

ENVIRONMENTAL ASSESSMENT

HOUSEHOLD TOXIC WASTE

PICKUP AND DISPOSAL

ISLAND OF MAUI

HAWAII

NOVEMBER 1987

Proposing Agency: Office of Environmental
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SECTION 1
PROJECT DESCRIPTION

I. INTRODUCTION

A. GENERAL

The continued proliferation of chemicals on the market and the increased incidents of adverse health and environmental effects resulting from their use and disposal have heightened community concerns regarding exposure to hazardous materials.

Various public opinion polls show that a majority of those surveyed agreed that protection of the environment is so important that requirements and standards cannot be too high and that costs are secondary to achieving protection (CBS-Times poll 58% of those surveyed in 1984). A recent community health survey conducted by the State of Hawaii Department of Health in 1985 states, "The most pervasive public health concern is pollution, then violent crime, drug and alcohol abuse, cost of medical and health care and smoking." Chemical pollution was found to be the most important public health concern--this was consistent for gender, age, geographical area, ethnicity, education, income, and marital status.

This concern is linked to frequent headlines that describe the discovery of hazardous wastes being disposed of improperly and thus endangering the community's health, and to scientific data that warn of more chemical substances hazardous to health. Most authorities believe that worker and community exposure to these materials will continue to increase. Excluding pesticides, over 1,000 new chemicals are introduced each year and well over 60,000 are already on the market. Many of these chemicals have not been evaluated for chronic toxicity.

In the minds of most people, hazardous waste issues involve large industries; recently, however, hazardous wastes have become a problem that involves the consumer, the individual household. In most cases, consumers are unaware that the over-the-counter products they purchase may contain toxic chemicals and so they use and dispose of these products in an unacceptable way. The safe disposal of household hazardous waste (HHW) is therefore complicated by two factors: (1) the public is unaware of what is and what is not hazardous, and (2) a practical and economical disposal system for household-generated hazardous waste is often unavailable. This results in a disposal problem. Every day across the nation tons of these chemicals are washed down drains or into cesspools, or dumped in the household trash.

B. PURPOSE OF THIS DOCUMENT

The purpose of this document is to briefly describe the proposed action, the one-day collection of household toxic wastes, and to evaluate its probable environmental impacts.

II. PROBLEM STATEMENT

A. Definition of Household Hazardous Waste (HHW)

The Environmental Protection Agency and the State of Hawaii have not officially or completely defined the term household hazardous waste in any regulation or publication. For the purpose of this document we have defined household hazardous waste as solid wastes discarded from homes or similar sources as listed in 40 CFR 261.33 (e) or (f); or wastes that exhibit any of the following characteristics as defined in 40 CFR, Parts 261.21 through 261.24: ignitability, corrosivity, reactivity, and EPA toxicity. For additional information and details please refer to Appendix A.

B. Generation Rates

There are no exact data on the amount of solid waste generated per person or the composition of the waste. There is this lack of definitive data because there is no standard definition of residential waste and because waste composition changes seasonally and varies geographically. The problem is also compounded by the fact that the type of waste generated and discarded changes as packaging and product formulation using new chemicals changes.

Currently, estimates based on the best available data give the range as from 2.5 to 3.5 lbs. per person per day. Of this amount, it is reasonable to assume that 1% of the waste can be considered hazardous. A rough estimate of pounds of Household Toxic waste is 1,570. (Assume population of 62,823 people x 2.5 lbs./person x 1%.)

C. Problem

Although the individual home is not generally considered a chemical storehouse, recent studies indicate that the average home today contains more chemicals than the average chemical laboratory of 100 years ago. Chemicals used by industry are subject to various health and safety regulations, but this is not true for those used by a homeowner. Because of inadequate labeling instructions and the consumer's lack of knowledge, products containing chemicals are often used in the home without proper instruction or care. Toxic products that become hazardous waste include household cleaners, automotive products, paint products, pesticides, and

herbicides. These substances present problems both in their use and disposal. Exposure to these substances can affect the health: corrosive substances can cause burns to the body and eyes; poisonous substances may cause severe illness or death when ingested; and flammable products often contain petroleum distillates which are skin, eye, and respiratory irritants and which can be fatal if ingested.

The fact is that hazardous waste is produced in every home throughout the country and is a problem that has only recently been acknowledged as one in need of public attention.

D. Environmental Impact of Household Hazardous Waste

There are no documented cases where Household Hazardous Waste (HHW) was solely responsible for a significant adverse environmental impact. However, this does not mean that HHW does not impact the environment. There appears to be no nationwide reporting procedure which includes information that relates HHW to the environment. Indirect evidence indicates toxic substances can migrate through the air, surface and ground water. The majority of the HHW are not pure substances; thus their degree of hazard is less, probably much less, than the same quantity of the pure hazardous substance. Additional studies must be conducted to determine their environmental impacts. There is indication that some of the landfills in Hawaii may be contaminating adjacent bodies of water.

III. PROPOSED ACTION

A. General

This program is designed to divert hazardous waste away from the municipal landfills, which are not designed to contain such wastes, out of sewer/cesspool system, and away from municipal incinerators or resource recovery facilities since some substances when burned can release more hazardous by-products.

B. Description of the Project

In January 1988, OEQC will implement a public education campaign on Household Hazardous Waste that will culminate in a one-day collection program to be held on January 23, 1988, at the C. Brewer Chemical Co. facility in Kahului, Maui.

The goals of the project are to increase general public awareness of the hazardous materials found in most homes; provide guidance related to the safe use, storage, and disposal of these materials; identify and encourage the use of less hazardous substitutes; and assist the homeowner in safe disposal of highly toxic waste via a one-day collection program. A telephone hot-line will be established that will allow Maui residents a toll-free call to OEQC for information on household hazardous waste and the Maui HHW Collection Project.

The household collection program is not designed to provide a disposal center for hazardous waste generated from households. It is designed to provide a convenient time and place for the collection of wastes and to insure the proper handling and ultimate disposal of the wastes in an approved facility.

OEQC conducted the Oahu Household Toxics Disposal Pilot Project in August 1986. The two-day collection effort resulted in the collection and disposal of 30 drums of hazardous waste from 260 participants. Costs per pound of waste disposed was \$5.40 per pound. Although this cost is high, it is within the range of costs experienced nationally for such collection programs.

Because disposal cost per barrel for this project is \$985/barrel, which is almost double that of the Oahu project, it was decided that emphasis will be on public education.

All participants in the collection project will be required to pre-register. This will insure that only those toxics on the registration form are brought in, as well as provide some control over quantity expected.

