



EXECUTIVE CHAMBERS

HONOLULU

GEORGE R. ARIYOSHI
GOVERNOR

March 27, 1979

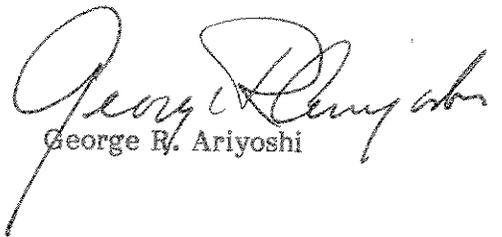
MEMORANDUM

TO: Mr. Donald A. Bremner, Chairman
Environmental Quality Commission

SUBJECT: Environmental Impact Statement for Maui Vacuum Cooling Plant
Improvements, Kula, Maui

Based upon the recommendation of the Office of Environmental Quality Control, I am pleased to accept the subject document as satisfactory fulfillment of the requirements of Chapter 343, Hawaii Revised Statutes, and the Executive Order of August 23, 1971. This environmental impact statement will be a useful tool in the process of deciding whether or not the action described therein should or should not be allowed to proceed. My acceptance of the statement is an affirmation of the adequacy of that statement under the applicable laws, and does not constitute an endorsement of the proposed action.

When you make your decision regarding the proposed action itself, I hope you will weigh carefully whether the societal benefits justify the environmental impacts which will likely occur. These impacts are adequately described in the statement, and, together with the comments made by reviewers, will provide you with a useful analysis of alternatives to the proposed action.


George R. Ariyoshi

cc: Honorable Hideo Murakami
Mr. Richard L. O'Connell



Office of Environmental Quality Control
Office of the Governor
550 Halekauwila Street
Tani Office Building, Third Floor
Honolulu, Hawaii 96813



ENVIRONMENT IMPACT STUDY CORP.

**MAUI VACUUM COOLING PLANT
IMPROVEMENTS
Environmental Impact Statement
Revised**

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STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

REVISED
ENVIRONMENTAL IMPACT STATEMENT
FOR THE
MAUI VACUUM COOLING PLANT IMPROVEMENTS
KULA, MAUI, HAWAII
MAUI TMK 2-3-03:23

This environmental document is submitted
pursuant to Chapter 343, HRS

Accepting Authority: Governor
State of Hawaii

Responsible Official: Hideo Murakami
Comptroller
Dept. of Accounting
and General Services

Prepared by: Environment Impact Study Corporation

February, 1979

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SUMMARY

MAUI VACUUM COOLING PLANT IMPROVEMENTS

KULA, MAUI, HAWAII

PROPOSED PROJECT: MAUI VACUUM COOLING PLANT IMPROVEMENTS
PROPOSING AGENCY: DEPARTMENT OF ACCOUNTING AND GENERAL
SERVICES
ACCEPTING AUTHORITY: GOVERNOR
STATE OF HAWAII

The State Department of Accounting and General Services proposes to improve the Maui Vacuum Cooling Plant, located on a 2.5 acre site approximately 5 miles south of the community of Makawao, County of Maui. The project site is accessible from the west via Omaopio Road and from the east via Omaopio Road and Kula Highway.

The objective of the proposed improvements is to increase the volume of produce which can be processed in order to keep pace with increasing agricultural production in the Kula area.

The proposed expansion of the plant facilities calls for the following:

1. The construction of a 24-foot by 40-foot building addition for a truck staging area; a 20-foot by 20-foot building addition for an office, conference-coffee room and restroom facilities;

and 22-foot wide overhanging roofs to cover the loading dock and local farmers' unloading area.

2. Installation of four 18-foot O.H. roll-up doors at the truck staging area side walls.
3. Construction of a 20-foot by 105-foot elevated loading dock.
4. Construction of a 16,725 square foot asphalt concrete paved area surrounding the loading dock and chain link fencing along the site boundary.
5. Installation of a new 4-skip vacuum cooling chamber unit with trolley tracks.
6. Construction of a 20-foot by 40-foot building addition to house a new walk-in refrigerator (reefer) unit with electrically operated doors.
7. Installation of an electrical door opening mechanism in the existing reefer unit.

Future plans may include the installation of a second new 4-skip unit and replacement of the two existing 2-skip vacuum chambers with larger 4-skip units.

Funding for proposed expansion of the Maui Vacuum Cooling Plant was made available by Act 195, Session Laws of Hawaii, 1975, in the amount of \$40,000, by Act 226 Session Laws of Hawaii, 1976, in the amount of \$149,500, by Act 9, Session Laws of Hawaii, 1977, in the amount

of \$270,000, and by Act 244, Session Laws of Hawaii, 1978, in the amount of \$175,000.

The land on which the plant is located was formed by prehistoric lava flows from Haleakala Volcano. Soils at the site are Keahua silty clay. The climate of the site is warm and sunny. Winds are generally light and from the northeast.

Vegetation at the site consists primarily of pasture grasses, such as Kikuyu grass and stargrass. Wildlife consists primarily of birds. No threatened or endangered species of plants or animals were found at the site during a reconnaissance survey.

There is one archaeological site near the project area: Mana Heiau, located approximately 750 feet west of the site.

Potable water, electricity, and telephone service are available to the project site. Police patrol the area at least 3 times daily. Response time for fire and rescue services is estimated at 12 minutes.

Expansion of the plant would be in compliance with land use plans, policies, and controls for the area.

Anticipated adverse impacts associated with the proposed project primarily involve construction activities. For example, there would be an increase in existing noise during construction of the building additions and paved

area. Another impact would be generation of some dust during the grading prior to paving. There will be some traffic disruption during development of the access points. All of these impacts are not anticipated to be greatly significant and will be of short duration, lasting only for the required construction period.

