22	24	16
Hobby	11	3	8	9	9
Maintenance	38	37	29	37	27
People	21	23	16	12	13
Unknown	6	10	4	13	8
Sound Production	100	93	62	48	40
Vehicular	39	26	20	21	30
Total	**645**	**563**	**509**	**487**	**457**

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

Native Species

19. Status of Plant Species

Hawaii is the most isolated high land mass on Earth and most of our native plants are found nowhere else in the world. Species that reached the islands before the arrival of humans evolved with minimum competition. As a result, most native plants are easily damaged by feral animals and do not compete well with introduced, aggressive plants. Land use changes and exotic plants and animals cause major problems to our native species.

The table below shows the number of extinct, native and nonnative plant species in Hawaii. The Council's year 2002 goal for the number of abundant native species is 757.

Table 19: Number of Plant Species in Hawaii by Status, 1995 to 1997.

Year	Extinct	Number of Plant Species					
		Native (1,093)					Non-Native (Exotic)
		Rare				Abundant	
		Listed Endangered or Threatened	Proposed Endangered or Threatened	Candidate	Of Concern		
1995	103	198	85	13	308	489	> 9000
1996	103	280	0	10	317	486	> 9000
1997	103	284	11	41	250	507	> 9000

Source: Center for Plant Conservation - Hawaii Office

Note: i) Native plant species are those that were established in Hawaii before the arrival of humans.

ii) Extinct means that there are no known populations or individuals remaining in the wild or in cultivation, that the species has not been sighted in many years, and there is insufficient high quality habitat left to survey within its natural range. This designation is difficult to verify, and must be based on the projections, probabilities and estimates of our best botanical experts.

iii) Listed Endangered/Threatened status is conferred upon its final approval by the U.S. Fish and Wildlife Service (USFWS) Director, and its publication as a Final Rule in the Federal Register. A species is thus afforded special protection under the Endangered Species Act.

iv) Candidate status is authorized for a species by the Director of the USFWS after sufficient information has been gathered by botanical experts to demonstrate that a species is sufficiently rare and imperiled to qualify for federal listing. Official candidate status follows the Notice of Review, which is published in the Federal Register. The USFWS then has one year to propose an official candidate species for federal listing.

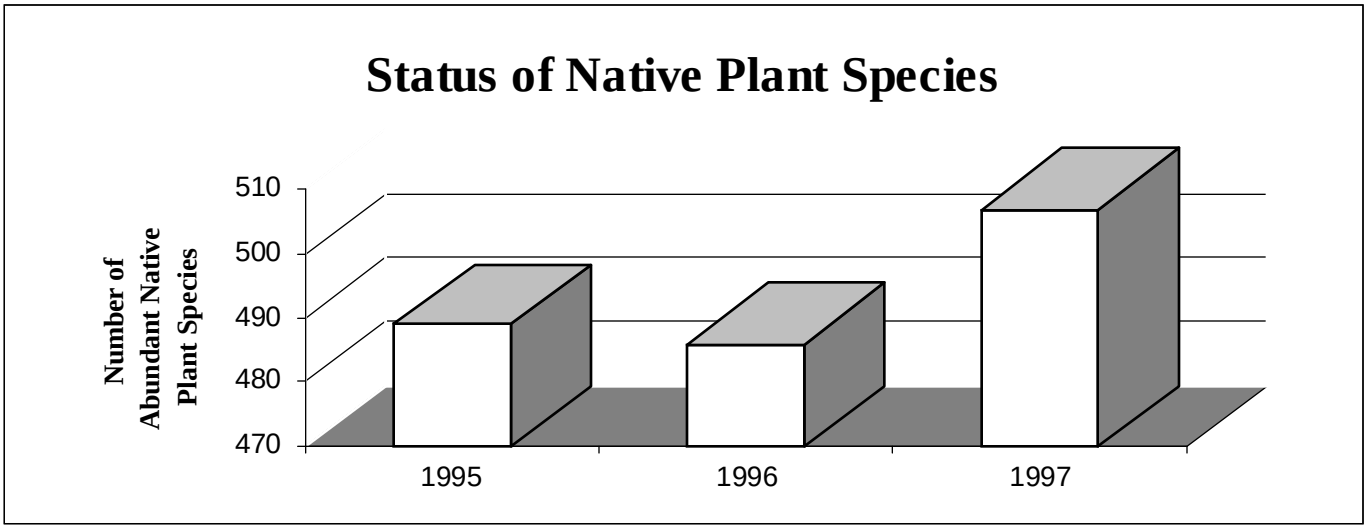
v) Proposed Endangered/Threatened status is conferred upon a species after approval by the USFWS Director and its publication in a Notice of Review in the Federal Register. The notice describes the status of a species and the nature and immediacy of the threats to its survival. The USFWS then has one year to advance the species through the final listing process, including a 30-day public comment period.

vi) Species of Concern is not an official USFWS category, but is used by professionals inside and outside of government to designate rare species that are potential candidates for listing.

vii) Rare means the species is uncommon in the natural environment. Usually, fewer than 5,000 individuals of a rare species exist although the number varies widely between species.

viii) Abundant means high numbers of individuals of the species are common in the natural environment.

ix) Nonnative or exotic means species that have been brought to the islands by humans.



20. Status of Native Animal Species

The loss of native species in Hawaii has been tremendous. Flora and fauna that evolved over millions of years have been devastated in less than 2,000 years. Twenty five percent of the U.S. endangered taxa occur in Hawaii.

The table below shows the status of native animal species (except invertebrates) in Hawaii.

Table 20: Status of Animal Species, as of July 1997

Taxonomic Group	Native Species	Extinct Species	Listed Endangered	Listed Threstened	Proposed for Listing	Candidate Species	Species of Concern
Mammals	4	0	4	0	0	0	0
Birds	93	26	30	1	0	2	6
Reptiles	5	0	2	3	0	0	0
Fishes	22	0	0	0	0	0	1

Source: U.S. Fish and Wildlife Service

Note: The status of Hawaiian invertebrates is hard to assess due to lack of information on abundance and distribution for described (5,500+ species) and undescribed (3,000 - 5,000 species) taxa.

Pollution

21. Beaches Posted as Unsafe Due to Pollution

Residents and visitors use our public beaches and the ocean for recreation and fishing. Sewage, oil and chemical spills can restrict our enjoyment and use of the shoreline as well as poison aquatic life.

The following table shows the places and times beaches were posted with warning signs (unsafe due to water pollution) by the Department of Health. The Council's year 2002 goal for beach closure days is 5.

Table 21: Days Beaches Posted as Unsafe Due to Pollution by DOH, FY 1995 to FY 1997.

Location of Beach	Dates Beaches Posted as Unsafe	Number of Days
Kahala Beach, Oahu	July 6 - 12, 1994	**FY 1995 = 18 days**
Pohaku Park, Napili, Maui	November 19 - 23, 1994	
Lua landing, Laie, Oahu	March 20 - 25, 1995	
Kalapaki Bay, Kauai	July 26 - 29, 1995	**FY 1996 = 28 days**
Hanamaulu Beach Park, Kauai	July 29 - August 3, 1995	
Kihei, Maui	January 6 - 9, 1996	
Lahaina, Maui	June 8 - 21, 1996	
Kahului Harbor Beaches, Maui	September 3 - 6, 1996	**FY 1997 = 27 days**
Waianae, Oahu	November 17 - 22, 1996	
Waialua, Oahu	November 18 - 22, 1996	
Kahala Beach, Oahu	January 20 - 31, 1997	
Hanamaulu Beach, Kauai	April 12 - 16, 1997	

Source: Department of Health, Clean Water Branch

Note: i) There were additional postings of warning signs on streams, lakes, and harbors.

ii) Other agencies may also post warning signs on beaches. For example, the City and County of Honolulu also posts warning signs on beaches after opening stream mouths to drain water.

22. Wastewater, Oil and Chemical Spills

Wastewater, oil and chemical spills pollute our ocean, streams, groundwater. In addition to the environmental and ecological damage, cleanup costs run into the millions of dollars. Even with the best response plan, it is impossible to restore the environment to its original condition. Spill prevention must be our primary strategy.

The following table shows the number of wastewater, oil and chemical spills in Hawaii. The Council's year 2002 goal for the number of spills is 365.

Table 22: Wastewater, Oil and Chemical Spills in Hawaii, 1995 to 1997.

Number of Spills	Oil		Other Chemicals		Wastewater	
	1995	1996	1995	1996	FY 95-96	FY 96-97
Oahu	58	164	129	140	**401**	453
Maui	6	11	3	13	**60**	55
Hawaii	15	24	10	3	**12**	9
Kauai	3	9	9	3	**12**	12
Total	**82**	**209**	**151**	**159**	**485**	**529**

Source: Wastewater spills (fiscal year data) - Department of Health, Wastewater Branch. Oil and other chemical spills (calendar year data) - Department of Health, Hazard Evaluation and Emergency Response Office.

23. Oil Spilled in Hawaiian Waters

Oil spills from vessels and pipelines pollute our shores and waters. This table quantifies oil spilled in Hawaiian waters.

Table 23: Amount of Oil Spilled in Hawaiian Waters in Gallons, 1993 to 1996.

Year	1993	1994	1995	1996
Oil Spilled (in gallons)	6,142	20,736	3,707	45,287

Source: Commanding Officer, United States Coast Guard, Marine Safety Office, Honolulu
Note: On May 14, 1996 approximately 39,000 gallons of fuel oil spilled into Pearl Harbor. The oil leaked from a corroded pipeline at Waiau Power Plant.

24. Drinking Wells Free of Chemicals

Fresh water is a precious resource. Pesticides, fertilizers, oils and chemicals that we apply to the ground eventually seep into our drinking water aquifers. We must protect our drinking water supplies from contamination, or spend millions of dollars for treatment. The next table shows the number of drinking wells free from chemical contamination. The Council's year 2002 goal for the percentage of wells free of chemicals is 80%.

Table 24: Number of Wells Free of Chemicals, 1996 to 1997.

County	As of October 1996			As of June 30, 1997		
	Number of Wells		Percent Free of Chemicals	Number of Wells		Percent Free of Chemicals
	Total	Free of Chemicals		Total	Free of Chemicals	
Oahu	251	178	74%	286	213	74%
Hawaii	76	49	64%	78	51	65%
Maui	44	37	84%	44	37	84%
Kauai	63	59	94%	63	59	94%
Lanai	9	9	100%	9	9	100%
Molokai	10	10	100%	10	10	100%
Total	**483**	**372**	**77%**	**490**	**379**	**77%**

Source: Department of Health Safe Drinking Water Branch
Notes: (i) Contaminants include pesticides, fuels and other man-made compounds. Nitrates are not included.
(ii) Figures include new wells and exclude non-drinking water wells.
(iii) The contamination levels usually detected are well below standards established to protect public health. If contamination approaches or exceeds standards, the well is closed or fitted with water treatment facilities to ensure safe drinking water for the public. Last year, one well on Oahu was closed because contamination levels approached threshold levels.

25. Public Water Systems Free of Microbiological Violations

Public water systems provide piped water for human consumption such as drinking and washing. They include both municipal and private facilities for the collection, treatment, storage and distribution of water.

The following table shows the number of public water systems that are free of microbiological violations. The Council's year 2002 goal for the percentage of water systems free of violations is 97%.

Table 25: Number of Public Water Systems Free of Microbiological Violations, 1995 to 1996.

Year	1995	1996
Number of Systems Free of Microbiological Violations	134	144
Total Number of Systems	150	150
Percentage Clean	**89%**	**96%**

Source: Department of Health, Safe Drinking Water Branch.

26. Hazardous Waste Generated

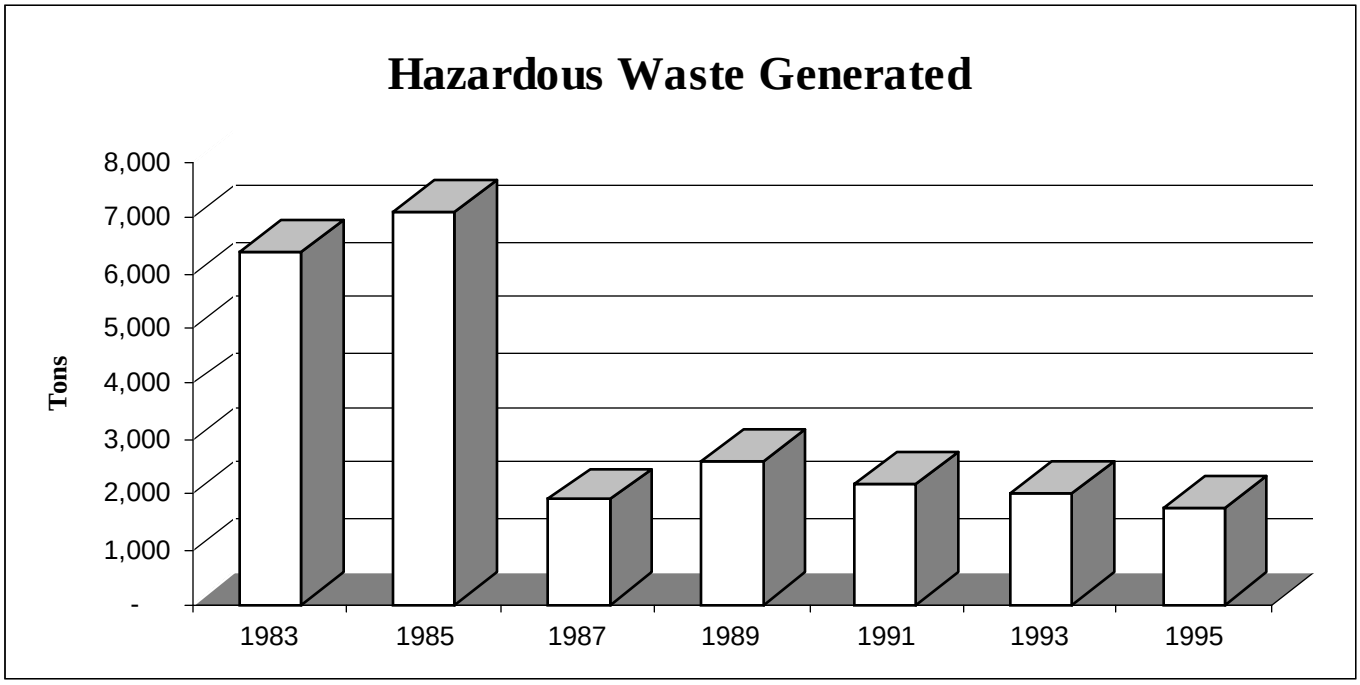
Hazardous wastes are classified as either ignitable, corrosive, reactive or toxic. These wastes have components that have been shown to be harmful to health and the environment. To protect worker safety, public health, and the environment, users of hazardous chemicals must minimize the amount of waste they generate.