C. Publicity

On January 4, 1988, a press conference will be held in Kahului, Maui, announcing the Maui HHW Collection Project. A dramatic demonstration of the possible hazards of unsafe disposal of toxic waste will be given in the hope of catching the public's attention and alerting them to the HHW problem. This will be followed by news articles, printed ads and brochures which will educate the public as well as encourage them to participate in the collection project. Registration forms will be printed in the local newspapers 3 weeks and 2 weeks prior to collection day in order to give adequate response time. Educational brochures will be distributed island-wide through grocery stores and schools. Flyers announcing the collection project and registration information, as well as the telephone hot-line number, will be inserted in the brochures.

Radio stations will be utilized for public service announcements that will inform the public of the project and the location of registration forms.

D. Education

A special household hazardous waste education program will be implemented in participating elementary schools through a week-long lesson unit titled Toxic's In My Home? You Bet! Developed by the Golden Empire Health Planning Center, it covers identifying household toxics, using toxics safely, disposing of toxics safely, and using alternatives that are less toxic.

Educational brochures will be widely distributed throughout the island with inserts announcing the collection project.

E. Implementation

A greeter entry point, as well as manifesting and packing station, will be established at the collection site. Upon arrival the client will be met by a greeter who will note whether any toxic wastes brought in for disposal are leaking or have broken containers, in which case he or she will alert collection site personnel. Also, it will be necessary to learn if all wastes delivered are on the acceptable list and to note whether or not some may be in the highly toxic category.

If everything is in order, the client will be sent directly to the packing station where wastes will be processed and packed into 55-gallon drums.

If there are questionable items for disposal, the next team will study and determine the disposition of the item. If the item is considered not hazardous, it will be placed in a trash dumpster on site for disposal in a local landfill.

At the packing station, the contractor will sort the toxic items into appropriate drums--Poisonous Liquids, Solids, Hazardous Liquids, Flammable Liquids, and so on.

All project personnel involved with handling the toxic items will take all precautions and wear protective clothing, rubber gloves, and respirator masks. Any shift of wind direction will be noted before opening any bag or container. Householders will be kept up-wind from any work being done by project staff to protect the clients at all times.

If there is any doubt about a container label and its contents, project staff with chemistry backgrounds will be consulted. Reference books will be checked before any decision regarding the contents is made.

The toxic project will then be verified by the Unitek Corp. representative, who will prepare the Uniform Hazardous Waste Manifest and place the item in the appropriate drum, pack vermiculite around it to protect it from breakage, seal the drum lid, label it, and prepare to ship it to a disposal site in California.

F. On-Site Emergency Plan

During routine operations risk is minimized by establishing good work practices and using protective equipment for personnel. Unpredictable events such as fire, chemical exposure, or physical injury may occur and must be anticipated.

Site Emergency Measures:

- The Environmental Protection Agency representative will be the Safety Officer responsible for emergency actions.
- Prior to starting, the Safety Officer will check off each of the following to assure that each item has been accomplished.
 - The location of the nearest emergency telephone has been made known to all site personnel.
 - A Police radio is on site as an alternative means of summoning help.
 - Audible warning signals are established for the rapid evacuation of personnel.

- Emergency exits from the site have been pointed out to all personnel prior to starting.
- Emergency equipment is available on site, including:
 - Medical First Aid Box
 - Fire Extinguisher
 - Eye Wash Facilities
 - Workable Showers or Water Hose
- Emergency Medical Care:
 - Arrangements for using emergency organizations have been made beforehand.
 - Organizations that might be needed are:
 - Fire Maui Phone 911
 - Police Maui Phone 911
 - Hospital--Maui Memorial
Phone 242-2343
 - Poison Control Center
Honolulu Phone 941-4411.
(To call from Maui
1-800-362-3585)
 - Personnel have been informed of the location of the nearest hospital.
 - The Emergency Room Supervisor has been alerted of the possible need for treating, admitting, and transporting of injured or exposed workers.
 - The nearest hospital emergency room location, travel time, directions, and phone number have been posted on the site.

- The phone number of the nearest ambulance has been posted.
- The nearest poison control center phone number was posted.

Records will be made of any exposure of site workers during an emergency or routine operation. The minimum amount of information needed along with any medical test results of personnel exposure will be noted.

REFERENCE SECTION 1

East-West Research Institute. Consumer Habits & Attitudes Involving Disposal of Dangerous Chemicals in the House.
Prepared for OEQC, State of Hawaii. September 1986.

A Survey of Household Hazardous Wastes and Related Collective Programs. USEPA/530-SW-86-038. October 1986.

Household Toxic Disposal Report Final Report.
Environmental Health Coalition. San Diego, CA. November 1984.

Household Hazardous Waste: Solving the Disposal Dilemma.
Golden Empire Health Planning Center. Gina Purin,
Project Director. 1984.

Health Behaviors, Concerns and Sources of Information in Hawaii. State of Hawaii, Dept. of Health. December 1986.

Existing Environment

SECTION 2

DESCRIPTION OF THE AFFECTED ENVIRONMENT

I. PROJECT SITE LOCATION

The project site is the C. Brewer Chemical Company's baseyard on the island of Maui. This site is ideal for conducting a homeowners hazardous waste collection because it is located close to the major population center of the island; is designated as an industrial area; is presently used for the commercial sale of fertilizers, pesticides, and herbicides; and has the necessary safety equipment--portable showers, eye wash, first aid equipment, and telephones. Please refer to Figures 2-1 and 2-2 site maps for additional information.

II. PHYSICAL CHARACTERISTICS

A. Soils

The soil of the project site is classified as Puuone sand, 7 to 30 percent slope (PZUE). This soil is found on sandhills near the ocean. In a representative profile the surface layer is grayish brown, calcareous sand about 20 inches thick, underlain by grayish-brown cemented sand. The soil is moderately alkaline in the surface layer. Permeability is rapid above the cemented layer. The permeability of the surface layer requires that the collection site be located not on bare ground but on concreted and/or asphalted area to contain the material should there be an accidental spill.

The project site is flat and there are no major drainage structures or channels on it.

B. Climate

1. Rainfall

The project site is located in an area that receives about 20 to 30 inches of rain per year, most of it during the winter months. Since the proposed action will occur in January, there is a possibility of rain and therefore provisions have been made to use a covered shed for the collection and processing of the hazardous waste brought in. Refer to Figure 2-3.

2. Climate, temperature, and humidity

The climate is subtropical. Temperature and humidity will not create problems during the collection and packaging phases of the project. Average temperatures range between a low of 60 to a high of 80 degrees F during the year. Prevailing winds are northeasterly trades with speeds exceeding 25 mph for extended periods of time. Refer to Figure 2-4.

C. Wetlands

There are no wildlife sanctuaries or wetlands on or adjacent to the project site.