Long-term impacts from the proposed action include benefits from crop sales due to increased production, increased agricultural employment, and greater self-sufficiency for the State. Expansion of the cooling plant would preclude activities and development incompatible with that of the plant.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

proposed project 1

SECTION 1

DESCRIPTION OF THE PROPOSED PROJECT

I. INTRODUCTION

The proposed project consists of the expansion of the Maui Vacuum Cooling Plant (locally known as the Kula Vacuum Cooling Plant). This plant is used to chill locally grown vegetables before shipment to market, thus expanding the shelf life to about 14 days. Without vacuum cooling, the shelf life of the produce would be approximately 5 days. The proposed expansion will consist of the following (in the priority established by the DOA):

1. The construction of a 24-foot by 40-foot building addition for a truck staging area; a 20-foot by 20-foot building addition for an office, conference-coffee room and restroom facilities; and 22-foot wide overhanging roofs to cover the loading dock and local farmers unloading area.
2. Installation of four 18-foot O.H. roll-up doors at the truck staging area side walls.
3. Construction of a 20-foot by 105-foot elevated loading dock.
4. Construction of a 16,725 square foot asphalt

concrete paved area surrounding the loading dock and chain link fencing along the site boundary.

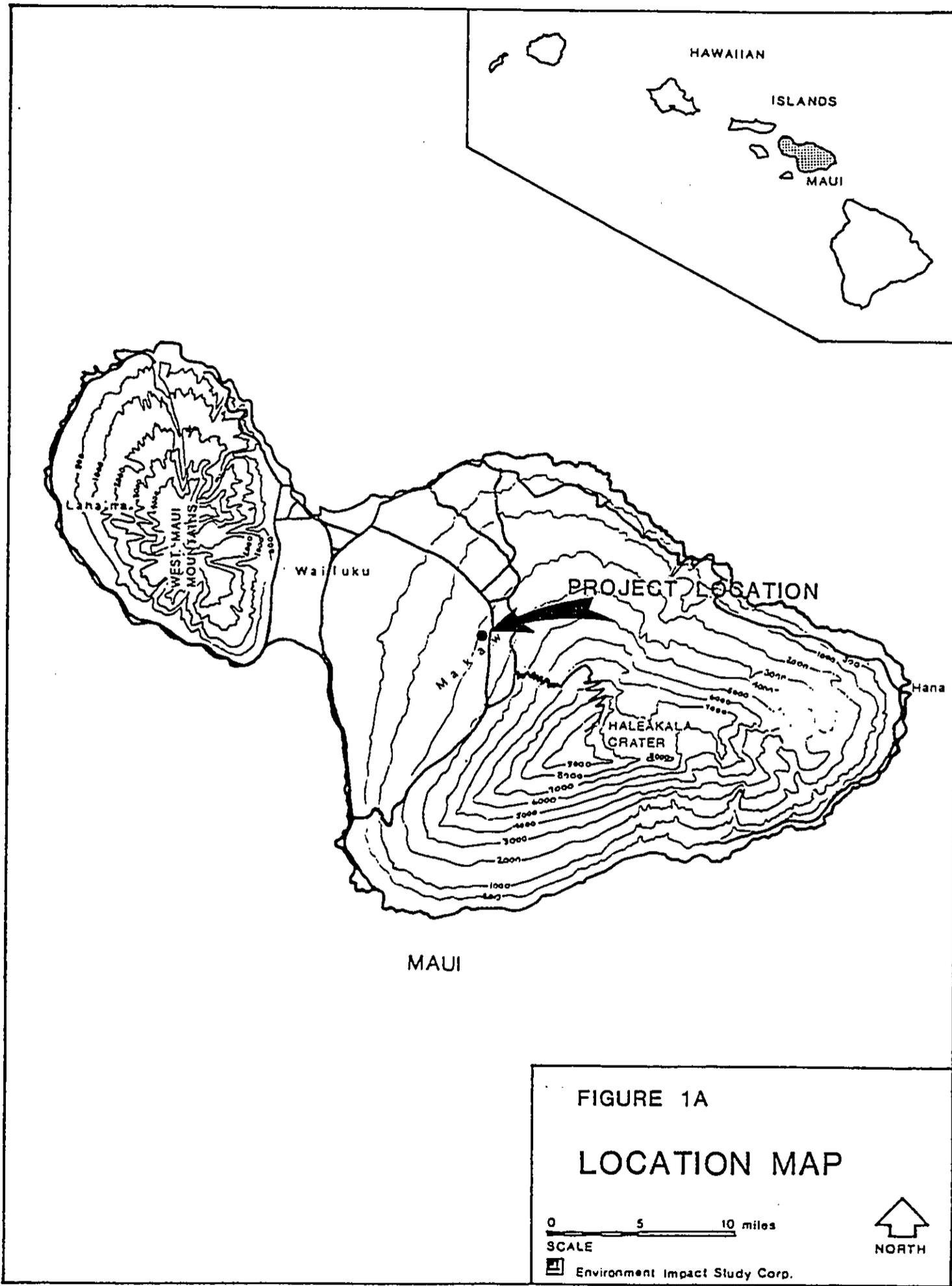
5. Installation of a new 4-skip vacuum cooling chamber unit with trolley tracks.
6. Construction of a 20-foot by 40-foot building addition to house a new walk-in refrigerator (reefer) unit with electrically operated doors.
7. Installation of an electrical door opening mechanism in the existing reefer unit.

Future plans may include the installation of a second new 4-skip unit and replacement of the two existing 2-skip vacuum chambers with larger 4-skip units.

The proposed project is located on a 2.5 acre site approximately 5 miles south of the community of Makawao in the Kula area, on the island of Maui. Access is available from Omaopio Road via Kula Highway. Note Figures 1A, 1B, 2 and 3.