State law requires large generators of hazardous waste to report biennially to the Director of Health the amount of hazardous waste generated. The following table shows the data. The Council's year 2002 goal for total hazardous waste generated is 900 tons.

Table 26: Total Hazardous Waste Generated in Hawaii, 1983 to 1995.

Year	1983	1985	1987	1989	1991	1993	1995
Hazardous Waste Generated (in tons)	6,400	7,100	1,900	2,600	2,200	2,000	1,742

Source: Biennial Report System submittal from Hawaii businesses to the Department of Health.



Ocean Resources

27. Health of Hawaii Fisheries

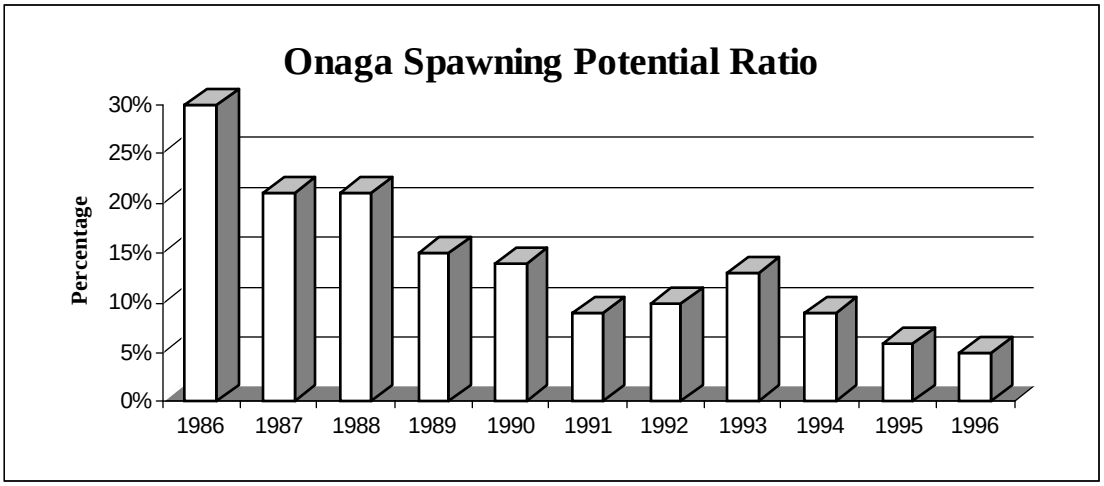
Ocean resources are an integral part of Hawaii's heritage. Aquatic resources are extremely valuable for ecological, social and economic reasons. Sustaining and enhancing Hawaii's living aquatic resources and their habitats make environmental and economic sense.

The table below shows the figures for the main Hawaiian Island bottomfish ***spawning potential ratio*** compiled by the Honolulu Laboratory of the National Marine Fisheries Service. This ratio indicates when the population of a species of fish has declined to a level beyond its ability to sustain itself. Because the habitat of bottom fish is relatively isolated from sources of pollution, the decline in their population is a direct reflection of overfishing. Two of the five most important species listed below have now dropped below the 20% SPR level considered critical to species survival. The Council's year 2002 goal for the onaga SPR is 15%.

Table 27. Hawaii Bottomfish Spawning Potential Ratio 1986 to 1995.

Bottomfish	Spawning Potential Ratio (in percent)										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Ehu	9	13	9	17	12	7	4	5	6	7	8
Hapuupuu	42	37	52	58	37	34	37	26	33	21	21
Onaga	30	21	21	15	14	9	10	13	9	6	5
Opakapaka	33	31	37	58	42	39	44	32	37	35	28
Uku	49	21	64	55	30	26	28	46	37	40	45

Source: Bottomfish and Seamount Groundfish Fisheries of the Western Pacific Region: 1996 Annual Report of the Western Pacific Regional Fishery Management Council.
Note: SPR is calculated from catch size composition and commercial catch rate. SPR values of less than 20% are thought to be indicative of recruitment overfishing, the point at which there may be too few spawning fish remaining to maintain the population. Target SPR values for ehu and onaga recovery are 20%.



Environmental Indicators

1997 Environmental Progress Report Card

In this section, the Environmental Council grades the status of Hawaii's environment. This year the Council applies a new grading method to measure progress towards annual goals. This report card provides citizens and policy makers with a quick assessment of how well we are caring for our environment. The Council hopes this evaluation stimulates the public to learn about and take action to improve our environment. Your thoughts and suggestions on the content and methodology of this report card are welcomed.

1997 Environmental Report Card Hawaii, State of	
Environmental Funding	**D**
Water Use	**C-**
Solid Waste	**C+**
Air Quality	**C**
Energy Use	**C**
Urbanization	**C**
Native Species	**B**
Pollution	**B**
Ocean Resources	**C-**
OVERALL PROGRESS GRADE	**C**

Method

Step 1.

Environmental Progress Scores and Grade

The method used to calculate the grades was selected to reward progress toward environmental indicator goals established for the year 2002. Progress is evaluated on a yearly basis and is measured relative to incremental progress toward the year 2002 goal. The grading system rewards Hawaii's people for movement towards sustainability and reduction of pollution levels.

Establishing goals for each environmental indicator is a necessary starting point for the grading method. In some instances the agency responsible for monitoring the data has an established target for the indicator. The Council considered agency goals in establishing our year 2002 goals for the indicators used in this report card.

With the previous year's data and year 2002 goal available it is possible to determine annual increments approaching the goal. An exponential function, one which involves decreasing incremental change over time, is used to calculate annual increments. Indicator ratings are assessed relative to annual goals and an unacceptable condition. (See Table A)

Individual indicator scores are assigned as follows:

Present condition equal to or better than annual goal	= 100
Present condition equal to previous year's level	= 50
Present condition equal to unacceptable condition	= 0

A linear scale is employed to assign scores for conditions falling between the limits listed above. Letter grades corresponding to the assigned scores are given in the same manner as last year. (See Table B)

To illustrate the proposed method, consider the following examples:

Environmental spending (latest year worse than previous year): In the previous year, 1.25% of state expenditures was spent for environmental protection and the year 2002 goal is 1.9%. Using these values the latest year goal is 1.39%. The unacceptable condition is 0%. In the latest year, the level of spending was 0.85%. The indicator score is then [(0.85 - 0) / (1.25 - 0)] x 50 = 34. The letter grade for this score is D.

Waste diverted (latest year better than previous year): In the previous year, 20% of waste was diverted and the year 2002 goal is 50%. Using these values the latest year goal is 27%. In the latest year, the percent of waste diverted was 23%. The indicator score is then 50 + [(23 - 20) / (27 - 20)] x 50 = 71. The letter grade for this score is B.

Environmental Sustainability Scores and Grades

The method used is based on the National Wildlife Federation's 1971 Environmental Quality Index (Kimball, 1972). Individual indicator scores are assigned as follows:

Present condition equal to or better than optimum condition	= 100
Present condition equal to unacceptable condition	= 0

A linear scale is employed to assign scores for conditions falling between the limits listed above. Letter grades corresponding to the assigned scores are given in the same manner as last year. (See Table B)

Environmental Indicators

Table A: Benchmarks for 1997 Environmental Report Card.

Indicator	Unacceptable Condition	Previous Year Level	Latest Year Level	Latest Year Goal	Year 2002 Goal	Optimum Condition
% of State Funding for Environment	0	1.25	0.85	1.39	1.90	2.50
Daily per capita Water Consumption in Gallons	300	159	162	157	150	100
% of Treated Wastewater Reused	0	5.8	2.9	9.8	25	50
% of Waste Diverted	0	20	23	27	50	75
Daily per capita Waste Generated in pounds	18	8.6	9.1	7.8	4.3	3.6
Particulates in Honolulu in mcg/m3	50	20	23	20	18	10
Number of Motor Vehicles per capita	1	0.68	0.69	0.67	0.61	0.33
Monthly per capita Elec. Energy Used in KWH	1,025	685	693	675	617	517
Imported Fuel in Trillion Btu	468	312	349	307	280	230
Conservation Land Area in million acres	1.03	1.98	1.97	2.00	2.11	2.25
Number of Noise Complaints	3,650	487	457	467	365	100
Bikeway Miles	0	118	132	156	327	1309
Annual TheBus Boardings in millions	0	81	76	82	89	124
# of Abundant Native Plants	0	486	507	543	757	1093
Number of Spills	3,650	718	897	652	365	100
Days Beaches Posted Unsafe	100	28	27	21	5	1
% of Wells Free of Chemicals	0	77	77	78	85	100
% of Water Systems Clean	0	89	96	91	97	100
Hazardous Waste Generated in Tons	4,500	2,000	1742	1705	900	500
Onaga Spawning Potential Rate	0	6	5	7	15	50

Table B: Environmental Progress Scores and Sustainability Scores for Environmental Indicators.

Indicator	Progress Scores	Progress Grade	Sustainability Scores	Sustainability Grade
% of State Funding for Environment	34	D	34	D
Daily per capita Water Consumption in Gallons	49	C	69	B
% of Treated Wastewater Reused	25	D	6	F
% of Waste Diverted	71	B	31	D
Daily per capita Waste Generated in pounds	47	C	62	B-
Particulates in Honolulu in mcg/m3	45	C	68	B
Number of Motor Vehicles per capita	48	C	46	C
Monthly per capita Elec. Energy Used in KWH	49	C	65	B
Imported Fuel in Trillion Btu	38	D+	50	C
Conservation Land Area in million acres	50	C	77	B+
Number of Noise Complaints	100	A+	90	A
Bikeway Miles	68	B	10	F
Annual TheBus Boardings in millions	47	C	62	B-
# of Abundant Native Plants	68	B	46	C
Number of Spills	47	C	78	B+
Days Beaches Posted Unsafe	57	C+	74	B
% of Wells Free of Chemicals	50	C	77	B+
% of Water Systems Clean	100	A+	96	A
Hazardous Waste Generated in Tons	94	A	69	B
Onaga Spawning Potential Rate	42	C-	10	F

Step 2.

The environmental indicators are then organized into nine categories. The categories are: environmental funding; water use; solid waste; air quality; energy use; urbanization; native species; pollution; and ocean resources.

A weight is assigned to each of the indicators in a given category. This weight is used to obtain the score for each category. The weights are assigned to each indicator in relation to the empirical importance of the indicator itself as well as the reliability of its related data. For simplicity in interpreting the "0" to "100" scores, letter grades are used (see Table C).

Table C: Category Scores and Grades for Environmental Progress.

Category	Indicator	Progress Scores	Relative Importance (Weights)	Category Scores	Category Grades
Environmental Funding	% of State Expenditures	34	100%	34	D
Water Use	Water Consumption per capita	49	70%	42	C-
	Wastewater Reuse Rate	25	30%		
Solid Waste	Waste Diversion rate	71	50%	59	C+
	Annual Waste Generated	47	50%		
Air Quality	Particulates in Honolulu	45	60%	46	C
	Number of Motor Vehicles	48	40%		
Energy Use	Electric Energy Used per capita	49	70%	46	C
	Imported Fuel	38	30%		
Urbanization	Conservation Land Area	50	35%	53	C
	Number of Noise Complaints	100	5%		
	Bikeway Miles	68	10%		
	Annual TheBus Passengers	47	50%		
Native Species	Number of Abundant Native Plants	68	100%	68	B
Pollution	Number of Spills	47	20%	69	B
	Days Beaches Posted Unsafe	57	10%		
	Wells Free of Chemicals	50	30%		
	Water Systems Free of Microbiological Violations	100	20%		
	Hazardous Waste Generated	94	20%		
Ocean Resources	Onaga Spawning Potential Rate	42	100%	42	C-

Step 3.

Finally, a weighted average of the nine components is used to obtain a progress index and grade for Hawaii's environment (see Table D).