D. Streams, ponds, estuaries

No streams pass through the project site, nor are there any ponds located there. The surface water from the project site doesn't drain into streams, ponds, or estuaries. Surface water during heavy rainfall enters Kahului Harbor and there is no indication that the storm runoff from the project site has contaminated the harbor.

E. Tsunami

The project site is located within the tsunami inundation area. In the unlikely event that a tsunami alert should occur during the collection day, provisions have been made to terminate the collection. There should be sufficient time to cancel the pickup by way of radio announcements, and people will be on hand at the collection site to divert the homeowners away from the site.

F. Seismic

The project site is located in seismic probability zone 2. Refer to Figure 2-5.

II. BIOLOGICAL CHARACTERISTICS OF THE PROJECT SITE

A. Flora

The only major vegetation on the project site is the coconut palm (Cocus nucifera). The project site is an industrial site used for the storage and sale of chemical products and as such, most of the area is covered by concrete or asphalt. There are no endangered species of plants located on the project site.

B. Fauna

A few birds, rats, mice, or mongooses may pass through the project site, but it would be unlikely that any would establish themselves there. On the project site, there is nothing to provide a habitat for birds or mammals. There are no rare or endangered species of birds or animals on the project site.

III. SOCIO-ECONOMIC CHARACTERISTICS

The population (1980) of census tracts representing the surrounding areas is presented in Table 2-1. The total population of the five census tracts rose from 18,503 in 1970 to 24,272, as is shown in the 1980 census, for a 31.2% increase.

The 1980 census showed that the Wailuku area contained a work force of 4,885, which was 94% employed in 1979. There were 2,682 persons who were not considered within the labor force at that time. Kahului, a growing community, had a labor force of 6,415 people with approximately 97% employed in 1979. There were 3,150 who were not considered as part of the work force. The median household income for Wailuku in 1979 dollars was \$18,156, for Kahului it was \$22,569.

IV. INFRASTRUCTURE

A. Utilities

1. Water is available on site for emergency use and fire protection.

2. Sewage. The project site is sewerred and restroom facilities are available.

3. Electricity is available but will not be needed for the proposed action. In the unlikely event that the activities must continue into the night, flood lights will be available.

4. Telephones are available on the site and can be used for contacting the police and fire departments.

B. Police and Fire Service

The project site is within a five to ten minutes response time by both the police and fire departments. The fire and police departments will be notified of the proposed action and off-duty police officers will be hired for security and traffic control during the collection activity.

C. Schools

Maui Community College is located adjacent to the project site, and Baldwin High School is about a mile away. Since the activity will occur on a Saturday, there should be little impact on school activities.

D. Churches

A church is located adjacent to the project site, but it should not be affected by the proposed action.

E. Access

The project site is located in Kahului and access is provided by Kahului Beach Road. Major roads that connect with Kahului Beach Road are Kaahumanu Avenue, Puunene Avenue, and Hana Highway. Most of the people will find the project site accessible and conveniently located.

F. Archaeological and Historical Concerns

A survey of the historical records in the state archives and all archaeological surface reconnaissance of the project site didn't indicate that the project site is a significant archaeological or historical site. The site has been altered over the years and surface features have been destroyed.

G. The relationship of the proposed action to land use plans, policies, and controls for the affected area: The proposed action will take place in an area designated for such activities. The existing use, storage and sales of fertilizers and pesticides make this an ideal site for the proposed project. There will be no land use conflicts.

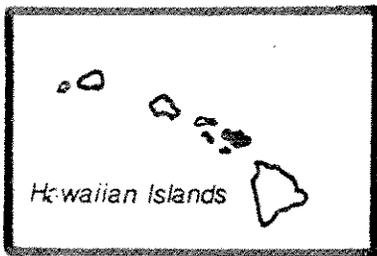
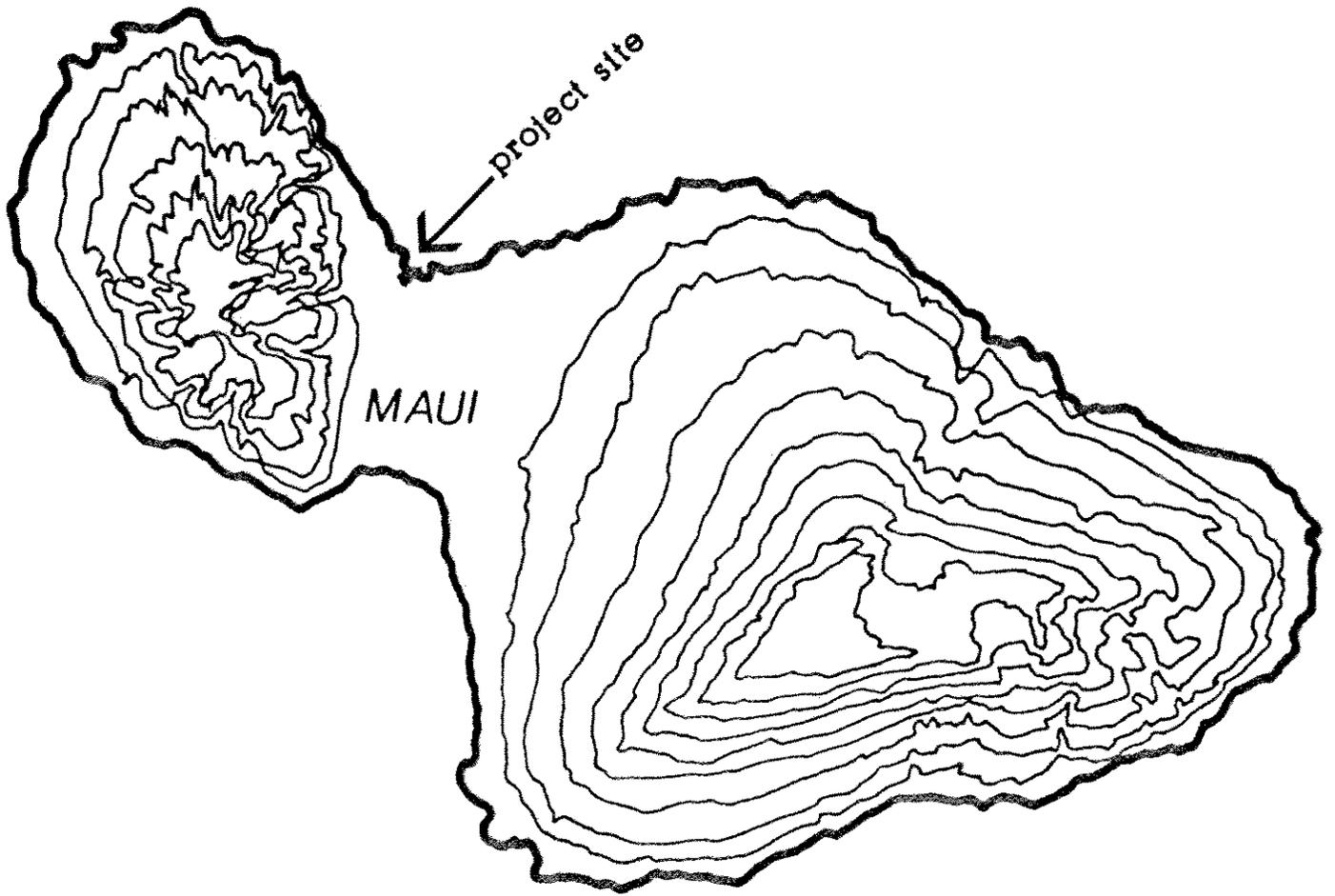