II. PROJECT OBJECTIVES

The immediate objective of the proposed project is to increase the volume of produce which can be chilled and stored before delivery to market. The present facility was designed to process 6.5 to 7.0 million pounds of produce annually. In 1977 the plant processed a total of 6,591,815 pounds, or close



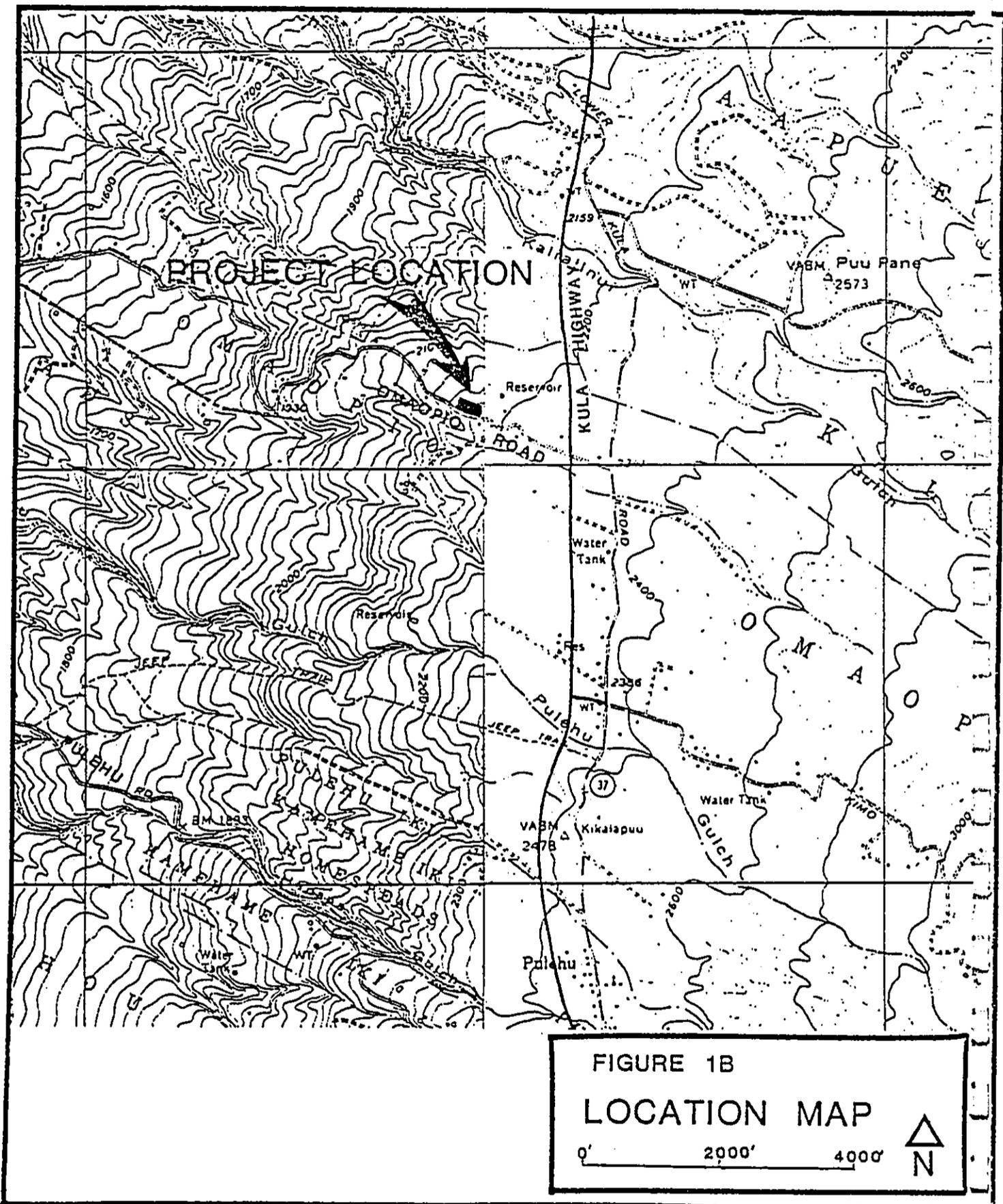


FIGURE 1B
 LOCATION MAP

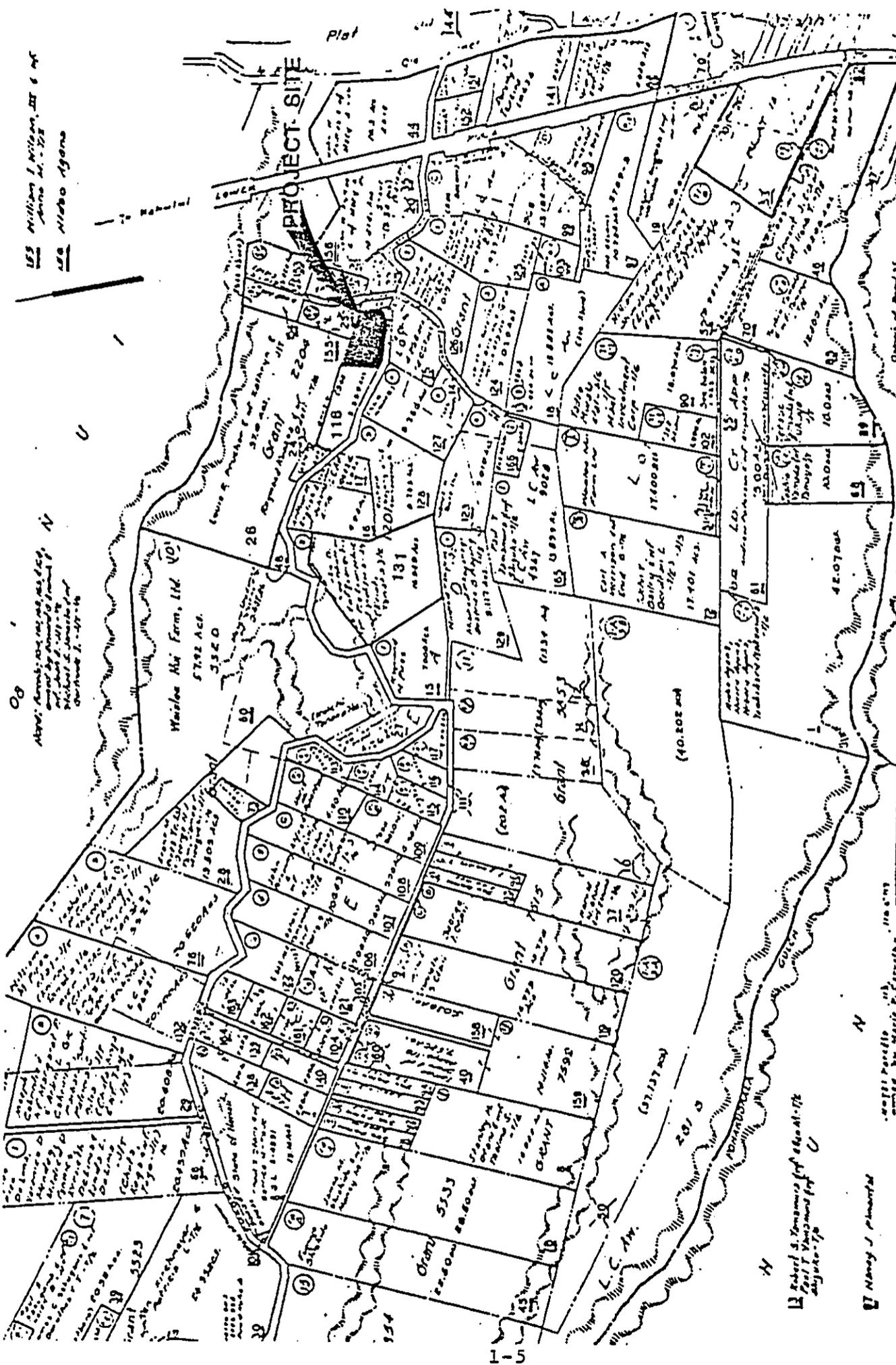


FIGURE 2
TMK MAP