Table D: Overall Environmental Progress Index and Grade for 1997 Environmental Report Card.

Category	Category Scores	Relative Importance (Weights)	Overall Scores
Environmental Funding	34	10%	3.4
Water Use	42	15%	6.3
Solid Waste	59	10%	5.9
Air Quality	46	15%	6.9
Energy Use	46	5%	2.3
Urbanization	53	10%	5.3
Native Species	68	15%	10.2
Pollution	69	15%	10.4
Ocean Resources	42	5%	2.1
Overall Environmental Progress Index and Grade		**100%**	**52.8 (C)**

Limitations

The comprehensiveness and accuracy of the grades are limited by the following factors:

a) The assessment is based on a sample of 20 environmental indicators. This small sample is not a full representation of Hawaii's environment.

b) The benchmarks for unacceptable and 2002 goals are based on assumptions and judgments made by the Council (see below). Others may have very different opinions about the figures.

c) The relative importance value to compute the weighted averages for the categories and total index is also subjective based on the Council's beliefs.

This is the second attempt to assess the status of Hawaii's environment. The Council hopes to continually refine and improve this assessment process.

Assumptions

The Environmental Council's assumptions for unacceptable conditions, year 2002 goals, and optimum levels for Hawaii's environmental indicators are listed below.

a) Environmental Spending: Based on information presented in World Resources Institute's 1992 Environmental Almanac the average state in the U.S. spends approximately 1.9% of its state budget on environmental protection. The year 2002 goal is the same as the average state. The optimum level is 2.5%.

b) Water Consumption: The Honolulu and Maui Boards of Water Supply have set a goal of 150 gallons per capita each day for the year 2002. Twice the above amount is unacceptable. The optimum level is 100 gallons per capita each day.

c) Treated Wastewater Reused: The Department of Health has set a reuse target of 25% for the year 2002. The optimum level is 50%.

d) Waste Diverted: Pursuant to section 342G-3, HRS, it is the goal of the state to reduce solid waste stream prior to disposal by 50% by the year 2000. The same goal is used for the year 2002. The optimum level is 75%.

e) Waste Generated: According to Healthy Hawaii 2000, the national objective is to reduce the average pounds of municipal solid waste produced per person each day to no more than 3.6 pounds. The optimum level is the same as the national objective. The year 2002 goal is the present national average of 4.3 pounds per person per day (EPA, 1997). It is unacceptable to produce 5 times the national objective.

f) Particulates: The standard for PM10 is 50 mcg/m3. Since there are no longer any standards for Total Suspended Particulates, the PM10 standard is applied. Eighty percent below the standard of 50 mcg/m3 is the optimum level. The year 2002 goal is 10 percent below the 1995 level.

g) Motor Vehicles: The year 2002 goal is to reduce the number of motor vehicles per capita by 10% from the 1995 level. One motor vehicle per person is unacceptable. The optimum level should be one motor vehicle for every three people (the average household size is three people).

h) Electric Energy: The year 2002 goal is to reduce energy use by 10% from 1995 levels. Using 50% more than the 1995 level is unacceptable. The optimum level should be a 25% reduction from the 1995 level.

i) Imported Fuel: The year 2002 goal is to reduce energy use by 10% from 1995 levels. Using 50% more than the 1995 level is unacceptable. The optimum level should be a 25% reduction from the 1995 level.

j) Conservation Land: The 2002 goal coincides with the State Land Use District Boundary Review, 1992 recommendation that approximately 150,000 acres of Urban and Agricultural lands be converted to Conservation zoning. The report also identifies another 139,000 acres of non-Conservation land as "Areas of Critical Concern" that should be protected for its conservation resource value. Therefore, the optimum level is the conversion of 289,000 acres. Any less than one fourth of state lands in the Conservation district is unacceptable.

k) Noise Complaints: The year 2002 goal is 365 complaints or less (1 per day). An average of 10 noise complaints per day is unacceptable. The optimum number is 100 or less.

l) Bikeway Miles: According to Bike Plan Hawaii a total of 1,309 miles of bikeways is proposed. The optimum condition is the construction of all the bikeways proposed. The year 2002 goal is to have 25% of the bikeways installed.

m)Bus Ridership: The present bus fleet is 525. The FEIS for the Honolulu Rapid Transit Program considered an expanded bus fleet of 997 buses for the Transportation System Management alternative. Based on Table 1.1 in the Comprehensive Bus Facility & Equipment Requirements Study, we estimate that the number of boardings for a fleet of 997 buses would be 124,000,000 per annum. The optimum level is 124,000,000 boardings. The year 2002 goal is to increase boarding by 10% from 1995 levels.

n) Native Plants: There are 1093 native plants species in Hawaii. The year 2002 goal is to have all the "species of concern" upgraded to "abundant." Optimally, all native species would be in abundance.

o) Spills: The year 2002 goal is to have less than 365 spills. An average of 10 spills per day is unacceptable. The optimum number is 100 or less.

p) Beaches Posted: The Department of Health has set a target of 5 beach closure days for the year 2002. A level of 100 beach closure days per year is unacceptable. Optimally, there would be one beach closure day or less.

q) Wells Clean: The year 2002 goal is 10% better than the 1996 level. Optimally, all wells will be clean.

r) Water System Clean: The Department of Health has set a target of 97% of the water systems clean for the year 2002. Optimally, all water systems will be clean.

s) Hazardous Waste: The Department of Health has set a target of 900 tons for the year 2002. Five times the target amount is unacceptable. The optimum target is 500 tons.

t) Onaga SPR: The National Marine Fisheries Service has set a target of 15% or better for the Onaga SPR for the year 2002. The optimum level is 50%.

Letter Grades

For the sake of simplicity in interpreting the "0" to "100" scores, letter grades are used. The scale that we used was obtained from A Rating Guide to Life in America's Fifty States (Thomas, 1994).

100 = A+
85-99 = A
80-84 = A-
75-79 = B+
65-74 = B
60-64 = B-
55-59 = C+
45-54 = C
40-44 = C-
35-39 = D+
25-34 = D
20-24 = D-
0-19 = F

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Section II

Student Essays

To help fulfill the Environmental Council's mandate to educate Hawaii's people, we sponsored an essay contest among high school students. We asked pupils across the state to identify Hawaii's greatest environmental problem and describe what should be done to solve it. We received scores of responses. The five winning essays reprinted in this section reflect the energy and vision of tomorrow's leaders. To preserve the style and content of the student's writing only minimal editing was performed on the essays. While the science or events described in these articles may not be completely accurate, the authors articulate their concerns with passion and present compelling arguments for change. Congratulations and thanks to all participants in this year's contest.

Pollution and Cars

by Audrey Ehrhorn
Iolani School

Cars are a big problem in Hawaii. They cause many problems such as pollution and traffic. Also people do not know what to do with their rusty old cars so they go into the landfill. I have figured out some ways to solve these awful problems.

We can solve the pollution problem by making the cars solar powered. We could make them solar powered by adding solar collectors to all the top, front and back. If we did that, no matter where the sun is, the solar collectors will always absorb the sun's radiant energy. And if there is no sun, the cars can be battery powered and the batteries can be rechargeable. This would help eliminate exhaust which would lessen pollution from cars. There would still be some pollution, but it would be greatly diminished.

We have other problems with cars. Cars and people driving them cause a lot of traffic during rush hour. We can solve this problem by having people car pool to wherever they have to go. If kids live in the same area and go to the same school, one of their parents can take them in and the other parent can go to work and not pollute as much. People can take the bus. The bus is a slow but efficient way to get many people to their destination. And all you have to do is pay fifty cents to a dollar or get a bus pass. It is a lot cheaper than keeping a car. This will also save fuel and gasoline so the prices might go down.

Another problem with cars is, what do you do with them once they get rusty? Before, people just dumped them on the side of the road or something like that. When I was younger I would see a lot of cars on the side of the road going to school. A better way would be to recycle all the usable parts, then melt the remainder down and use it for scrap iron or make something out of it.

Another idea is if a person buys a car, one car has to go out of the economy and be turned into scrap metal. There always would be the same number of cars on the island. This would help us because we would not have as much traffic or pollution. This idea would be an alternative to the other three that I have mentioned. If the other three ideas failed, this one would come in handy.

I think these ideas would help our state out a lot. If this happens, we might finally be taking a step in the right direction.

Audrey is an eighth grader at Iolani School. Besides the environment, her interests include soccer, softball, science and computers, surfing the Net, and shopping. While she's not sure about career goals yet, she does volunteer her time at a local hospital.

Preserving Ka`ena Point

by Melissa Maxwell
Leilehua High School

The most significant issue that is important to me today is the preservation of Ka‘ena Point, which is located on the North Shore on Oahu. Recently, a public meeting was held at the John Kalili Center in Haleiwa. Beside public residents and fishermen, also present here were a task force made up of the North Shore Neighborhood Board and the Department of Natural Resources members.

Ka‘ena Point is a beautiful isolated area. It is also an underdeveloped area. Because of its peacefulness and isolation, it has been for years a favorite place to fish and dive for fishermen. Now the task force suggested that the area should be turned into a public park. This would mean improving the road and allowing more access to the area.

A few years ago a gate at the end of the paved road was put up to prevent vehicles from entering. A few miles in, another gate was put up too. This was to preserve the many endangered plants that were damaged over the years from off-road vehicles and motorbikes. And of course, people too. Today the area is also a bird sanctuary, a resting place for the Hawaiian Seals, a nesting place for the Albatross birds and the many different plants that are flourishing. Public access to this area is possible today by foot or bicycle.

One of the main topics at the public meeting was the task force suggestion that the area between the two gates be turned into a public park. This is also the area that is frequently used by fishermen. The task force suggested a new paved road plus off-road areas for fishing. However, there was opposition. Will this cause more crime, more abandoned vehicles, more rubbish? Right now, the area is clean because the “wardens” are there who patrol the area. They have done a terrific job. I believe the people who come out there to fish also do their part in keeping the area clean.

Nothing is final yet and it may take a few more years before anything is done. More public input is needed and I hope the task force will listen to the people and come to some agreement, especially with the fishermen.

I have been fortunate over the years regarding Ka‘ena Point. I started fishing out there around the age of six with my step-dad and mother. The area was always a mess. There was lots of trash around. Burnt cars, old refrigerators, stoves, dead and abandoned animals, you name it, it was there. The area around the light house was destroyed by off-road vehicles, dune-buggies, dirt bikes and motorbikes. I saw it all. That was one of our favorite places to fish. We could see the Waianae Coast which looked so beautiful from Ka‘ena Point. The water was always so beautiful too. Today, I’m so proud of what has been done to preserve the area. There is still lots of work ahead but, I’m for it. I want the area to remain beautiful and peaceful. If the road is ever improved, so be it. But, educate the public. Make them aware of the environment. Set rules and enforce them.

There is so limited area to fish on Oahu. Ka‘ena Point is one of the most popular areas. I hope it will always remain so. I want the task force to really listen to the fishermen and hopefully, come to some agreement. I would not want the fishermen to lose their fishing area.

I love Ka‘ena Point. The mountain, the ocean, the peacefulness, and the isolation. This is the place to be.

Melissa, a senior at Leilehua High School, is an officer in the school’s hiking club. In addition to camping and hiking, the club organizes several service projects each year. One particularly exciting project involved clearing beaches, trails, fence line, and a fishing shrine in Kalaupapa. Melissa spends a lot of time with her family at Ka`ena Point fishing, camping and enjoying nature. She would like a career that allows her to learn more about, protect and care for our environment.

The Depopulation of Fish In Our Hawaiian Waters

by Kimo Yamashiro
Iolani School

For over fifty years, Hawaii has promoted the sport of fishing. Fishing has been popular here since introduced by our ancient Hawaiian predecessors. They got the idea of fishing from their Polynesian ancestors. At one point in time, fish in Hawaii used to be more plentiful than anyone could begin to imagine.

Throughout the years fish have been caught and killed for food, or sometimes for the perverse pleasure of watching one of nature's creatures die.

Unhealthy reefs have contributed to the depopulation of the fish, as the reefs have died so have the feeding grounds that sustain our ocean. Pollution running off into our bays and beaches, as well as sewage spills and people dumping litter and damaging liquids into the sewer and storm drain systems have contributed to their demise. The reefs are now spawning unhealthy bacteria that only kill our corals and crustaceans that feed the fish and other sea life. This bacteria is further contributed to by pesticides and fertilizers running off the land from adjacent golf courses. If the fish live through this pollution and ruin of their natural environment, we see them starve to death.

Illegal drift nets capture thousands of innocent creatures. Abandoned gill nets have also decreased the fish population. The gill net issue has gotten so bad, that strict laws have been enacted, limiting the amount of time that these nets are left alone. As an avid fisherman myself, I know when I have caught enough (though this rarely happens), and I know to release the smaller fish. I get extremely irritated at the fishermen who take more than they can eat, or when they kill a fish the size of their finger. Even the fishermen who work on the commercial fishing boats are sometimes at the docks with hundreds of small fish that aren't marketable. It makes me heartsick to see the waste. I think they should release the smaller fish, keeping only mature fish.