FIGURE 2-1

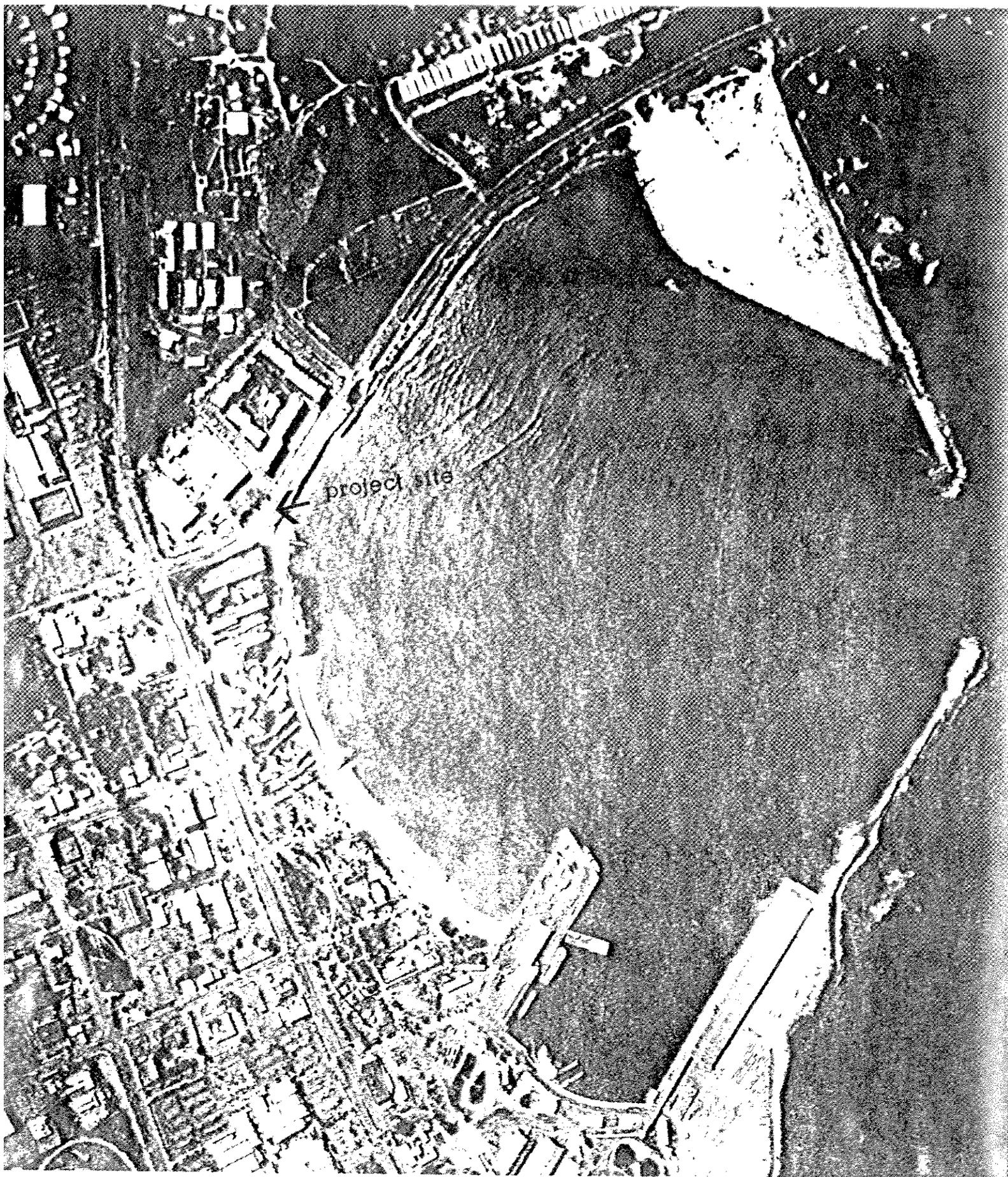
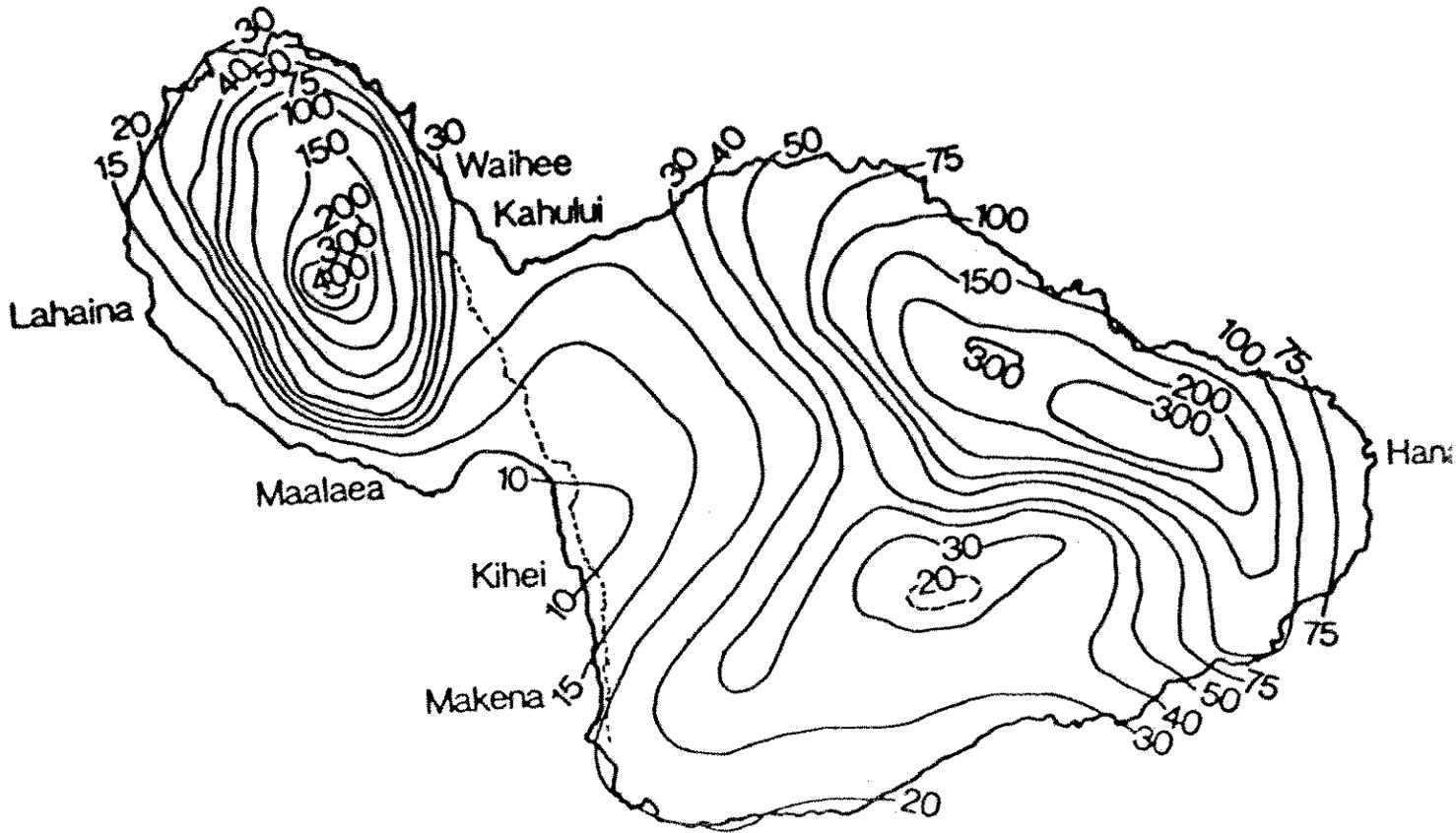
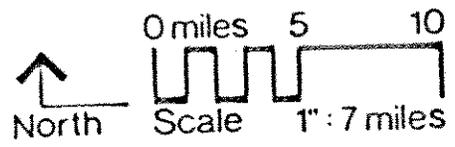