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125 Robert S. Thomas (part of 124)
 126 Paul T. Thompson (part of 124)
 127 Nancy J. Thomas

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128 Robert S. Thomas (part of 124)
 129 Paul T. Thompson (part of 124)
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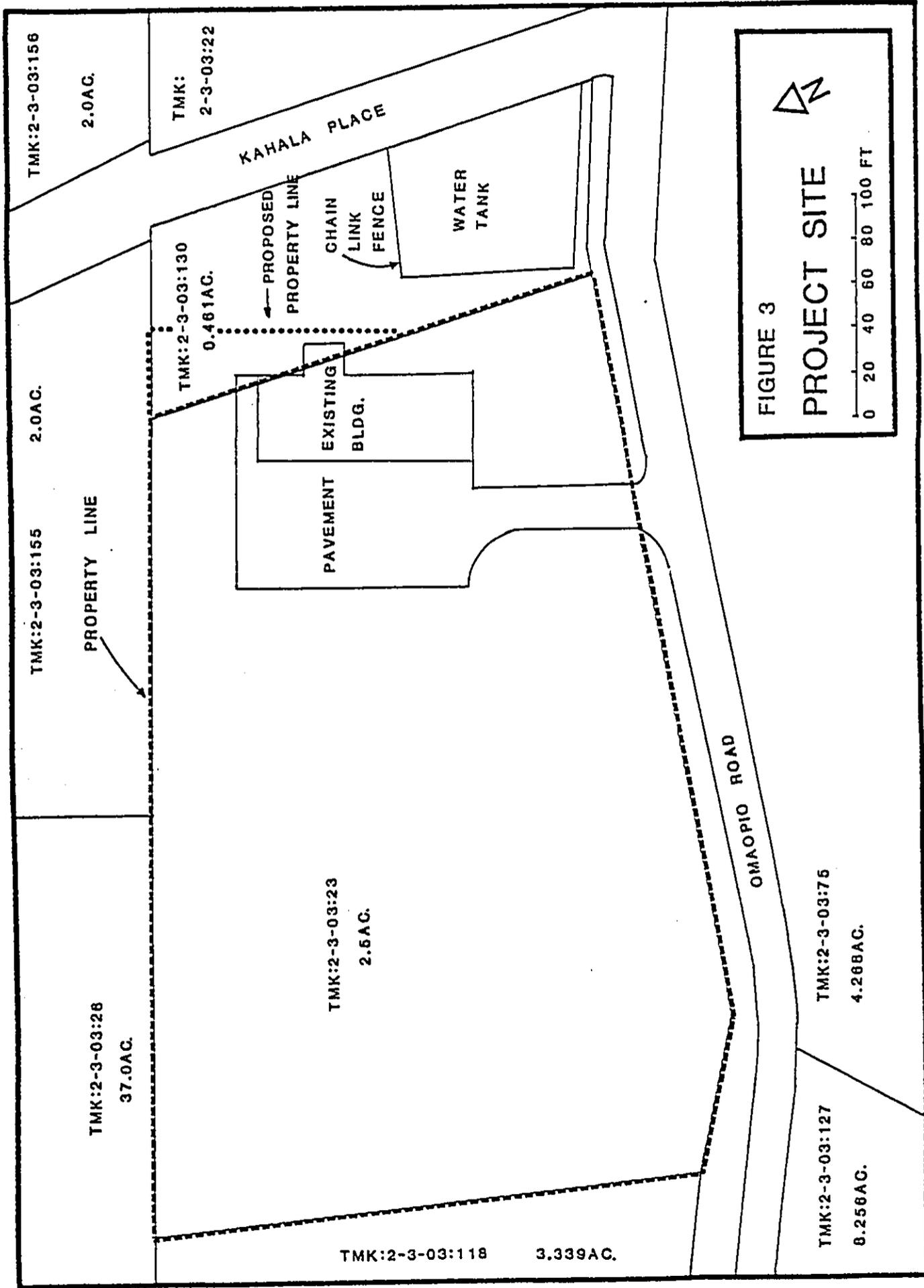
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to 6.6 million pounds. Thus, the plant is close to or at capacity at the present time.