Fish can only reproduce so fast, they are a limited resource. I think that our State should look into developing fish hatcheries, and develop seeding programs. I also think that we should establish bag limits and have open and closed seasons for certain species of fish. These bag limits could be more lenient for the commercial fisherman. We should also establish closed seasons for population replenishment. What I think would help us the most is establishing size limitations for all Hawaiian fishermen for every species of fish. One of the few size limitations I am aware of is for the " Papio" (Trevally family) which is seven inches long. Why can't we establish size limitations for all species of fish?

This is an important environmental issue. Hawaii's fish are becoming scarce. Maybe the saying, "There are other fish in the sea," won't have any meaning for us in the future.

Kimo, a student at Iolani School, spends most of his time fishing. He loves the outdoors and the water and enjoys swimming and water polo. Kimo is 13 years old. He likes science and math and would like to become a doctor one day.

Global Warming

by Moana Minton
Kahuku High School

By the time scientists in the 1980's were corroborating the possibility of a warming planet, the United States was well advanced to its position as donor of half the total pollution and destruction. Ironically, following the discovery of the detrimental results of its consumer life-style, the U.S. began a move backward; from unaware of to unwilling to cooperate with the war for a healthier planet. Claiming conspicuous weather patterns to be the logical results of the 1991 Mount Pinatubo explosion, the world's policeman refused to sign the compact drawn up at the 1992 Earth Summit. Though Clinton later accepted the terms which included emissions reductions and endangered species protection, the resistance of today's most powerful nation was clearly felt.

America is an essential player in the effort to stop and perhaps even reverse global warming. As a world leader, in addition to the greatest problem, our steps will be greatly scrutinized in the crucial first years of the next century. The American people, however, could be some of the most unwilling participants involved. The creative efforts of many European nations and the example set by several Asian cities contrast the limited actions of the USA. As many Americans lack the vision to realize the imperative nature of environmental action, it is necessary that we employ coercion as well as incentive.

The reduction of vehicle emissions would play a central role in the slowing of global warming. Projects underway in countries like France and England to reduce emissions have been markedly successful. A city-wide car system allows the public use of vehicles to and from mass transit service, as do public bicycles. These reduce the total time spent by people in vehicles, and are financially beneficial as well as relatively low in inconvenience. Cars propelled by battery as well as hydrogen and methane are also available, reducing the burning of fossil fuels. In many Asian cities, well-planned city blocks reduce city driving, and maximize mass transit accessibility. The random layout of many American cities is inefficient. A federal program funding the redesigning of major cities would significantly reduce fossil fuel emissions.

Central warehouses assist minimal trucking time and the delivery of multiple products simultaneously. Micro factories are also an option that would lower consumer cost and bring industry into eager small towns. This would call for cooperation between corporations, a concept which, while perhaps unlikely, could be promoted with tax preferences.

Monetary compensation is a surefire tempter for the stagnant American. Tax breaks for corporations following more rigid Federal guidelines and car owners who drive electric cars could present an option. But in the face of our slow economy, there is perhaps a better solution. California car manufacturers have developed interesting alternatives since an ordinance demanded 10% of the available vehicles in the state run without fossil fuels by the year 2000. We must simply apply the pressure.

Global warming is upon us, and as scientists have predicted a measly rise of three degrees in global temperatures would mean the melting of polar ice caps, we had better make a move. The last three decades have seen a rise of one degree. Delayed action could mean the loss of all civilization. Underdeveloped countries, however, will be difficult to coax out of practices that are their only income. We will not be able to stop forest fires in Argentina.

America must take the first steps toward a living planetary ecosystem. Alternatives such as hemp fiber and a reduction in red meat consumption could bring forest burning down from its current rate of two football fields per second. Subsidizing is an often offensive but widely practiced solution that could aid in the fight for a cooler climate. Displaced laborers can be well put to work in the reconstruction of an Earth-friendly society.

Global warming requires more than a single solution. Immediate pressure on industry and tax relief for cooperating citizens and businesses will be a first step in the final stop of global warming. A continued effort including remapping of cities and a restructured diet for America will be essential in its completion. Global warming can be stopped. We must be willing to work toward it.

Moana credits her mother, a biology teacher, with instilling in her a love for nature and a strong environmental ethic. Moana was very interested in science during her years at Kahuku High School (when she wrote this essay), she is now studying physics at MIT.

A People at War With Their Land

by Janis Dela Cruz
Waianae High School

What is happening to Hawaii's water supply? Will there be enough fresh water to support life in the future? Who will win the battle for existence, man or nature? These questions refer to the most significant environmental issue facing Hawaii today, the amount of fresh water. Every environmental problem has a cause, an effect, and a solution. Humans can't afford to depend on hazardous chemicals, to build more dams to relocate water, and to use water in excess. When will people realize that we depend on the environment just as much as the environment depends on us?

Dangerous chemicals, dams for irrigation, and the constant use of water are causing the depletion of Hawaii's water supply. Pesticides wash right off the plants on rainy days. Dams built for irrigation cause streams to become warm, shallow, and semi-stagnant. Washing dishes, watering gardens, even taking long showers can be considered a waste of water. It is sad to think that all of these situations could have been avoided if only people thought of the effect it would have on nature first, before counting how much profit they would receive.

The advancement of technology has had disturbing side effects on Hawaii's water supply. Pesticides may evaporate, eventually returning to the land through a process called the hydrologic cycle, when water moves from the air to the land and back again. Rain containing dangerous substances may contaminate the groundwater which makes up 90% of Hawaii's drinking water. Leptospirosis, a bacterium that infects through open wounds, thrive in dam created pools. Each time someone neglects to do their part in conserving water the entire state suffers. Although technological breakthroughs have opened the door to wealth and an easier way of life, they have also introduced various diseases and toxic chemicals into Hawaii's surface and underground water systems.

The last step in the process by which men live is to find a solution for the problem they've caused. To reduce the number of "hungry bugs" that feed on plants, farmers permit even "hungrier insects and animals," such as lady bugs, to dispose of them. Natural fertilizers harmlessly enhance the growth of plants. Drip irrigation involves pipes that drip water only at the base of the plants. Conserve water by fixing the leaks in all water control devices and don't allow water to run down the drain. Watering plants in the morning and directing the water closer to the ground are two lawn watering techniques. These strategies can be used by citizens to alleviate Hawaii's water problems.

Unaltered Hawaiian streams and pools are rare treasures that deserve to be protected unquestionably. The citizens of Hawaii must act now in order to prevent further damage to the environment. Some people have the misconception that it would be useless to change their ways. Change and sacrifice is the basic structure for almost all solutions. It only takes one person to make a difference. But it takes all of humanity to amend it.

Janis is a junior at Waianae High School. Her interest in the environment began when she was 12 years old visiting Waikiki. The crushing onslaught of lights, cars and concrete greatly disturbed her. Realizing that nature had been smothered by an urban wilderness, she became more aware of the impact people often have on the environment. Janis would like to become a high school English teacher.

Section III

Agency Goals

Summary of Agency Goals and/or Objectives

The Environmental Council monitors agency progress in achieving the state's environmental goals and makes an annual report with recommendations to the Governor and Legislature.
The Council asks each agency for its environmental goals and objectives for inclusion in its annual report. Each agency identifies its top three environmental goals for the past and current years and the results of its efforts to achieve these goals.

Public Agency Environmental Highlights

18 agencies claim to have achieved all of their stated goals for fiscal year 1997.

Of the 40 state and county agencies surveyed, the following failed to respond: 1) Department of Business, Economic Development and Tourism; 2) Office of Hawaiian Affairs; 3) City and County of Honolulu Department of Housing and Community Development; 4) County of Hawaii Department of Parks and Recreation; 5) County of Kauai Fire Department; 6) County of Kauai Planning Department; and 7) County of Maui Department of Fire Control.

Agency Goals

State Department of Accounting and General Services

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Continue with upgrades of lighting fixtures for energy efficiency and continue with energy conservation practices.

B. Goal/Objective #2: Increase the number of contract awards for products with recycled content.

C. Goal/Objective #3: Continue to require and monitor conformance with environmental regulations in State Public Works Construction.

II. Results of Efforts FY 1997

A. Goal/Objective #1: The Kalanimoku Building was converted to electronic ballast and energy efficient computer equipment was installed. An overall savings of 15.5% was achieved in DAGS managed facilities (Central Services Division). In addition, many DAGS offices conserve energy by turning off lights and equipment when not in use for extended periods of time.

B. Goal/Objective #2: The State Procurement Office is continuing to award contracts for products with recycled content. They are also receptive to newly developed recycled products, thus increasing the number of recycled products included in the competitive bid process.

C. Goal/Objective #3: The Public Works Division as well as the outer island District Engineer's offices administer construction projects so that all phases of work conform with State and Federal environmental policies.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Increase the recycle/reuse of office paper.

B. Goal/Objective #2: The Stadium Authority will continue to purchase and use several biodegradable products for cleaning the arena facilities and administrative offices.

C. Goal/Objective #3: Recognizing that lead is a significant threat to human health, the Public Works Division will develop a guidance for Lead Paint removal. The guidance will cover monitoring requirements and safety precautions during Public Works construction projects.

State Department of Agriculture

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Prevent the introduction of harmful pests and diseases into the State.

B. Goal/Objective #2: Limit the plant pest populations which can cause significant economic damage to agriculture or constitute a serious threat to the environment.

C. Goal/Objective #3: Minimize the adverse effects of pesticides on the environment.

II. Results of Efforts FY 1997

A. Goal/Objective #1:

* Issued 485 violation notices resulting from surveillance of Hawai'i-bound air and sea baggage, cargo, mail and visitors.
* A total of 295 insect interceptions of species not known to occur in Hawai'i.
* Big Island judges fined two individuals the maximum $25,000 penalty (one later reduced) for possession of a snake.
* Educated over 10,600 Hawai'i residents about the need to protect Hawai'i's environment by not importing alien species.

B. Goal/Objective #2:

* Identified five new immigrant insects which have the potential to become plant or nuisance pests.

C. Goal/Objective #3:

* Funded pesticide user education activities, including certification classes, and publication of "The Pesticides Label."
* Conducted over 600 inspections of farms, pesticides dealers, and non-farm users for proper use and distribution.
* Issued over 70 warning letters for improper use and collected $16,200 in penalties for illegal use or sale of pesticides.

III. Goals/Objectives FY 1998

Same as for FY 1997.

State Department of the Attorney General

I. Goals/Objectives FY 1997

A. Goal/Objective #1: The Department of the Attorney General has as its primary goal to continue to provide legal assistance to our clients to support their environmental regulatory and enforcement efforts.

B. Goal/Objective #2: A secondary goal of the Department of

the Attorney General is to participate in a multi-agency environmental enforcement task force that will take action against environmental violations in an effort to deter environmental polluters. This task force will facilitate communications between state and federal environmental enforcement branches regarding violators, successful prosecutions, and evidence used in prosecuting violators.

II. Result of Efforts FY 1997

A. Goal/Objective #1:

* In two separate air pollution cases, the respondents settled by each paying $100,000.00 to fund a study of the air quality at the Campbell Industrial Park. In four separate hazardous waste enforcement actions, the respondents settled by paying the full amount or significant portions of the assessed fines.
* The Department also assisted the DOH in finalizing proposed amendments to the state clean air rules, helped the DOH in the adoption of new statewide sanitation rules for food establishments and statewide noise rules, and assisted DOH in the drafting of a bill which created Hawai'i's voluntary response program. The program will allow potentially responsible persons to clean up sites in a more efficient manner.

B. Goal/Objective #2: In August, 1997, the United States Attorney successfully indicted two individuals with the assistance of DOH and the Department.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: To continue to provide legal assistance to our clients in the implementation and enforcement of their environmental programs.

B. Goal/Objective #2: To continue to participate in the multi-agency environmental task force to effectively deal with environmental violations that impact on more than one agency.

State Department of Defense

Hawai'i Army National Guard

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Training. Ensure personnel at all levels of command receive environmental awareness and regulatory training (initial/refresher), i.e., general awareness/safety, hazmat, spill response, transportation, and land management of training areas.

B. Goal/Objective #2: Compliance. Ensure current installation operations meet applicable Federal, State and local requirements, i.e., removal of five underground storage tanks (UST), installation of three oil/water separators, procurement of spill containment, hazardous waste minimization and pollution prevention equipment.

C. Goal/Objective #3: Environmental documentation. Ensure documentation is completed on all anticipated/proposed actions, programs and projects to determine impacts affecting the areas of conservation, preservation and restoration, i.e., integrated resources management plan, use of local training areas, cultural/natural resources inventory, and environmental assessments.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Training. Conducted regulatory initial and refresher training for State and Federal personnel. Course topics/enrollment: Environmental Compliance Officer Certification (60), Initial Response to Hazardous Materials Incidents/Spill Response (283), and Transportation of Hazardous Materials Certification (23).

B. Goal/Objective #2: Compliance. Published HIARNG Regulation 200-1, Environmental Protection and Enhancement/Environmental Compliance. Completed the removal of two USTs and awarded the construction of three oil/water separators. Increased the substitution of hazardous materials with nonhazardous materials where feasible, reduced the volume of hazardous waste generated, and implemented an EPCRA training program.

C. Goal/Objective #3: Environmental documentation. Completed a preliminary assessment for Keaukaha Military Reservation. Identified ten USTs; two underground injection control wells; subsurface reservoirs, bunkers and tunnels; and historic unexploded ordnance sites and Navy dumping grounds.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Compliance. Meet EPA requirements for UST upgrade/removal by 1998. Install oil/water separators and secondary containment.