FIGURE 2-2



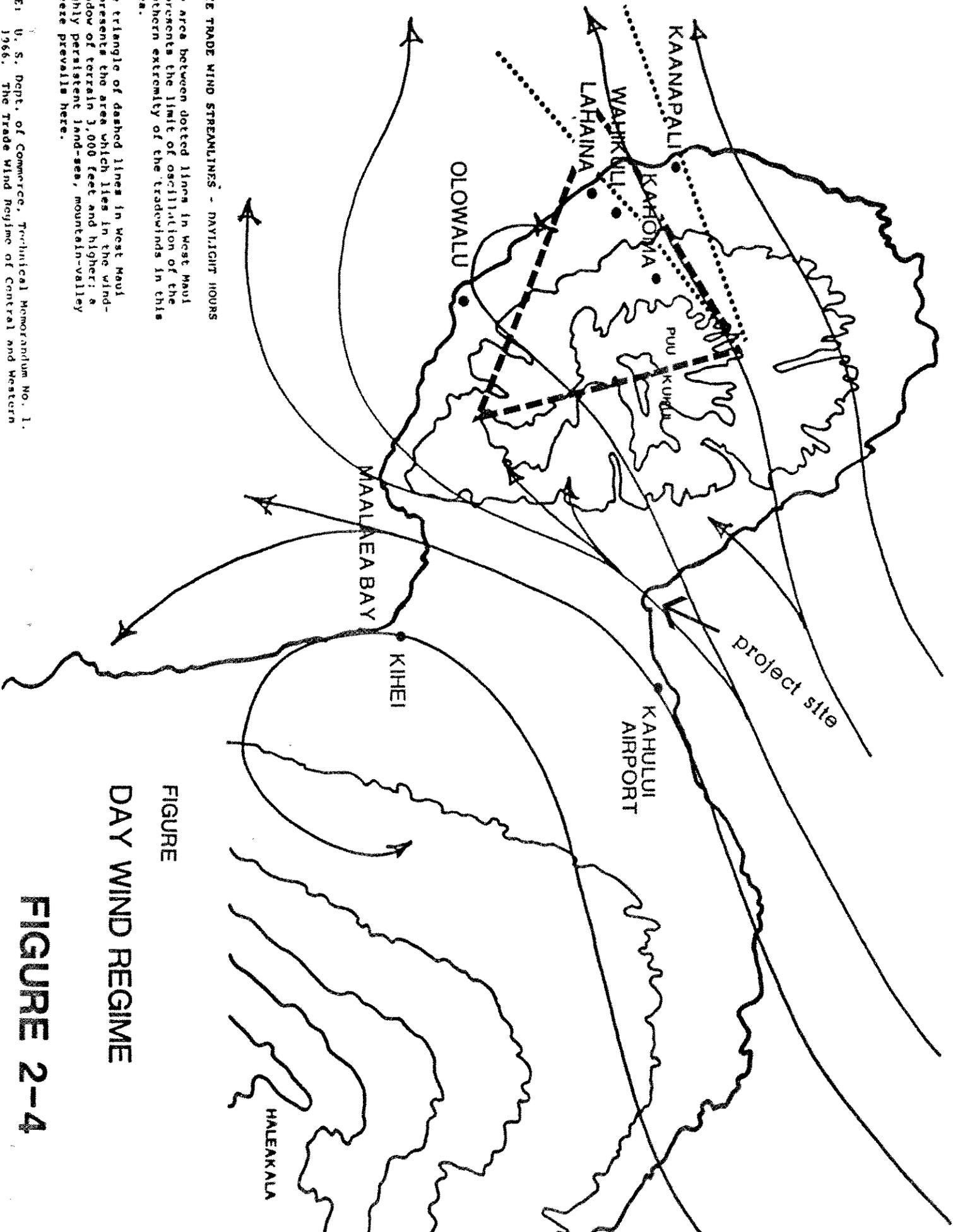
10.———10 Isohyetal Line (inches)
 ---20--- Estimated Isohyetal Line
 Isohyets based on values from 100
 gages for period 1933-1957