In the vicinity served by the facility, all of the farmers harvest at the same time, and produce must be processed within two to three hours to prevent spoilage or deterioration of quality. The heaviest load is between 11 a.m. and 3 p.m., 5 days per week.

Thus, capacity must be geared to the peak demand. In 1977, for example, the peak month was July. The plant processed a total of 654,655 pounds of produce over a period of approximately 2 weeks. This averages out to 46,761 pounds per day, most of which was probably processed during the peak hours. Keeping in mind that this average is probably on the low side, this means that approximately 39 skips (at 1,200 pounds per skip) were processed in four hours each day. Thus, usage during that time came close to or equalled the maximum capacity of 12 skips per hour, or 48 skips in 4 hours. To keep pace with increases in production, the capacity of the coolers must be increased.

In addition to the capacity of the vacuum coolers, the capacity of the the reefer units must be increased also. On the "average" peak day described above, the existing reefer would be pushing its limits since

ideal loading is 16 skips and maximum loading is 30 skips.

Availability of vacuum cooling means that members of the Maui Produce Processing Cooperative (MPPC) can market produce within the State that is as good or better in quality than like products traditionally imported from the mainland. Vacuum cooled produce has had fewer losses, better consumer acceptance and higher returns to the farmers.

If the plant capacity is not increased the quality of the produce over and above capacity will deteriorate, and it is potentially possible that the produce will no longer be able to compete successfully on the local market against mainland products. This will result in the loss of the Hawaiian market for the produce.

The proposed project will enable the farmers to increase their capacity and to expand their acreage presently under cultivation.

By doing so, they can purchase farm inputs in bulk and reduce their production costs. In addition to accommodating increased acreages, the project would accommodate the increased yield per unit acre anticipated by the proper selection of various varieties of produce. An increase of up to 10% is

anticipated within three to five years according to research conducted by the University of Hawaii.

Finally, the expansion will also aid in providing accessibility to the site by allowing the farmers to bring in all the produce at one time, thereby cutting down on the number of trips to and from the field and increasing efficiency.

III. EXISTING VACUUM COOLING PLANT AND OPERATION

The Maui Vacuum Cooling Plant was built in late 1973. Since then vegetable production on Maui has increased each year. One example is head lettuce. In 1972 (before vacuum cooling) 0.7 million pounds of lettuce were produced. Each year since then it has increased by at least 0.6 million pounds, with close to 4.6 million pounds being produced and processed in 1977. Other products which are currently processed by the facility include Romaine lettuce, Chinese cabbage, cauliflower, celery, spinach, and broccoli. Total production increased by 26.6% (1.1 million pounds) in 1976 and by 25.3% (1.3 million pounds) in 1977.

The present vacuum cooling plant consists of a 40-foot by 100-foot building housing a small office, two 2-skip vacuum cooling units with trolley tracks and a 20-foot by 40-foot walk-in reefer unit. In

addition there is a paved driveway and unloading area in front of the building (Note Figure 3). At present the doors to the reefer unit must be operated by hand.

The reefer can accommodate a maximum of 30-skips, however ideal loading is 16-skips. Each vacuum unit can accomodate two skips (pallet boards) at one time, hence the designation "2-skip". Each vacuum cooling unit can operate at up to three cycles per hour (20 minutes per cycle) and thus handle a total of six skips per hour. Thirty to thirty-five skips per day is the average processed per day at the existing facilities. On heavy days approximately 45 to 56 skips can be processed per day. The maximum number of skips which can be processed in a 10 to 12 hour workday is 65 skips. In general, the heaviest load is between 11 a.m. and 3 p.m.

The vacuum cooling process is as follows:

Farmers using the facilities bring in their produce already packaged in corrugated fibreboard boxes and loaded on to a skip. Approximately 27 to 33 boxes can be accommodated on one skip (about 1,200 pounds) and the average farmer brings in 4 to 6 skips twice a week. Skips loaded with the produce are then placed onto trolleys using fork lifts, pushed to the

vacuum cooling unit and then placed into the vacuum cooling chamber automatically. Within the chamber the air pressure is lowered to produce a vacuum. In doing so the water evaporates from the produce and cools the produce to the evaporating temperature of water. At the end of 20 minutes the cooled produce is removed. At this point there are three options available to the farmer:

1. He may immediately remove the skips and take them to market.
2. The produce may be stored for approximately two to three hours in the refrigerator unit, which maintains the produce at 39°F. Then the farmer may pick up the produce and deliver it to the market; or the produce may be stored overnight for the farmer to pick up the following morning.
3. The produce may be temporarily stored in the reefer unit and then placed into refrigerated container vans or loaded directly into the vans. Each van has a capacity of 10 skips and maintains the temperature at 40°F. Approximately nine electrical outlets are available for van hook-up at the project site.