B. Goal/Objective #2: Conservation. Implement the Endangered Species Program.

C. Goal/Objective #3: Land Management. Create a Geographic Information System mapping data base.

Hawai'i Air National Guard

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Training. Ensure personnel at all levels of command receive environmental awareness and regulatory training (initial/refresher), i.e., general awareness/safety, hazmat, spill response, transportation, and land management of training areas.

B. Goal/Objective #2: Compliance. Ensure current installation operations meet applicable Federal, State and local requirements, i.e., removal of five underground storage tanks (UST), installation of three oil/water separators, procurement of spill containment, hazardous waste minimization and pollution prevention equipment.

C. Goal/Objective #3: Environmental documentation. Ensure documentation is completed on all anticipated/proposed actions, programs and projects to determine impacts affecting the areas of conservation, preservation and restoration, i.e., integrated resources management plan, use of local training areas, cultural/ natural resources inventory, and environmental assessments.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Training. Air Force's computer-based Interactive Hazardous Waste Training installed at all Geographically Separated Units (GSUs) to provide required annual training. Training program also installed at Hickam AFB units with Hazardous Waste Satellite Accumulation Sites.

B. Goal/Objective #2: Compliance. All regulated underground storage tanks (USTs) have been removed. Final closure reports are being submitted to provide formal notification of closure. Continued utilization of the Air Force's Environmental Compliance and Management Program to conduct self-inspections and identify potential compliance problems in-house. Emphasis on resolving Major findings, which indicate a potential for monetary fines.

C. Goal/Objective #3: Environmental Documentation. Increased emphasis on the Air Force Form 813, which documents the Environmental Impact Analysis Process for all "significant Federal actions." Completion of this form is required for all repair, alteration, and construction projects, and ensures that the environmental aspects of a project are considered in the decision to proceed.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Compliance. Ensure continued compliance with Federal, State, and local regulations.

B. Goal/Objective #2: Environmental Documentation. Continue to pursue assessment and consideration of environmental impacts for all proposed projects.

C. Goal/Objective #3: Pollution Prevention. Identify and pursue projects which eliminate potential spills and undesirable discharges to the environment.

Civil Defense

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Training. Provide a statewide training and exercise program for emergency managers at state and county levels with funds provided by FEMA, DOT, EPA, and DOE that emphasize potential environmental impacts of all phases of emergency management, e.g., Mitigation, Preparedness, Response, and Recovery.

B. Goal/Objective #2: Ensure proper consideration of law, regulation, and indirect impacts of emergency response and recovery operations by Federal, State, and County governments. Monitor environmental impact statements and environmental assessments for proper evaluation of known natural hazards and availability of emergency warning systems and infrastructure.

C. Goal/Objective #3: Provide for full integration and access to existing data bases that detail environmental sensitive areas in the State of Hawai'i and the Pacific Insular States. Integrate information from official sources that are useful in reducing the impact of emergency management operations on the environment into the Pacific Disaster Center (PDC) and the Pacific Regional Emergency Management Information System (PREMIS). Provide assistance to county governments in gaining access to Geographical Information Systems (GIS) provided by the PDC to assist these governments in obtaining environmental information that should be considered in decision making.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Training. Scheduled and conducted over 15 classes for emergency managers from state and all counties. Over 350 students completed training in principles, techniques, and operations for handling of radiological materials, hazardous materials, recovery management procedures which includes environmental and historical preservation standards.

B. Goal/Objective #2: Monitored compliance with environmental standards for the National Environmental Protection Act, State and County environmental protection laws and ordinances. Provided assistance from local sources in resolving environmental issues. Participated with the SERC and the Local Environmental Planning Councils from each county, in reviewing the progress of integrating environmental concerns and procedures into the State Emergency Operations Planning System.

C. Goal/Objective #3: Data bases have been identified for incorporation into the PDC GIS program. PREMIS is in place and functioning well among all county civil defense emergency operation centers. Continued efforts to collect, integrate and fuse these very large data bases into the PDC operations profile is on-going. Tailored enhanced support is being provided to county emergency management operations. State information agencies are extending connections to the statewide fiber optic network that when completed will give direct access to all State Departmental Civil Defense Points of Contact. Enhanced capability to monitor and record flood damage has been achieved.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Maintain current statewide training program at its current level.

B. Goal/Objective #2: Continue to monitor closely the EIS and EA process for all recovery and mitigation projects.

C. Goal/Objective #3: Achieve full operations potential and capability for the PREMIS and PDC program which impacts all agencies, federal, state, county and private nonprofit, that are involved in all or some phases of emergency management within the State of Hawai'i and the Pacific Insular States.

Engineering Office

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Training. Develop and conduct a comprehensive environmental awareness and regulatory training program.

B. Goal/Objective #2: Compliance. Ensure current installation operations meet applicable Federal, State, and local requirements.

C. Goal/Objective #3: Environmental documentation. Ensure documentation is completed on all anticipated/proposed actions, programs, and projects to determine impacts affecting the areas of conservation, preservation, and restoration.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Training. Conducted 15 classes during FY 1997 with a total attendance exceeding 350 students. Course titles were: Fundamentals Course for Radiological Monitors, Fundamentals Course for Radiological Response Teams, Public Assistance Inspector Course, Training for HAZMAT Incident Management, HAZMAT Training for First Responders, HAZMAT Refresher Course, Chemistry of HAZMAT, and HAZMAT Tactical Considerations.

B. Goal/Objective #2: Compliance. N/A

C. Goal/Objective #3: Environmental documentation. In the area of restoration and environmental assessments, State Civil Defense continues to monitor restoration activities in the wake of Iniki on the island of Kauai. Specifically, during 1997 environmental restoration activities included in the Wailua Golf Course Wall and the Brenecke's Beach Wall. On Oahu, during November 1996 and for several weeks after, the Waianae floods resulted in a massive debris removal operation and hazardous waste disposal operation.

III. Goals/Objectives FY 1998

None for submission.

Office of Veterans Services

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Training. Ensure personnel at all levels of command receive environmental awareness and regulatory training (initial/refresher), i.e., general awareness/safety, hazmat, spill response, transportation, and land management of training areas.

B. Goal/Objective #2: Compliance. Ensure current installation operations meet applicable Federal, State and local requirements, i.e., removal of five underground storage tanks (UST), installation of three oil/water separators, procurement of spill containment, hazardous waste minimization and pollution prevention equipment.

C. Goal/Objective #3: Environmental documentation. Ensure documentation is completed on all anticipated/proposed actions, programs and projects to determine impacts affecting the areas of conservation, preservation and restoration, i.e., integrated resources management plan, use of local training areas, cultural/natural resources inventory, and environmental assessments.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Training. Conducted initial and awareness training focused on maintenance staff at the Hawai'i State Veterans Cemetery (HSVC) on responsibilities for hazardous material handling, groundwater contamination, and chemical and petroleum handling. Conducted ongoing training on use of recycled organic mulch to cut down on use of chemical herbicides, fertilizers, and pesticides.

B. Goal/Objective #2: Compliance. Conducted survey of operations to determine compliance with applicable rules, regulations, and laws related to safety and health conditions, workplace environmental conditions, and work practices. Identified weaknesses and started the process of updating training to correct faults.

C. Goal/Objective #3: Environmental documentation. This continues to be an area of emphasis and further progress needs to be made in strengthening the documentation process.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Training. This continues to be an important segment of the OVS/HSVC environmental protection program. Continual updating of training to emphasize water conservation (we have our own water system from our own non-potable well), recycling of organic green waste, recycling of paper and aluminum cans, and begin the process of limiting the use of chemically treating HSVC grounds for weeds and pests.

B. Goal/Objective #2: Compliance. OVS/HSVC will continue to monitor and proactively develop protocols for meeting all applicable laws, rules, and regulations related to environmental protection or conservation.

C. Goal/Objective #3: Conservation. Faced with a severe lack of manpower to properly maintain the HSVC landscaping while still providing excellent counseling services, we will focus on our recycling program to reduce the amount of paper we use in our offices, the amount of water we use for irrigation, and the amount of chemicals we apply on our planted areas.

Agency Goals

Department of Education

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Continue to provide staff development activities to strengthen teachers' knowledge and skills to assist students in improving their critical thinking, problem-solving, and decision-making skills for responsible environmental actions.

B. Goal/Objective #2: Develop environmental curricular guides to infuse critical thinking, problem-solving, and decision-making skills into the classroom.

C. Goal/Objective #3: Establish community partnerships to enrich the instructional delivery of environmental education through contextual learning.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Provided teacher workshops on Oahu and Hawai'i to assist teachers in strengthening their skills in teaching inquiry and problem-solving. Also provided a series of teacher workshops in critical thinking, reasoning, and Socratic questioning.

B. Goal/Objective #2:

* A cadre of master teachers in global education are field testing their curriculum units on biodiversity, sea level rise, population study, and global warming. They will be editing their work during spring/summer for future dissemination.
* A cadre of master teachers in environmental issue studies have compiled a facilitator's manual to guide future workshops in inquiry investigations.

C. Goal/Objective #3: Established partnerships with the University of Hawai'i, Curriculum and Research and Development Group and Sea Grant College to provide technical assistance at teacher workshops on environmental monitoring and GLOBE/GAIA activities. Also established partnerships with City and County, Waste Management Division, Hawai'i State Department of Health, Clean Water Branch, and Hawai'i Water Education Association to provide teacher workshops in water quality monitoring.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Provide staff development activities for teachers to share and learn effective instructional strategies in inquiry, critical thinking, and problem-solving.

B. Goal/Objective #2: Develop standard-based, results driven instructional units in studying the natural and built environments.

C. Goal/Objective #3: Continue to establish partnerships to enrich the instructional delivery of environmental education through contextual learning.

Department of Health

I. Goals/Objectives FY 1997

A. Goal/Objective #1: To ensure that Hawai'i's coastal waters are safe and healthy for people, plants, and animals.

B. Goal/Objective #2: To protect and restore the quality of Hawai'i's streams, wetlands, estuaries and other inland waters for fish and wildlife, recreation, aesthetic enjoyment, and other appropriate uses.

C. Goal/Objective #3: To protect Hawai'i's groundwater from contamination for drinking, irrigation, and other appropriate uses.

D. Goal/Objective #4: To protect Hawai'i's lands from pollutants that endanger people and the environment; and to rehabilitate contaminated lands.

E. Goal/Objective #5: To protect and enhance Hawai'i's air quality for the health of the people.

II. Results of Efforts FY 1997

A. Goal/Objective #1:

* 10.5% of wastewater effluent was reused by the end of FY 1997, thus reducing the potential for exposure to human pathogens in coastal waters.
* In FY 1997, there were 7 beach closures due to sewage spills and chemical releases, compared to an average of 5 beach closures per year over the past three years.

B. Goal/Objective #2: A water quality monitoring and assessment initiative was implemented for the Ala Wai and West Maui watersheds, providing information on problem areas and trends, and enabling the DOH to address public health threats.

C. Goal/Objective #3: Drinking water Source Protection Areas are being delineated for groundwater sources of drinking water.

D. Goal/Objective #4: Reuse/recycling rates for FY 1997 are not presently available. Below is a table of waste diversion rates in Hawai'i for 1995-96.

	Municipal Solid Waste	***Recycling & Composting***	***Water Diversion Rate***
Oahu	*1,667,000 tons*	*408,000 tons*	*24.5%*
Maui	*203,000 tons*	*51,000 tons*	*25%*
Kauai	*81,000 tons*	*12,000 tons*	*15%*
Hawaii	*181,000 tons*	*32,000 tons*	*17.5%*
TOTAL	***2,132,000 tons***	***503,000 tons***	***23.5%***

E. Goal/Objective #5: Sulfur dioxide levels in Honolulu were maintained at 95% below national standards.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: To ensure that Hawai'i's coastal waters are safe and healthy for people, plants, and animals.

B. Goal/Objective #2: To protect and restore the quality of Hawai'i's streams, wetlands, estuaries and other inland waters for fish and wildlife, recreation, aesthetic enjoyment, and other appropriate uses.

C. Goal/Objective #3: To protect Hawai'i's groundwater from contamination for drinking, irrigation, and other appropriate uses.

D. Goal/Objective #4: To protect Hawai'i's lands from pollutants that endanger people and the environment; and to rehabilitate contaminated lands.

E. Goal/Objective #5: To protect and enhance Hawai'i's air quality for the health of the people.

Department of Labor and Industrial Relations

I. Goals/Objectives for FY 1997

We currently have not identified or established environmental goals and/or objectives.

II. Results of Efforts FY 1997

Accordingly, we are unable to report the results of our efforts.

However, the Department's Hawai'i Occupational Safety and Health Division (HIOSH) has an Occupational Health Branch charged with establishing an occupational health program for the State of Hawai'i. We have established permissible exposure limits (PELs) for worker's exposure to air contaminants in the workplace and measure our success with both the Bureau of Labor Statistics injury and illness data and state workers' compensation data.

The HIOSH Consultation and Training Branch provides onsite consultation and training in the area of occupational health. This branch measures results similarly. Since employer's requests are the basis for this branch's activity, there are not set goals with respect to numbers of training sessions, number of employees/ employers trained, or numbers of occupational health hazards identified and resolved.