Figure 2
 RAINFALL



SOURCE: National Weather Service Pacific Region, 1974

FIGURE 2-3



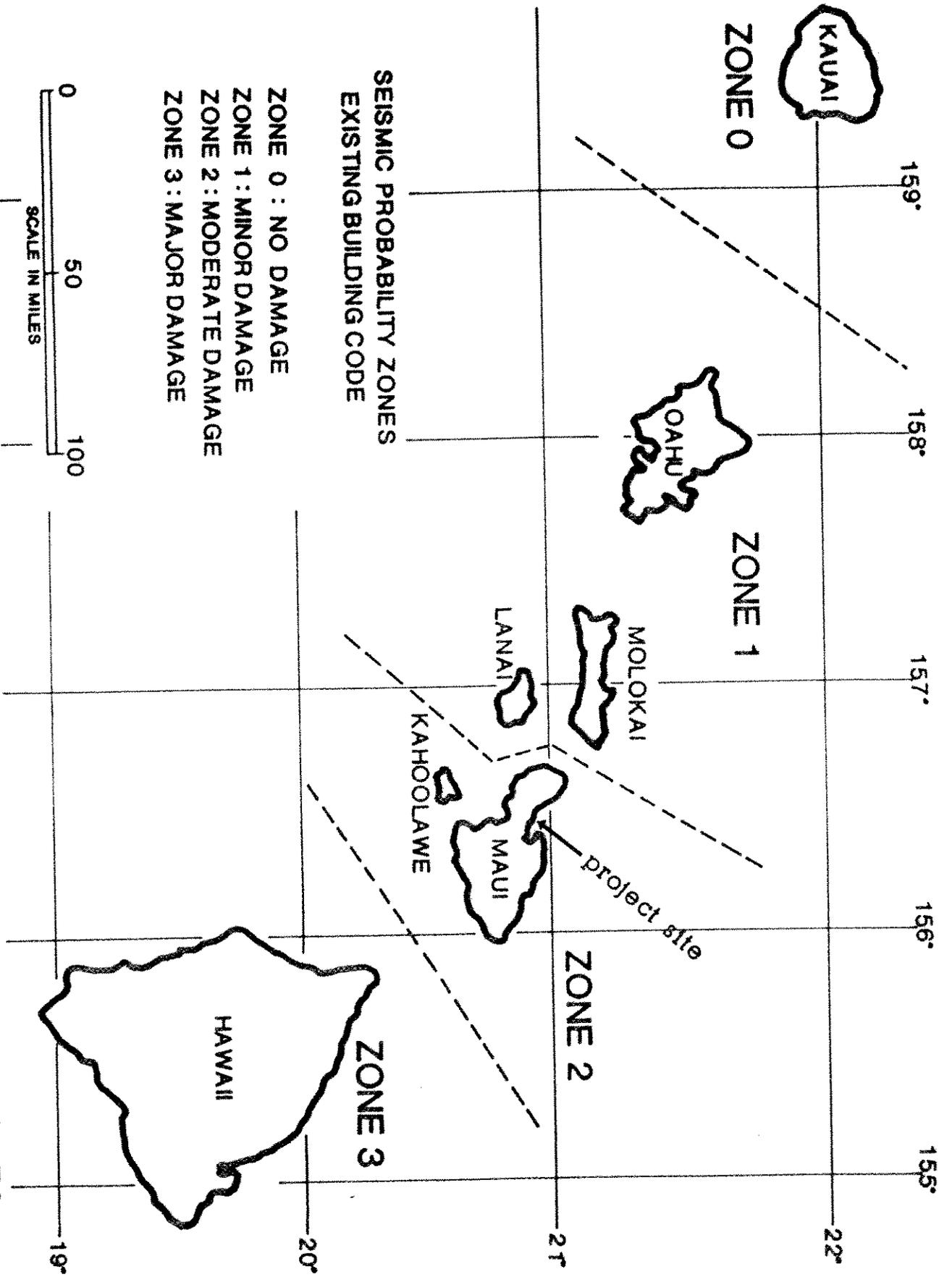
SURFACE TRADE WIND STREAMLINES - NAVIGABLE HOURS

- The area between dotted lines in West Maui represents the limit of oscillation of the southern extremity of the tradewinds in this area.
- The triangle of dashed lines in West Maui represents the area which lies in the wind-shadow of terrain 3,000 feet and higher; a highly persistent land-sea, mountain-valley breeze prevails here.

SOURCE: U. S. Dept. of Commerce, Technical Memorandum No. 1, 1966. The Trade Wind Regime of Central and Western

**FIGURE
DAY WIND REGIME**

FIGURE 2-4



FIGURE

FIGURE 2-5

REFERENCE SECTION 2

- 2.1 Soil Survey of Islands of Kauai, Oahu, Maui,
Molokai, and Lanai. USDA & SCS
August 1972. P117

State of Hawaii Data Book. DPED. 1986

Marlin, Mark. Hawaiian Coastal Plants. 1977
Neal, Marie In Gardens of Hawaii. B.P. Bishop
Museum. Special Publication
50. 1965

Environmental Impacts

SECTION 3

ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATIVE MEASURES TO MINIMIZE ADVERSE IMPACTS

This section will analyze, summarize, and discuss the probable impacts of the proposed action on the environment.

I. PRIMARY IMPACTS

A. Short-Term Environmental Impact

1. Economic Impacts

Within the next six to eight months, approximately \$70,000.00 will be spent on this project. A significant amount of this money will be spent on the collection, packaging, and shipping of the hazardous waste out of the state to an approved hazardous waste landfill in California. The cost per 55-gallon barrel for packaging and shipping from Maui ranges from \$900.00 to \$1,200.00, nearly double the price from one year ago. It is estimated that the money spent on this project will generate approximately 1.1 more because of the multiplier effects for the purchase of goods and services. Therefore, approximately \$77,000.00 to \$147,000.00 will be injected into the local economy in the next six to eight months.

2. Air Quality

No significant adverse air quality impacts are anticipated from this action.

3. Water Quality

There will be no significant adverse environmental impacts to water quality. The proposed

action will be conducted on an impervious surface and as an additional precaution, a waterproof plastic liner will be placed on the ground to contain any spills. These precautions will eliminate the possibility of ground and surface water contamination.

4. Biological

There are no endangered or rare species of plants or animals located on the project site that will be affected by the proposed action.

5. Infrastructure

The proposed action will not place demands on the existing infrastructure. Water, electricity, and telephone services are available on the site.

6. Traffic

Potential traffic problems will be mitigated by the hiring of an off-duty police officer for traffic control. The action will occur on a Saturday and not during peak traffic periods or when the facility is not in operation.

B. Long-Term Impacts

1. Economic

There will be no long-term economic impacts from the implementation of this action.

2. Air Quality

There may be long-term air quality impacts. If the homeowner assumes the responsibility of the proper use and disposal of the product containing hazardous

substances, the release of the volatile substance into the atmosphere will be lessened or eliminated. The removal of these substances from the waste stream will decrease the amount of dioxin and other toxic substances formed during the incineration process.