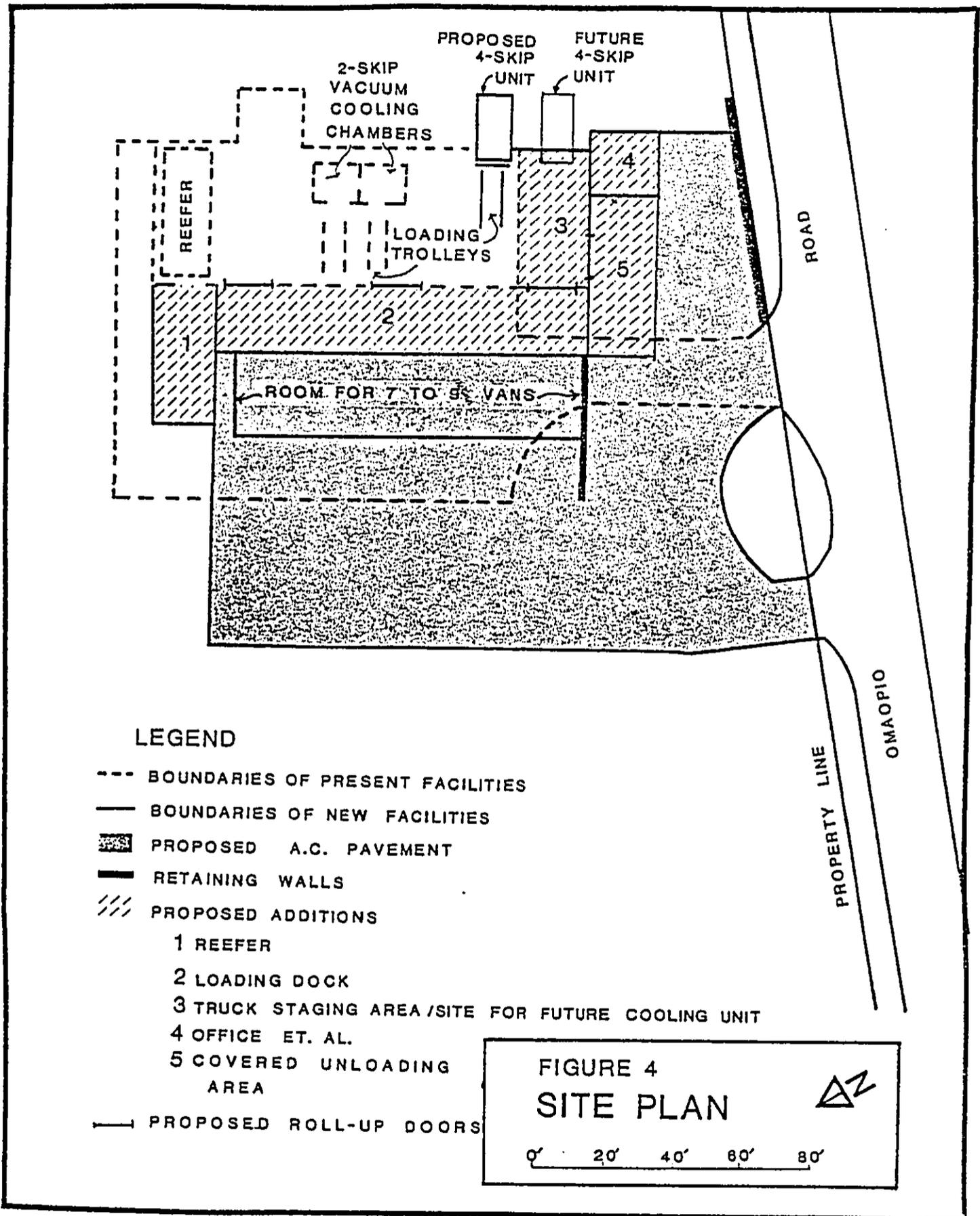
The only option available to the farmer on heavy processing days is for the farmer to immediately remove the skips from the reefer unit and take them to market. The produce can be taken (in the container vans) to the docks at Kahului where Young Brothers barges leave from Maui for the market in Honolulu on Monday, Wednesday and Friday of each week.

IV. PROPOSED ADDITIONS TO THE VACUUM COOLING PLANT

The proposed project will include the construction of the building addition, roll-up doors, loading dock and paved area and installation of a new vacuum cooler and storage reefer. Note Site Plan in Figure 4.

A 24-foot by 40-foot building addition will be located on the Omaopio side of the present building and will be used as a truck staging area. The existing office and restroom will be removed. A 20-foot by 20-foot building addition will be located adjacent to the first addition and will house an office, conference-coffee room and restroom facilities. A shower stall will be located in the men's restroom. A 22-foot wide overhanging roof will be constructed off the first building addition to cover the local farmers' unloading area.

Four 18-foot O.H. roll-up doors will be installed



LEGEND

- BOUNDARIES OF PRESENT FACILITIES
- BOUNDARIES OF NEW FACILITIES
- ▨ PROPOSED A.C. PAVEMENT
- ▬ RETAINING WALLS
- ▧ PROPOSED ADDITIONS
- 1 REEFER
- 2 LOADING DOCK
- 3 TRUCK STAGING AREA / SITE FOR FUTURE COOLING UNIT
- 4 OFFICE ET. AL.
- 5 COVERED UNLOADING AREA
- PROPOSED ROLL-UP DOORS

FIGURE 4
SITE PLAN

0' 20' 40' 60' 80'

at the truck staging area sidewalls (See Figure 4).

The 20-foot by 105-foot loading dock will be 4-feet high and will be located adjacent to the front of the existing building and extend to the front of the first proposed addition. A 22-foot wide overhanging roof will be constructed off of the main building and addition to cover the loading dock area.

Approximately 16,725 square feet surrounding the loading dock and entrance will be paved with asphalt concrete. This will allow ease of movement in entering and leaving for the farmers and for the 8-foot by 20-foot refrigerated container vans. There will be room for seven to nine vans adjacent to the loading dock.