III. Goals/Objectives FY 1998 - None

Department of Land and Natural Resources

Aquaculture Development Program

I. Goals/Objectives FY 1997

The Program's goal is to encourage and support sustainable aquaculture development which fosters wise use and good stewardship of land, water, plant and animal resources, is environmentally non-degrading, technically appropriate, economically viable and socially acceptable.

A. Objective #1: Facilitate and streamline the permit process for restoration of ancient Hawaiian fishponds and assist interested community groups and individuals in their reconstruction and operation.

B. Objective #2: Plan and facilitate the development of aquarium products for Hawai'i.

C. Objective #3: Encourage statewide commercial development of sustainable aquaculture utilizing native species and environmentally-sound production systems.

II. Results of Efforts FY 1997

A. Objective #1:

* Assisted in developing cooperative public/private partnership between several State agencies and Molokai community groups to organize the community, identify resources and complete required surveys, coring and beach profiles for the two demonstrations ponds.
* Facilitated the community beginning restoration work on Honouliwai Fishtrap on June 16, 1997 and collated and formally submitted to the Department of Health water quality monitoring information in compliance with permit conditions.
* Assisted State Representative Nestor Garcia in preparing a preliminary proposal to restore one or more fishponds in Pearl Harbor and formed a network of potential cooperators in the community.
* Worked with various other groups around the State to facilitate restoration of fishponds.

B. Objective #2:

* Continued to work on the recommendations from the 1996 report to the Legislature on the potential of the aquarium products industry.
* Published a Hawai'i Aquarium Products Directory to increase communication and networking in the industry.
* Authored legislation passed by the 1997 Legislature to open the Department of Agriculture's, Aquaculture Revolving Loan Fund to aquarium species producers.

C. Objective #3:

* Cooperated with the Division of Aquatic Resources to carry out site inspections to implement the aquaculture license to raise regulated species.
* Advised potential farmers on appropriate species, systems and sites for environmentally sound development.
* Promoted the use of moi as a native aquaculture species and began developing market demand for the anticipated increases in supply in 1998.

III. Goals/Objectives FY 1998

ADP will have the same top goals and objectives as in FY-97.

Commission on Water Resource Management

I. Goals/Objectives FY 1997

A. Objective #1: To better plan for the sustainability of our water resources by initiating an integrated resource planning process to revise the Hawai'i Water Plan.

B. Objective #2: To more efficiently use our remaining water resources by promoting the use of reclaimed sewage effluent in the Ewa Plains region on the island of Oahu.

C. Objective #3: To improve stream protection and management by adopting administrative rules.

II. Results of Efforts FY 1997

A. Objective #1: Successfully obtained $525,000 and two temporary positions in our FY 98-99 budget to revise the Hawai'i Water Plan. Jointly funding an integrated resource planning process to update the Oahu Water Use and Development Plan with three City and County of Honolulu agencies.

B. Objective #2: Permits issued for the Ewa Plains region are for short timeframes and require the permittees to convert to reclaimed sewage effluent when available. The length of the permit was based on the planned completion of the R-1 facility at Honouliuli by the City and County of Honolulu.

C. Objective #3: Draft administrative rules were taken to state-wide public hearings in 1997. The staff is revising the rules based on testimonies and comments, and expects to request approval of the rules in FY 1998.

III. Goals/Objectives FY 1998

A. Objective #1: To better plan for the sustainability of our water resources by participating in an integrated resource planning process to revise the Oahu Water Use and Development Plan and by revising the Hawai'i Water Plan.

B. Objective #2: To more efficiently use our remaining water resources by promoting the use of reclaimed sewage effluent.

C. Objective #3: To improve stream protection and management by adopting administrative rules and beginning implementation.

Kaho'olawe Island Reserve Commission

In 1993, the U.S. Congress voted to put a permanent stop to over fifty years of U.S. military use of Kaho'olawe Island as a weapons range and training area. Congress also authorized funding to the U.S. Navy to clean up the Island in consultation with the State of Hawai'i. In 1993, the Hawai'i Legislature established the Kaho'olawe Island Reserve (the island and surrounding waters extending two miles from its shoreline) and the Kaho'olawe Island Reserve Commission (KIRC) to implement controls and permitted uses for the Reserve. The KIRC also serves as the Navy's single point of contact for State oversight of the Omnibus UXO Cleanup, slated to begin in FY 1998.

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Completion of the Regulatory Framework and other necessary agreements between the State and the Navy.

B. Goal/Objective #2: Commencement of the Omnibus Cleanup, with continued meaningful coordination with the Navy and its contractors, in order to achieve State cleanup goals.

C. Goal/Objective #3: Completion of the Ocean Management Plan and the Restoration Plan and implementation of pilot projects.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Completed in November 1996.

B. Goal/Objective #2: Cleanup has not commenced due to the Navy's determined timeline. Meaningful coordination with the Navy and its contractors continues for the pre-cleanup planning phase.

C. Goal/Objective #3: Ocean Management Plan is completed and adopted by the Commission. A draft of the Restoration Plan was prepared and is currently being circulated for public review.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Commencement of the Omnibus Cleanup, with continued meaningful coordination with the Navy and its contractors, in order to achieve State cleanup goals.

B. Goal/Objective #2: Completion of the Restoration Plan, integration of the Plan into the Navy cleanup and begin pilot revegetation projects.

C. Goal/Objective #3: Initiate Ocean Resource monitoring and management.

Land Division

I. Goals/Objectives FY 1997

A. Goal/Objective #1: To develop and implement a Coastal Erosion Management Plan for the State of Hawai'i in coordination with pertinent Federal, State and County agencies, with assistance from technical and scientific expertise provided by the U.H..

B. Goal/Objective #2: To implement specific elements and action items, as identified in the State Flood Hazard and Mitigation Plan.

C. Goal/Objective #3: To complete the Conservation District Review Project and implement Land Board approved recommendations and work elements.

II. Results of Efforts FY 1997

A. Goal/Objective #1: A Coastal Erosion Management Plan (COEMAP) was prepared and distributed for comment to pertinent Federal, State and County agencies. Meetings were held with interested agencies to further discuss plan elements. Presentations were also made to twelve Oahu Neighborhood Boards, six of which passed motions or resolutions in support of the COEMAP. The department also submitted an application to the Federal Emergency Management Agency (FEMA) for a beach nourishment project on Maui.

B. Goal/Objective #2: The Federal Emergency Management Agency (FEMA) accepted and approved the State of Hawai'i's "State Flood Hazard Mitigation Plan" which identifies flood hazard mitigation issues and proposes an action plan that can be undertaken to reduce the risk of life and property. FEMA's approval of the plan makes Hawai'i eligible to seek federal funds for flood hazard mitigation projects.

C. Goal/Objective #3: The department's consultant has drafted a "Discussion Draft Conservation District Management Plan" which proposes various recommendations related to the current subzone classification regime, identifies known resource attributes such as endangered species, and proposes various subzone recommendations for lands presently classified within the State Conservation District.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Adopt the Coastal Erosion Management Plan (COEMAP) and Coastal Lands Program (CLP) as policies of the Department of Land and Natural Resources. Initiate work on a pilot beach nourishment project on Maui and continue to build institutional arrangements to promote beach management in the State.

B. Goal/Objective #2: To implement specific elements and action items, as identified in the "State Flood Hazard Mitigation Plan". Continue work with State, County and Federal agencies to reduce the loss of life and property due to flooding.

C. Goal/Objective #3: To conduct agency and public informational meetings statewide to finalize the State Conservation District Management Plan. Upon Board of Land and Natural Resources approval, initiate specific plan recommendations and action items.

State Parks Division

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Enhance the sustainable management of the park resources through the involvement and education of the community. Create stakeholders in the community, by including volunteers in problem solving and resource management activities.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Community organization created in Hawai'i to help care for the newly named "Kekaha Kai" State Park. Park "ambassador" position created to work with volunteers and to educate park users. Park cleared of accumulated rubbish and main building painted.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Continue program initiated previous years. Next park targeted is the Diamond Head State Monument.

Department of Public Safety

I. Goals/Objectives FY 1997

A. Goal/Objective #1: To ensure all hazardous chemical handling practices comport to all existing laws, requirements, and regulatory guidelines.

B. Goal/Objective #2: To develop and provide sufficient training to staff to ensure proper levels of hazardous material awareness is achieved and safe handling practices are observed at all times.

C. Goal/Objective #3: To maintain proper oversight over departmental operations to ensure all aspects of hazardous material handling comport to established policies and procedures at all times.

II. Results of Efforts FY 1997

A. Goal/Objective #1: The departmental policy and procedure on Hazardous Material Use, Control, and Handling was completely revised to comport to all OSHA, EPA, and DOH regulations, and implemented in 1997.

B. Goal/Objective #2: The departmental Personnel Relations section in conjunction with the Consultation and Training Branch of the Hawai'i Occupational Safety and Health (HIOSH) Division of the Department of Labor and Industrial Relations conducted the first

annual departmental wide training on Hazardous Material Use, Control, and Reporting, for all line level supervisory and branch level management staff involved in physical plant operations.

C. Goal/Objective #3: The departmental Audit and Compliance Section of the Inspection and Investigation Office has been tasked to develop and conduct annual audit inspections of all operational branches, sections, and units, to ensure proper compliance to established policies and procedures relating to environmental conditions inclusive of adopted national standards for operations and the proper handling of Hazardous Material.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: To develop appropriate contingencies to properly institutionalize the Department's ability to maintain current levels of training and proposed inspections of environmental conditions inclusive of policy and procedure development and the establishment of permanent offices/sections and positions.

Department of Transportation

Airports Division

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Complete Stormwater Pollution Prevention Plans (SWPP) for Kahului and Lihue Airports and report water quality data to DOH.

B. Goal/Objective #2: Complete Environmental Compliance Handbook for tenants. Hire environmental technical consultant. Hire one environmental engineer on staff.

C. Goal/Objective #3: Complete noise compatibility plans for Kalaeloa, Dillingham and Keahole Airports.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Data on tenant activities at Lihue and Kahului was gathered. Water quality data was gathered.

B. Goal/Objective #2: A Pollution Prevention Handbook was completed in draft form and is being reviewed. Environmental consultants have been selected. An environmental engineer was approved in the legislative budget process. The job description has been written and submitted.

C. Goal/Objective #3: Aircraft noise contours were completed for Kalaeloa, Dillingham and Kona Airports. The noise compatibility plans are in draft form pending reviews.

III. Goals/Objectives FY 98

A. Goal/Objective #1: Renew general stormwater permits for Kahului, Lihue, Molokai and Dillingham Airports.

B. Goal/Objective #2: Publish the Airports Pollution Prevention Handbook for tenants.

C. Goal/Objective #3: Hire the first environmental engineer for in-house staff.

Harbors Division

I. Goals/Objectives FY 1997

A. Goal/Objective #1: The Harbors Division perseveres to balance environmental and economic concerns in the improvement, allocation and use of harbor facilities.

B Goal/Objective #2: The Harbors Division encourages management practices which control and abate pollution.

C. Goal/Objective #3: To support Hawai'i's life-style, the Harbors Division develops transportation systems in compliance with environmental regulations.

II. Results of Efforts FY 1997

A. Goal/Objective #1:

* Engineering design and construction insure minimal environmental impacts of harbors projects.

* Harbors Division's engineering design and construction services always strive for project compatibility with the environment and natural surroundings.

* By consulting/coordination with appropriate citizen groups and environmental organizations, the Division was able to address all environmental concerns/impacts to the satisfaction of the involved parties.

* Harbors projects continue to reflect an aesthetic harmony with the environment while striving to protect and preserve the environment.

* Harbors projects also minimize noise pollution and blasting vibrations to satisfy public/community concerns.

B. Goal/Objective #2:

* The Harbors Division complies with all environmental requirements in the control and abatement of pollution. Coastal Zone Management approval of harbors projects entail compliance with U.S. Army Corps of Engineers, State Department of Health (DOH) and U.S. Environmental Protection Agency pollution control requirements. Dredging, excavation and ocean dumping require the use of silt curtains, filtering pools, and water quality monitoring. Harbors projects also perform air monitoring whenever required by DOH programs.

* Asbestos, lead paint, contaminated soil, and other hazardous wastes generated by structural demolition are properly disposed or treated by the appropriate service.

* Administrative/professional offices practice paper and aluminum recycling.
* Harbors operations maintain pollution/litter control in and around the harbors and harbor facilities.
* Underground storage tanks are regularly monitored for leaks.
* Solvents, used oil, oil-based paints, lacquer, thinner, brake fluid, and other hazardous wastes are properly disposed.
* Nonhazardous substitutes (i.e., water-based solvents) are being considered to minimize hazardous waste generation.
* Tenants and lessees are advised of appropriate pollution control measures.

C. Goal/Objective #3:

* Hawai'i's history and tradition are linked to the sea. Our maritime culture began on the day the first Polynesian seafarers set foot on these islands. The harmonic embrace of the maritime culture, the life-style of the people and the environment of the State are being perpetuated through the development of additional/ improved commercial harbor facilities and the use of more efficient vessels.

III. Goals/Objectives FY 1998

Harbors Division will have the same goals and objectives as in FY 1997.