3. Water Quality

The collection and processing of the homeowner's hazardous waste will take place on an impervious surface. That surface will be covered with a plastic liner, as an additional precaution against liquids seeping into the ground. Also, all activities will be conducted under cover, within a shed, limiting the possibility of rainwater and wind currents carrying the chemicals from the project site.

If the public recognizes that household waste contains hazardous substances and takes an active part in the proper use and disposal of the products, there is a possibility that contamination of the surface and ground water from this source will be reduced or eliminated.

4. Biological Impacts

It is difficult to determine if there will be a long-term biological impact. Again, if the homeowner assumes the responsibility for the proper use and disposal of the waste, then there is less possibility of long-term biological impacts. The toxic substances will be removed from the biological food chain cycle; there will be less injury to waste handlers; and there will be a decrease in the incidence of poisoning among children.

5. Other

The proposed action will not have a long term environmental impact on: archaeological and historical sites, infrastructure, recreational sites, population, land use, housing, real property taxes, access to near shore areas, and visual concerns.

II. Secondary Impacts

A. Introduction

Secondary environmental impacts are those which are anticipated over the duration of the existence of the project and include indirect benefits arising from the proposed action.

B. Anticipated secondary environmental impacts

The proposed action will occur on one day only and no long-term secondary impacts will result from the collection and disposal of the household hazardous waste. However, the educational and public awareness components of the program may have long-term secondary environmental impacts. These impacts are difficult to quantify, but experience gained from other programs held in other communities have been: a general increase in awareness and concern regarding hazardous waste in the homes, which resulted in a decrease in use of hazardous substances; a demand for more information on the toxic ingredients used in product formulation; changes in the product formulation by industry in response to public pressure; increasing numbers of hazardous waste pickup programs; the establishment of permanent sites for household hazardous waste pickup; and development of educational programs on hazardous waste within the school system.

Adverse Environmental Effects

SECTION 4
PROBABLE ADVERSE ENVIRONMENTAL IMPACTS
THAT CANNOT BE AVOIDED

This section will briefly discuss the probable adverse environmental impact and mitigative measures when applicable and a rationale for proceeding.

I. PRIMARY SHORT-TERM IMPACTS

A. Probable Impacts and Mitigative Measures

1. Traffic

No major traffic problems are anticipated. However, there is the possibility that minor traffic problems may occur within the project site.

Mitigative measures: traffic control within the project site will be implemented by designation of flow patterns using traffic cones and the hiring of an off-duty police officer for enforcement and security.

2. Accidental Spills

There is always the possibility of accidental spills of household hazardous waste.

Mitigative measures: Accidental spills will be contained on the plastic liner that will be used, and sorbant material will be available to contain and absorb the chemical substances.

3. Exposure of personnel to hazardous waste

There is always the possibility of exposure to hazardous substances.

Mitigative measures: Participants will be kept away from the collecting and packaging areas. The toxic waste will be handled by trained personnel, who will wear protective clothing and gas masks. A properly trained Safety Officer will be designated and have the authority to impose all safety requirements.

II. PRIMARY LONG-TERM IMPACTS

No long-term primary adverse environmental impacts are anticipated from the proposed action.

III. SECONDARY IMPACTS

No long-term secondary adverse environmental impacts are anticipated from the proposed action.

Alternatives

SECTION 5
ALTERNATIVES TO THE PROPOSED ACTION

This section briefly discusses the alternatives to the proposed action.

I. NO ACTION

A no action alternative was considered. This alternative would result in returning approximately \$70,000 of Federal and State grant money specifically appropriated for this task. The entire project has been scaled down, returning approximately \$50,000 to the State. We believe that the elimination of toxic wastes from the environment and the education of the public with regards to the potential hazards of toxic substances commonly found in the home are presently warranted, and a no action alternative will do little to provide information on the proper use and disposal of toxic substances.

II. COMBINATION OF FARMERS AND HOMEOWNERS HAZARDOUS WASTE PICKUP

Having the farmers and homeowners hazardous waste pickup on the same day would result in packing, labeling, and, ultimately, disposal problems. It is essential that the waste stream of the major toxic waste generators and that of the homeowners be separated to prevent disposal problems. The present requirements dealing with handling, packing, labeling, and disposal reasonably preclude a joint pickup of toxic wastes. Also, there is a shortage of qualified people who could work on a joint program.

**Short
Term Uses · Long
Term Productivity**

SECTION 6
THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF
MAN'S ENVIRONMENT AND MAINTENANCE AND
ENHANCEMENT OF LONG-TERM PRODUCTIVITY

This section discusses briefly the extent to which the proposed action involves trade-offs between short-term environmental gains at the expense of long-term losses, or vice versa, and the extent to which the proposed action forecloses future options, narrows the range of beneficial uses of the environment, and proposes long-term risks to health or safety.

The proposed action will not cause trade-offs between short-term environmental gains at the expense of long-term losses, foreclose future options, nor narrow the beneficial uses of the environment or propose long-term risks to the health or safety of the people of Hawaii. As a matter of fact, the successful implementation of the proposed action will directly remove some of the toxic substances commonly found in homes and may prevent undue exposure to these substances. There is a possibility that the removal of these substances may also lower the probability of accidental poisoning of children.

The educational component of the program, if successfully implemented, will have long-term environmental impacts. The proper use and disposal of household products containing toxic substances undoubtedly will contribute to the lessening of air and water pollution.

Commitment of Resources

SECTION 7

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

This section considers the commitment of resources that will be made once the project is implemented.

I. FINANCIAL

Financial resources, already allocated, for the project will be used. There are no competing uses for the funds.

II. LABOR

Approximately 20 mandays have been used for the planning of the project, and another 10 mandays for the collection and another 40 mandays for the education phase are projected.

Government Policies to Offset Adverse Effects

SECTION 8

AN INDICATION OF WHAT OTHER INTEREST AND CONSIDERATIONS OF
GOVERNMENTAL POLICY ARE THOUGHT TO OFFSET THE ADVERSE
ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION

As indicated in Section 3 (Anticipated Environmental Impacts and Mitigative Measures to Minimize Adverse Environmental Impacts), most of the adverse impacts are short-term related and effective measures have been planned to mitigate any adverse environmental impacts.

All of the adverse impacts anticipated from the implementation of the proposed action are insignificant compared to the gains.

Approvals

SECTION 9
LIST OF NECESSARY APPROVALS

FEDERAL

Hazardous waste manifest number.

Status - Obtained - EPA No. applied for and
forthcoming

STATE

None required.

OTHER

Permission to use private facility.

Status - approval from C. Brewer obtained.