The proposed project will include a 20-foot by 40-foot building addition to house a new walk-in reefer unit with electrically operated doors. It will be located at the end of the new loading dock adjacent to the existing reefer unit. A staircase will be located adjacent to the new unit, connecting the loading dock with the paved area below. In addition, an electrical door opening mechanism will be installed in the existing reefer unit. Finally, a chain link fence will be constructed along the site boundary and a new 4-skip vacuum cooler will be installed in the main building.

Upon completion, the plant will be able to process up to 24 skips per hour or 96 in four hours. Up to 60 could be stored in the reefer units and 90 in the vans.

The plant is located on a parcel 2.5 acres in size and when the proposed expansions are completed it will cover approximately 28,135 square feet, or 0.65 acres. The parcel is owned by the State. Should future demand require expansion beyond the remaining acreage the DOA intends to acquire the adjoining parcel 118 (Note Figures 2 and 3). This property is owned by the State and presently is leased to Mr. Prucher, owner of adjoining parcel 26. Adjoining parcel 130 is owned by the State and is used by the County of Maui, Department of Water Supply. A request has been made to realign the property line between parcel 23 and parcel 130, as shown on Figure 3.

V. FUNDING

The project cost is estimated to be approximately \$500,000. Funds have been appropriated under four acts of the Session Laws of Hawaii (SLH). The breakdown is as follows:

<u>Funding</u>	<u>Authorization</u>
\$ 40,000	Act 195, Part VI, Section 91, SLH 1975
74,500	Act 226, Part VI-A, Section 91E, SLH 1976
75,000	Act 226, Part VI-A, Section 91F, SLH 1976
270,000	Act 9, SLH 1977
<u>175,000</u>	Act 244, Section 2, SLH 1978
\$ 634,500	

existing environment 2

SECTION 2

DESCRIPTION OF THE ENVIRONMENTAL SETTING

I. CLIMATE

The climate in the vicinity of the project site is generally mild. The temperature regime for Makawao is shown in Figure 5. Average winter temperatures range from the low 50's to the mid 60's and summer temperatures range from the low 60's to the low 70's. All time temperature extremes range from about 42°F to 82°F. The coldest month is March, with a mean maximum temperature of approximately 64°F and a mean minimum temperature of about 51°F. The warmest month is August, with a mean maximum temperature of approximately 70°F and a mean minimum temperature of about 62°F.

The project site receives from 20 to 25 inches of rain per year, primarily from November through April. Note Figure 6. Rainfall is light and variable. Heavy rains occur primarily in the winter months and are generated by winter storms, Kona storms, hurricanes or tropical storms. Drought conditions occur relatively frequently, resulting in competing demands between the predominant agricultural users and growing urban development [2,1].