City & County of Honolulu Board of Water Supply

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Develop environmentally-appropriate water system projects to ensure a safe and reliable supply for island residents.

B. Goal/Objective #2: Encourage the Commission on Water Resource Management (CWRM) to develop an implementation schedule to set permanent instream flow standards which would resolve the uncertainty regarding surface water resources.

C. Goal/Objective #3: Increase personnel, agency cooperation, communication and action to make our environmental efforts more efficient and encompassing.

II. Results of Efforts FY 1997

A. Goal/Objective #1: BWS projects have become more environmentally appropriate.

B. Goal/Objective #2: The CWRM has not made any recent progress to develop permanent instream flow standards.

C. Goal/Objective #3: Due to budget constraints, personnel could not be increased; however, new computers have aided staff response time. Through streamlining our process, we will continue to address all pertinent environmental policies within current resources.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Continue to develop environmentally-appropriate water system projects.

B. Goal/Objective #2: Continue to encourage the CWRM to set permanent instream flow standards to resolve the uncertainty regarding surface water resources.

C. Goal/Objective #3: Formulate in conjunction with the City's Department of Wastewater Management and Planning Department, an integrated water resources plan to address all of Oahu's water resources: groundwater, surface water, reclaimed effluent and storm water.

City & County of Honolulu Building Department

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Comply with Environmental Impact Statement Rules, Hawai'i Administrative Rules, Title 11, Department of Health, Chapter 200.

B. Goal/Objective #2: Comply with environmental programs that directly affect construction activities.

C. Goal/Objective #3: Comply with environmental requirements in our maintenance and operations activities.

II. Results of Efforts FY 1997

A. Goal/Objective #1: During the past year, our planning and engineering efforts were involved in 17 projects for which environmental assessments were accomplished or are in progress.

B. Goal/Objective #2: The following types of programs have been addressed in our public building facility construction activities: the Underground Storage Tank Program, the National Pollutant Discharge Elimination System (NPDES) Program, Elimination of Chlorofluorocarbon (e.g. air conditioning refrigerant) Program, Polychlorinated Biphenyls (PCB) Program (e.g. Transformers, Capacitors, Lighting Ballasts), Lead Paint Abatement/Removal Program, Asbestos Abatement Program, Indoor Air Quality Program, and Energy Conservation Program (e.g. Green Lights).

The Building Department, Safety Division, administers Ordinance No. 94-75 which provides for building energy efficiency standards in all new buildings and new construction in existing buildings.

C. Goal/Objective #3: Activities in this area include the proper storage and handling of hazardous materials which includes compliance with Material Safety Data Sheets program and disposal of such materials as paints, chemicals, fluorescent lamps and ballasts. This area also includes our activities in the collection of paper waste in public facility offices for recycling purposes.

III. Goals/Objectives FY 1998

The Building Department will have the same goals and objectives as in FY 1997.

City & County of Honolulu Fire Department

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Implement and monitor departmental recycling program. Make changes based upon the evaluation of this program.

B. Goal/Objective #2: Continue to integrate energy efficient appliances in the older, existing stations wherever possible. Coordinate with the Building Department to replace existing light fixtures with high efficiency lamps.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Evaluation of pilot recycling project to be conducted. Meeting scheduled with program coordinator and our Administrative Services Bureau.

B. Goal/Objective #2: Station renovation projects. Energy efficient light fixtures, solar panels and oil water separators have been incorporated into the renovation plans of the older stations. For FY 1998, the following stations are scheduled for renovations:

Kaaawa Fire Station (began FY-97) - station replacement
Mililani-Mauka - new fire station
Waikele - new fire station

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Expand the recycling program from one battalion to five battalions (department-wide program).

B. Goal/Objective #2: Department to install partitions in dormitories. This will reduce the usage of overhead light fixtures and promote usage of low wattage desk lamps for each cubicle.

C. Goal/Objective #3: Completion of wash rack at the new maintenance facility. City trucks in the Waipahu area will be permitted to use the wash rack which will meet NPDES requirements.

City & County of Honolulu Department of Parks and Recreation

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Environmental/microclimate enhancement.

B. Goal/Objective #2: Recycle and use recycled materials.

II. Results of Efforts FY 1997

A. Goal/Objective #1: We are responsible for street trees and beautification of park lands and traffic islands. This reduces solar radiation and purifies the air within the hard surfaced urban environment, increases habitats for birds and other wildlife, and improves groundwater recharge. We increasingly use native Hawaiian/indigenous trees and plants and xeriscape practices.

B. Goal/Objective #2: We specify playground equipment using recycled plastics, metals, rubber, etc.; recycle metals and use green waste from tree trimmings; use mulch as a soil amendment and ground cover to conserve plant's moisture; and operate a tree bank to collect trees being removed and dispense them to areas needing planting.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Preserve the Ka Iwi coast of Oahu through acquisition or land use zoning.

B. Goal/Objective #2: Continue beautification efforts including landscaping, stream and beach cleaning projects and other conservation efforts.

C. Goal/Objective #3: Develop an island-wide Park Master Plan, a comprehensive long-range plan for open space, parks and recreation, utilizing an overall systems approach to planning.

City & County of Honolulu Department of Public Works

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Continuing efforts in compliance with stormwater National Pollutant Discharge Elimination System (NPDES) permit requirements.

B. Goal/Objective #2: Promoting public awareness and participation in non-point source pollution prevention programs.

C. Goal/Objective #3: Coordinating interagency efforts and actions in the area of environmental protection.

II. Results of Efforts FY 1997

A. Goal/Objective #1:

* Promulgated administrative rules to regulate stormwater discharge activities;
* conducted field investigations and cited illegal discharge of nonstorm water;
* collected and analyzed stormwater samples from monitoring stations; and
* implemented various public education programs.

B. Goal/Objective #2:

* Developed video tapes;
* produced refrigerator magnets, door hangers, billboards and brochures related to prevention of non-point source pollution for public distribution; and
* launched "Adopt-A-Stream", "Storm Drain Stenciling", and recycle programs to encourage citizen participation in pollutant control and reduction.

C. Goal/Objective #3: Served as a member in various task force and advisory committees to provide input on proposed rules and regulations, administrative policies, technical assistance, relating to environmental activities, e.g., Kailua Bay Advisory Council, Ala Wai Canal Watershed Steering Committee, Interagency Water Quality Training Committee and Environmental Management Advisory Group, just to name a few.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Continuing efforts in compliance with stormwater NPDES permit requirements and preparing draft stormwater NPDES permit renewal covering the period between 2000 and 2005.

B. Goal/Objective #2: Continuing efforts in promoting public awareness to control and reduce non-point source pollution.

C. Goal/Objective #3: Continuing efforts in coordinating interagency activities relating to environmental protection.

City & County of Honolulu Department of Transportation Services

I. Goals/Objectives FY 1997

A. Goal/Objective #1: To improve the safe and efficient operation of City transportation and other facilities under the jurisdiction of the department.

B. Goal/Objective #2: To assess and improve use, convenience and safety of the City's transportation facilities.

C. Goal/Objective #3: To improve the overall operation of the City and County of Honolulu through the department's cooperative partnership with other government agencies and the private sector.

II. Results of Efforts FY 1997

A. Goal/Objective #1:

* Conducted an environmental compliance assessment of the two bus maintenance and four park-and-ride facilities.
* Started construction on the Traffic Control Phase Signalization Project that will install 16 new traffic signals and seven traffic video cameras, and upgrade three existing traffic signals.
* Instituted traffic calming measures in various areas of Oahu.

B. Goal/Objective #2:

* Continued implementation of the Bikes-on-Buses Program; 250 transit buses have been equipped with front-mounted bike racks.
* Purchased 15 bicycle parking racks for installation in municipal parking lots, sidewalks and other areas.
* Completed construction of the Kailua Area Bikeway project.
* Initiated work on the Honolulu Bikeway Master Plan.

C. Goal/Objective #3:

* Formed the School Traffic Safety Committee, consisting of various organizations and government agencies, to pool resources and information to effectively handle existing school traffic safety matters.
* Continued work on the State Department of Transportation North-South Road project in Ewa.
* Continued work on the Ewa Highway Master Plan Agreement with a group of the major developers of the Ewa area that will participate in and finance the plan.
* Managed the consultant contract to conduct the environmental assessment for the dredging of the Ala Wai Canal.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: To promote programs to reduce dependence on the use of automobiles.

B. Goal/Objective #2: To evaluate the social, economic, and environmental impact of additions to the transportation system prior to construction.

C. Goal/Objective #3: To support environmental friendliness through waste minimization, materials recycling, and the undertaking of proactive measures to ensure that City transportation facilities comply with all environmental rules.

Agency Goals

City & County of Honolulu Department of Wastewater Management

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Obtain agreements with several users of effluent reuse water.

B. Goal/Objective #2: Treatment and discharge of primary effluent under a new 301(h) waiver permit for the Sand Island WWTP. Also, obtain 301 (h) waiver permit for the Honouliuli WWTP.

C. Goal/Objective #3: If the consensus of UV application at Kailua Regional WWTP is unanimous and if the City concurs with this technology, positive efforts toward application of a UV disinfection system at the subject facility should move forward.

II. Results of Efforts FY 1997

A. Goal/Objective #1: The City has set December 1, 1997 as a deadline for contracting with the private sector to design, construct, market and operate the treatment and distribution of recycled effluent. If this deadline is not met, the City will design, construct and operate a reclamation facility and distribution system. Agreements with users of reclaimed effluent will be needed by June 1998.

B. Goal/Objective #2: The U.S. Environmental Protection Agency is requesting higher treatment levels at Sand Island WWTP as a condition to renewing its 301(h) waiver permit. The Department of Wastewater Management has formed a task force to explore ways to address the EPA request. A similar response team will be created for the Honoluliuli WWTP.

C. Goal/Objective #3: A UV study was completed in 1996 and reviewed by July 1997. A design contract is being completed with M&E Pacific. Design of the facility is anticipated to start in October 1997 and construction is expected to start in the spring of 1999.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Reuse 2 million gallons per day of reclaimed effluent by June 30, 1998.

B. Goal/Objective #2: Prepare preliminary engineering report for a long-term solution to improve treatment at the Sand Island Wastewater Treatment Plant.

C. Goal/Objective #3: Develop and implement a plan to stop discharging nutrient-rich effluent into Lake Wilson, an enclosed freshwater body, and to reuse the effluent.

City & County of Honolulu Oahu Civil Defense Agency

I. Goals/Objectives FY 1997

A. Goal/Objective #1: None

B. Goal/Objective #2: None

C. Goal/Objective #3: None

II. Results of Efforts FY 1997

A. All employees of the agency have been made familiar with the provision of Chapter 344, HRS.

B. Approximately 30 percent of civil defense volunteers have been made familiar with the provisions of Chapter 344, HRS. We will continue to provide training in this subject matter.

C. This agency does not expect to develop new goals at this time, but will remain cognizant of environmental concerns and add new goals as appropriate.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Civil Defense volunteers will be able to describe, in general terms, the State Environmental Policy presented in Chapter 344, HRS.

City & County of Honolulu Planning Department

I. Goals/Objectives FY 1997

A. Goal/Objective #1: To ensure compliance with environmental requirements by continuing to incorporate the environmental review process within the Development Plan Annual Amendment Review process and to establish environmental policies, principles and guidelines in the Revised Development Plans.

B. Goal/Objective #2: To continue to analyze proposed projects that may have potential impacts on the environment, and to provide objective information to decision makers.

C. Goal/Objective #3: To incorporate principles of community sustainability and responsible natural resource and hazard management in the North Shore Development Plan Revision Program, targeted for completion in December 1997; the Waipahu Livable Communities Initiative, targeted for completion in the Fall of 1997; and the Wahiawa Urban Design Plan, targeted for completion in the Summer of 1997.

II. Results of Efforts FY 1997

A. Goal/Objective #1: During the 1997 Annual Amendment Review Process, the Planning Department processed and accepted two Final Environmental Impact Statements for proposed amendments which triggered the environmental review process. The establishment of environmental policies, principles and guidelines, and a new environmental review process triggered by Zone Change applications for Ewa were accomplished by the enactment of the Ewa Development Plan (Ordinance 97-49), which takes effect on October 21, 1997.

B. Goal/Objective #2: The Planning Department reviewed and commented on one Environmental Impact Report Preparation Notice, one Draft Environmental Impact Report, 10 Pre-Draft Environmental Assessments, 29 Draft Environmental Assessments, one Supplemental Draft Environmental Assessment, three Environmental Impact Statement Preparation Notices, two Draft Environmental Impact Statements and one Supplemental Draft Environmental Impact Statement.

C. Goal/Objective #3:

* The North Shore Development Plan Revision Program. The North Shore Development Plan Revision Program is an ongoing community-based planning effort which will provide a long-range vision for the region and policies and guidelines on how to achieve that vision. Based on several meetings with the community, the department has developed vision statements and analyzed issues that need to be addressed. The department is currently developing possible alternative scenarios based on community values and identified opportunities and constraints. In addition to providing a conceptual framework toward creating livable communities, the new North Shore Development Plan will include policies and guidelines to protect scenic, natural, and cultural resources and to promote sustainable economic development consistent with the rural character of the North Shore.