JOHN WAIHEE
GOVERNOR



MARVIN T. MIURA, Ph.D.
DIRECTOR

TELEPHONE NO.
548-6915

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
465 SOUTH KING STREET, ROOM 104
HONOLULU, HAWAII 96813

December 4, 1987

Mr. Art Suzuki, Mgr.
C. Brewer Chemical Corp.
28-10 Beach Road
Kahului, Maui, Hawaii 96732

Dear Mr. Suzuki:

This is to confirm our conversation of today, establishing the date of our household toxic waste pick-up project on Saturday, January 23, 1988 on Maui.

We appreciate your kindness in making your facility available to us for it is comforting to have shower facilities and other emergency measures close by in case of any accident on site.

Thank you for your generosity, cooperation and do have a Merry Christmas.

Sincerely,

A handwritten signature in cursive script that reads "George Brosky".

George Brosky
Planner

Organizations and Persons Consulted

SECTION 10
AGENCIES, ORGANIZATIONS AND PERSONS CONSULTED
IN THE PLANNING AND REVIEW PROCESS

STATE AGENCIES

DEPT. OF HEALTH

Hazardous Waste Program - Grace Marcos - Ext. 8837
Administrative Services - Calvin Kuniyama - Ext. 5995

DEPT. OF AGRICULTURE

Pesticides Branch - Dean Yoshizu - Ext. 7124
Hector Matsuda - Ext. 7125

MAUI COUNTY AGENCIES

Maui Fire Dept.-Maui 911
Maui Police Dept. - Sgt. Tamura - Maui 911
Maui Memorial Hospital - Alan Lee - Maui 242-2080
Maui Memorial Hospital Emergency Room - Supervisor -
Maui 242-2343.

FEDERAL AGENCY

U.S. Environmental Protection Agency - Mr. Bob Boesch
- Ext. 8837

PRIVATE AGENCIES

Poison Control Center, Supervisor Amy Shimamoto, RN
Honolulu 941-4411.
To call from Maui - 1-800-362-3585

C. Brewer Chemical Co. - Art Suzuki - Maui 244-3761
Unitek Environmental Services - Derek Yasaka -
834-1444

Appendices

Appendix A

OTHER HOUSEHOLD ITEMS THAT MAY BE HAZARDOUS

I. HOUSEHOLD CLEANERS

A. Drain Openers; (C)*

1. Sodium Hydroxide; Lye; Caustic Soda; (C)
2. Potassium Hydroxide; (C)
3. Sulfuric Acid; (C)
4. Hydrogen Chloride; Hydrochloric Acid;
Muriatic Acid; (C)

B. Oven Cleaners; (C)

1. Sodium Hydroxide; Lye; Caustic Soda; (C)

C. Toilet Bowl Cleaners (C)

1. Hydrogen Chloride, Hydrochloric Acid;
Muriatic Acid; (C)
2. Sodium Acid Sulfate; (C)

D. General Purpose Cleaners; (C or I)

1. Oxalic Acid; (C)
2. Sodium Hydroxide; (C)
3. Ethyl Alcohol; (I)

E. Disinfectants; (C or I)

1. Sodium Salt of O-phenyl phenol;
Dowicide A; Natriphene; (C)
2. Pine Oil; (I)
3. Isopropyl Alcohol; Isopropanol; (I)
4. Ethanol; Ethyl Alcohol; (I)

II. AUTOMOTIVE PRODUCTS

- A. Lubricating Fluids; (I or E)
 - 1. Petroleum Distillates; (I)
 - 2. Lead; (E)
- B. Radiator Fluids and Additives
 - 1. Morpholine; Tetrahydro-1,4-oxazine; (I)
- C. Waxes, Polishes and Cleaners; (I or C)
 - 1. Petroleum Distillates; (I)
 - 2. Phosphoric Acid; (C)
- D. Grease and Rust Solvents; (C)
 - 1. Phosphoric Acid; (C)
 - 2. Potassium Hydroxide; Caustic Potash; (C)
- E. Body Putty; (I)
 - 1. Toluene; Toluol; (I), (U220)
 - 2. Butyl Acetate; (I)
 - 3. Styrene; Vinyl Benzene; (I)
- F. Transmission Additives; (I)
 - 1. Xylene; Xylol; Dimethylbenzene; (I)

III. HOME MAINTENANCE AND IMPROVEMENT PRODUCTS

- A. Paints; (I)
 - 1. Xylene; Xylol; Dimethylbenzene; (I), (U239)
 - 2. Toluene; Toluol; (I), (U220)
 - 3. Propane; (I)
 - 4. Vinyl Acetate; (I)
 - 5. Amyl Acetate; (I)
 - 6. Vinyl Toluene; Methyl Styrene; (I)
- B. Paint Removers and Strippers; (C)
 - 1. Hydrogen Chloride; Hydrochloric Acid; Muriatic Acid; (C)

- C. Stains, Varnishes, and Sealants; (I)
 - 1. Mineral Spirits; (I)
 - 2. Petroleum Distillates; (I)

IV. MISCELLANEOUS

- A. Batteries; (C or E)
 - 1. Sulfuric Acid; (C)
 - 2. Mercury; (E)
 - 3. Mercuric Oxide; (E)
 - 4. Potassium Hydroxide; (C)
 - 5. Sodium Hydroxide; (C)
 - 6. Silver Oxide; (E)
 - 7. Silver; (E)
 - 8. Lead; (E)
 - 9. Lead Peroxide; (E)
 - 10. Lead sulfate; (E)

- B. Fingernail Polish Removers; (I)
 - 1. Acetone; (I), (U002)
 - 2. Ethyl Acetate; (I), (U112)

- C. Pool Chemicals; (R)
 - 1. Sodium Dichloro-S-triazinetriene; (R)

- D. Photo Processing Chemicals; (E, C, or I)
 - 1. Silver; (E)
 - 2. Selenium; (E)
 - 3. Sulfuric Acid; (C)
 - 4. Heptane; (I)

- E. Electronic Items; (E)
 - 1. Electrical Solder
 - a. Lead; (E)
 - b. Silver; (E)

 - 2. Switches
 - a. Mercury; (E)

IV. MISCELLANEOUS (Continued)

E. Electronic Items; (E) (Continued)

3. Floodlights

a. Mercury Vapor; (E)

- *I: Ignitable per 40 CFR Part 261.21
- C: Corrosive per 40 CFR Part 261.22
- E: EP Toxic per 40 CFR Part 261.24
- R: Reactive per 40 CFR Part 261.23
- U###: EPA hazardous waste number for a specific hazardous waste appearing in 40 CFR Part 261.33 (f)

Note: Components listed are examples of those likely to be found in each generic type of item. The percentages of these components in these items vary from one brand to another and thus the components may result in the item being hazardous. However not all examples of each generic type listed contain the listed components (or other hazardous components) and these examples would not likely fail any of the characteristic tests.