* The Waipahu Livable Communities Initiative. The Planning Department will complete the Waipahu Livable Communities Initiative Project in the Fall of 1997. This is the second phase of an ongoing community-based planning effort to define and implement priority transportation projects and refine urban design guidelines intended to facilitate the revitalization of Waipahu.

* The Wahiawa Urban Design Plan. The Wahiawa Urban Design Plan is an ongoing community-based plan that, to date, has benefitted from five citizen task force meetings and two community workshops. The Final Wahiawa Urban Design Plan is scheduled to be completed before the end of 1997. Recommendations regarding highway signs, gateways, streetscapes and building character of Wahiawa are being finalized to help create a framework for implementing improvements and redevelopment in Wahiawa that will make the town a pleasant physical environment and an attractive destination for commerce.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: To analyze proposed projects that may have potential impacts on the environment, and to provide objective information to decision makers.

B. Goal/Objective #2: To incorporate principles of sustainability in regional planning efforts.

C. Goal/Objective #3: To establish environmental policies, principles and guidelines; and a new environmental review process triggered by Zone Change applications in the remaining seven Development Plan Areas.

County of Hawai‘i Fire Department

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Continue implementation of Hazmat Teams for East and West Hawai‘i.

B. Goal/Objective #2: Continue wildland fire pre-planning.

C. Goal/Objective #3: Continue replacement of lighting fixtures in all Fire Department facilities with energy-efficient models.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Protocol is being established for medical baseline for Hazmat Team members.

B. Goal/Objective #2: Acquisition of computers, cellular phones, fax, modem, and printers for Hazmat vehicle.

C. Goal/Objective #3; Collectively, with the County of Hawai‘i, performance contract to retrofit lighting to reduce energy consumption is being proposed.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Update pre-plans for hazardous material.

B. Goal/Objective #2: Purchase Hazmat vehicle for West Hawai‘i.

C. Goal/Objective #3: Continue wildland fire/urban interface pre-fire plans.

Agency Goals

County of Hawai‘i Department of Water Supply

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Removal of detected hazardous materials at water facility sites.

II. Results of Efforts 1997

A. Goal/Objective #1: Replaced transit pipes containing asbestos with ductile iron pipes. This will be an on-going activity throughout the island.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Continue to replace transit pipes with ductile iron pipe throughout the island.

B. Goal/Objective #2: Refurbish and paint water tanks to improve aesthetics.

County of Hawai‘i Office of Housing and Community Development

I. Goals/Objectives FY 1997

A. Goal/Objective #1: To constantly update correspondence to ensure all interested parties are contacted regarding Environmental Assessments (e.g., Department of the Army, Corps of Engineers and U.S. Fish and Wildlife).

II. Results of Efforts FY 1997

A. Goal/Objective #1: The OHCD has consulted the County of Hawai‘i’s Planning Department to ensure the proper parties are consulted for comments to possible impact to the environment.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: The OHCD will continue to seek training to keep staff abreast of NEPA’s rule changes.

B. Goal/Objective #2: The OHCD will continue to seek ways to educate and coordinate with its environmental consultants to streamline environmental assessment process, with Federal and State agencies.

County of Hawai‘i Department of Parks and Recreation

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Wastewater System Improvements

B. Goal/Objective #2: Tree Planting Program

II. Results of Efforts FY 1997

A. Goal/Objective #1: Conversion from cesspool system to septic system was completed at Waimea Park, South Kohala and Whittington Beach Park, Ka‘u.

B. Goal/Objective #2: Tree planting completed at Hilo Bayfront soccer fields.

III. Goals/Objectives FY 1998

Same goals as in FY 1997.

County of Hawai‘i Planning Department

I. Goals/Objectives FY 1997

A. Goal/Objective #1: To continue to seek a proper balance between protection of our environmental resources and the encouragement of economic development for the well-being of our island residents.

B. Goal/Objective #2: To establish better coordination of our review and permitting procedures with various Federal, State and County agencies.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Recent adoption of the revised Hawai‘i County Zoning Code provides for increase public participation and notification of land use actions taken by the Planning Department and Planning Commission. Increase public awareness allows for greater public input leading to better decision-making. In addition, applicants requesting a change of zone must now prepare an environmental report at the time of filing.

B. Goal/Objective #2: On-going.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: To continue to seek a proper balance between protection of our environmental resources and the encouragement of economic development for the well-being of our island residents.

B. Goal/Objective #2: To continue to work for better coordination of our review and permitting procedures with various Federal, State and County agencies

C. Goal/Objective #3: Update of Hawai'i County General Plan to commence by year's end. Take this opportunity to reevaluate environment-related elements within the General Plan against the county's environmental goals for the first decade of the next century. Elements regarding Environmental Quality, Flood Control & Drainage, Historic Sites, Natural Beauty and Natural Resources and Shoreline will all be reassessed.

County of Kaua'i Housing Agency

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Effectively assume responsibility for environmental review, decision making and action that would otherwise apply to HUD under the National Environment Policy Act, 24 CFR Part 58.

B. Goal/Objective #2: Afford private citizens and governmental entities the opportunity to provide comment on federally funded activities affecting human, physical and social environments.

C. Goal/Objective #3: Effectively monitor activities subject to Part 58, including Community Development Block Grant, HOME Investment Partnerships Program, Emergency Shelter Grant Program, and Special Purpose Grants.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Carried out environmental review responsibilities in determining appropriate level of review and documentation for each activity/project. Also, as responsible entity, assumed environmental review duties for Self-Help Ownership Program and Housing Opportunity Program grants.

B. Goal/Objective #2: Issued public notices and considered public comments in conducting environmental evaluations.

C. Goal/Objective #3: Maintained environmental review record for each program activity/project subject to Part 58.

III. Goals/Objectives FY 1998

Same as those identified for fiscal year 1997.

County of Kaua'i Department of Public Works/Solid Waste

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Continue Public Education Program to promote environmental awareness.

II. Results of Efforts FY 1997

A. Goal/Objective #1:

* Executed contract for glass recycling on Kaua'i, includes component to provide public education on recycling of glass.

* Continued public advertisements for the Kaua'i Recycles Residential Recycling Program.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Continue programs to promote environmental awareness.

County of Kaua'i Department of Water

No specific goals at this time.

County of Kaua'i Office of Economic Development

OED has been working to develop the Kaua'i Resource Exchange & Buy Back Center since receiving a grant from EDA. The Center will be a place where reusable (and some recyclable) items can be taken as an alternative to hauling and burying them at the landfill. Services provided by the Center will include education and promotion of waste reduction, reuse and recycling issues. One of our primary goals is to encourage reuse-related entrepreneurial activities on Kaua'i. OED's environmental goals/objectives pertain to this particular project.

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Complete EA.

B. Goal/Objective #2: Complete RFP for Operator.

C. Goal/Objective #3: Complete Design Plans/Specs.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Final EA received FONSI Aug. 1997.

B. Goal/Objective #2: RFP completed and targeted advertising date is November 1997.

C. Goal/Objective #3: Design Plans/Specs expected to be completed October 14, 1997. Final approval is expected within two weeks. Targeted advertising date for construction bid is November 1997.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Construction contract by end of 1997.

B. Goal/Objective #2: Contract an operator for the Center.

C. Goal/Objective #3: Promote use of the Center.

County of Kaua'i Planning Department

I. Goals/Objectives FY 1997

A. Goal/Objective #1: To ensure that land use and development projects are assessed for conformity to the goals and policies of the Kaua'i County General Plan and supporting zoning ordinances with respect to maintaining Kaua'i as the "Garden Island" by sustaining the unique landscape, natural ecology and environmental character of the Island.

B. Goal/Objective #2: To facilitate the implementation of the County's Shoreline Setback and Special Management Area Rules and Regulations.

C. Goal/Objective #3: To provide objective reviews and information regarding projects that may have potential impacts to the environment.

II. Results of Efforts FY 1997

A. Goal/Objective #1: Discretionary permits and applications are referred to various governmental agencies for comments (and HRS 343 process when applicable) and adjoining property notification and public hearings are held to further identify and address impacts. The County is also in the process of updating the General Plan.

B. Goal/Objective #2: An inspector position has been established to enhance the Department's capability to monitor development activities which may impact the Special Management Area.

C. Goal/Objective #3: Departmental comments are offered through the environmental assessment process, conservation district use permit reviews and when requested by other agency or applicant actions. As funding allows, staff attends workshops and conferences to enhance in-house expertise.

Goals/Objectives FY 1998

The current environmental goals/objectives apply to FY 1998.

County of Maui Department of Housing and Human Concerns

We currently do not have specific environmental policies in place, however, we work towards the following objectives in the course of meeting Department program goals for the promotion of community wellness, alcohol and drug abuse prevention, responding to homelessness, promotion of respect for cultural diversity and the fostering of self-esteem:

1. Fulfill requests to review development proposals (environmental impact statements, special use permit applications, etc.) as referred by the County Planning Department to ensure maximum project results with a minimum of negative community impact.

2. Protect and enhance land, natural, historic, and cultural resources within County leasehold properties.

3. Encourage, design, development, operation and maintenance of facilities and landscape areas to enhance environment, conserve water and energy, reduce negative impacts, minimize waste and promote the recycling of excess building materials for all capital improvement projects.

While we did not report environmental goals for 1997, we plan to track our progress for 1998 according to the above objectives.

County of Maui Department of Parks and Recreation

I. Goals/Objectives FY 1997

A. Goal/Objective #1: To raise awareness of the value of trees through the staff support of the Arborist Committee, a citizen advisory committee to the Mayor, by observing Arbor Week in November and the successful application for the Tree City, USA designation.

B. Goal/Objective #2: To promote environmental awareness in Maui County by recruiting and staffing the Christmas TreeCycling projects.

II. Results of Efforts FY 1997

	FY 96 Actual	*FY 97* Actual
Additional street trees planted	50	153
Additional park trees planted	300	225

III. Goals/Objectives FY 1998

No environmental goals/objectives identified.

County of Maui Department of Planning

I. Goals/Objectives FY 1997

A. Goal/Objective #1: To provide the expertise and staff to enforce the County's Special Management Area and Shoreline Area Regulations, as revised.

B. Goal/Objective #2: To continue to review projects for conformity with the County's current environmental policies in the General Plan, the specific community plan, zoning codes, and coastal zone management guidelines.

C. Goal/Objective #3: To continue to support the adoption of all pending community plans by providing timely updated information and revised proposals necessary for the County Council's review. These plans contain environmental goals, objectives and policies, and implementing actions as they relate to the specific community plan region.

II. Results of Efforts FY 1997

A. Goal/Objective #1: In Fiscal Year 1997, the Maui Planning Department reviewed one hundred seventy (170) applications for Special Management Area Permits. Of these, one hundred thirty-four (134) were minor permits which are reviewed administratively. The other thirty-six (36) were publicly reviewed before one of Maui County's planning commissions.

B. Goal/Objective #2: In Fiscal Year 1997, the Maui Planning Department reviewed eighty-nine (89) discretionary applications for conformance with the County environmental policies, as expressed in the Maui General Plan and appropriate community plans. These applications include:

* Seven (7) District Boundary Amendments
* Eight (8) State Special Use Permits
* Twelve (12) Changes in Zoning
* Four (4) Project District Reviews
* Three (3) Community Plan Amendments
* Three (3) Conditional Use Permits
* Three (3) County Special Use Permits
* Seventeen (17) Shoreline Setback Approvals
* Three (3) Shoreline Setback Variances
* Seven (7) Environmental Assessments
* One (1) Environmental Impact Statement

C. Goal/Objective #3: In Fiscal Year 1997, the Maui Planning Department supported the review of the Kihei-Makena Community Plan by the County Council's Planning Committee.

III. Goals/Objectives FY 1998

The Maui Planning Department's top three goals will remain the same as Fiscal Year 1997.

County of Maui Department of Public Works and Waste Management

I. Goals/Objectives FY 1997

A. Goal/Objective #1: Adopt the revised Soil Erosion and Sedimentation Control Ordinance and implement its provisions and training program.

B. Goal/Objective #2: Develop and implement a pretreatment program which will effectively manage and track commercial discharges into the County's wastewater collection system. Additionally, this program will have the enforcement authority to issue fines for properties that are in violation of the new pretreatment program.

C. Goal/Objective #3: Continue to expand the wastewater reuse program by actively speaking with prospective reuse users both in the private and public sectors.

II. Results of Efforts FY 1997

A. Goal/Objective #1: The revised soil erosion and sedimentation control ordinance has been submitted to Council for action.

B. Goal/Objective #2: All of the projected users of reclaimed water are now online. Additional requests for this water may exceed ability to supply in the near future. A wastewater pretreatment program is currently undergoing final revisions for submittal to Council. A full-time employee has been hired to implement this program.

C. Goal/Objective #3: The wastewater reuse program now has an enabling ordinance and rate schedule. Approximately 2 MGD of reuse water over the previous year is now sold to various property owners.

III. Goals/Objectives FY 1998

A. Goal/Objective #1: Adopt the soil erosion and sedimentation control ordinance.

B. Goal/Objective #2: Adopt the wastewater pretreatment program and civil procedure rules and ordinance changes to better manage this program.

C. Goal/Objective #3: Finalize an agreement with the Department of Health to receive grant money for a part-time person to implement the findings of the West Maui Watershed Project to improve County procedures to reduce runoff to nearshore waters.