Cool northeasterly trade winds blow between 5 and

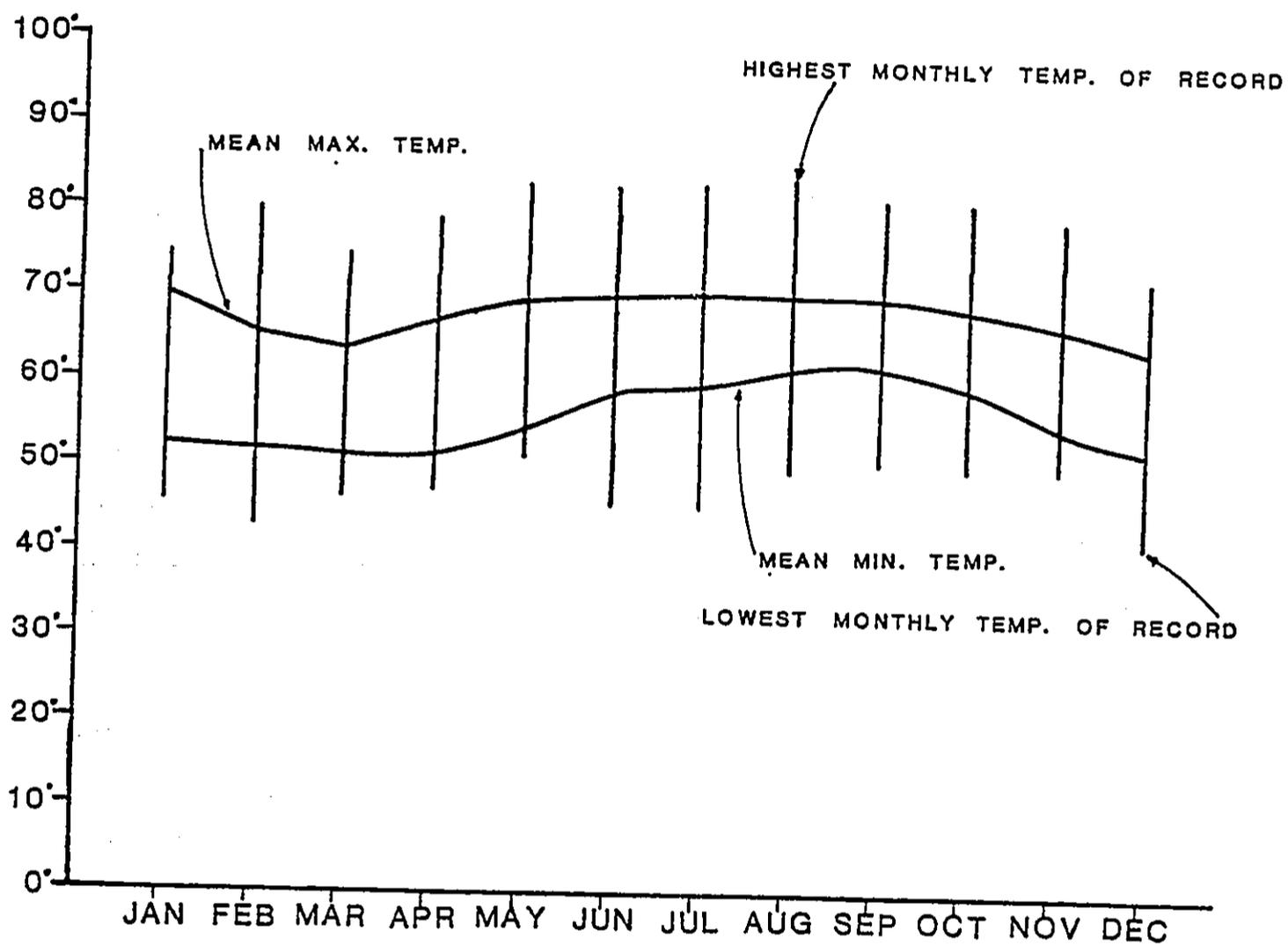
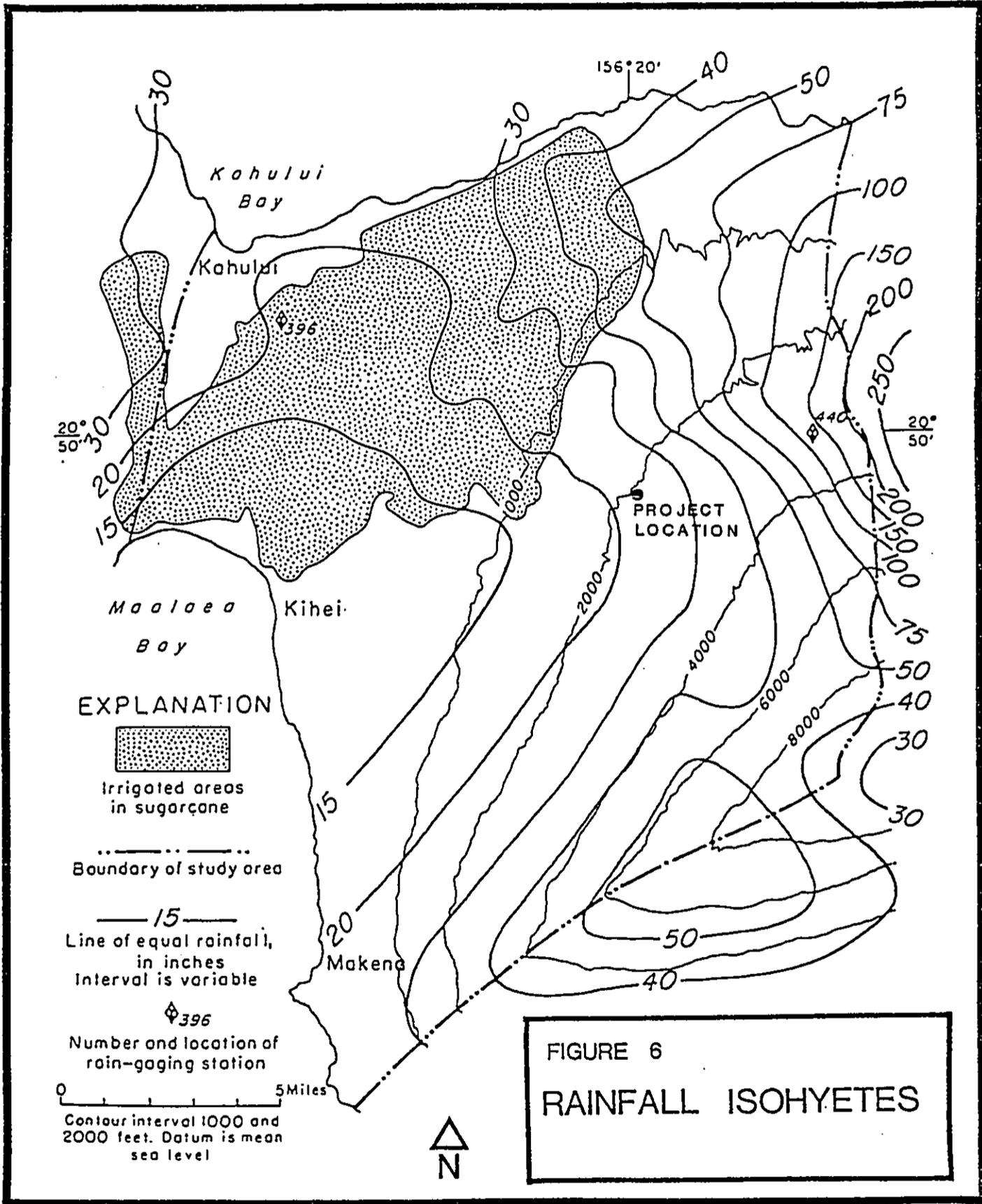


FIGURE 5
 TEMPERATURE REGIME:
 MAKAWAO
 SOURCE: ATLAS OF HAWAII



10 mph in the vicinity of the project site. A localized wind caused by nighttime temperature variations along the slopes of Haleakala gives the area gentle, southeasterly evening breezes. Kona winds (from the south) occur primarily in the winter months.

II. TOPOGRAPHY

The project site is located on the lower slopes of Haleakala. Elevations on the subject property range from approximately 2,150 feet to approximately 2,200 feet. Natural slopes on the property are generally about 8%, with one area of 25% slope. The existing plant site is level. The parcel is bounded on the south by Omaopio Road and 500' to the north by an unnamed gulch. Note Figure 2-4. The gulch contains an intermittent stream. Between the site and the gulch are two parcels - TMK 2-3-03:155 and 2-3-03:154.

III. GEOLOGY

Haleakala is a shield volcano that developed in three major volcanic sequences: the Honomanu, the Kula, and the Hana Volcanic Series. Lava flows of the Honomanu Volcanic Series first built a primitive shield volcano. The shield was totally capped and buried by the flows of the Kula Volcanic series, with the last sequence being the Hana Volcanic Series. Note Figure 7.

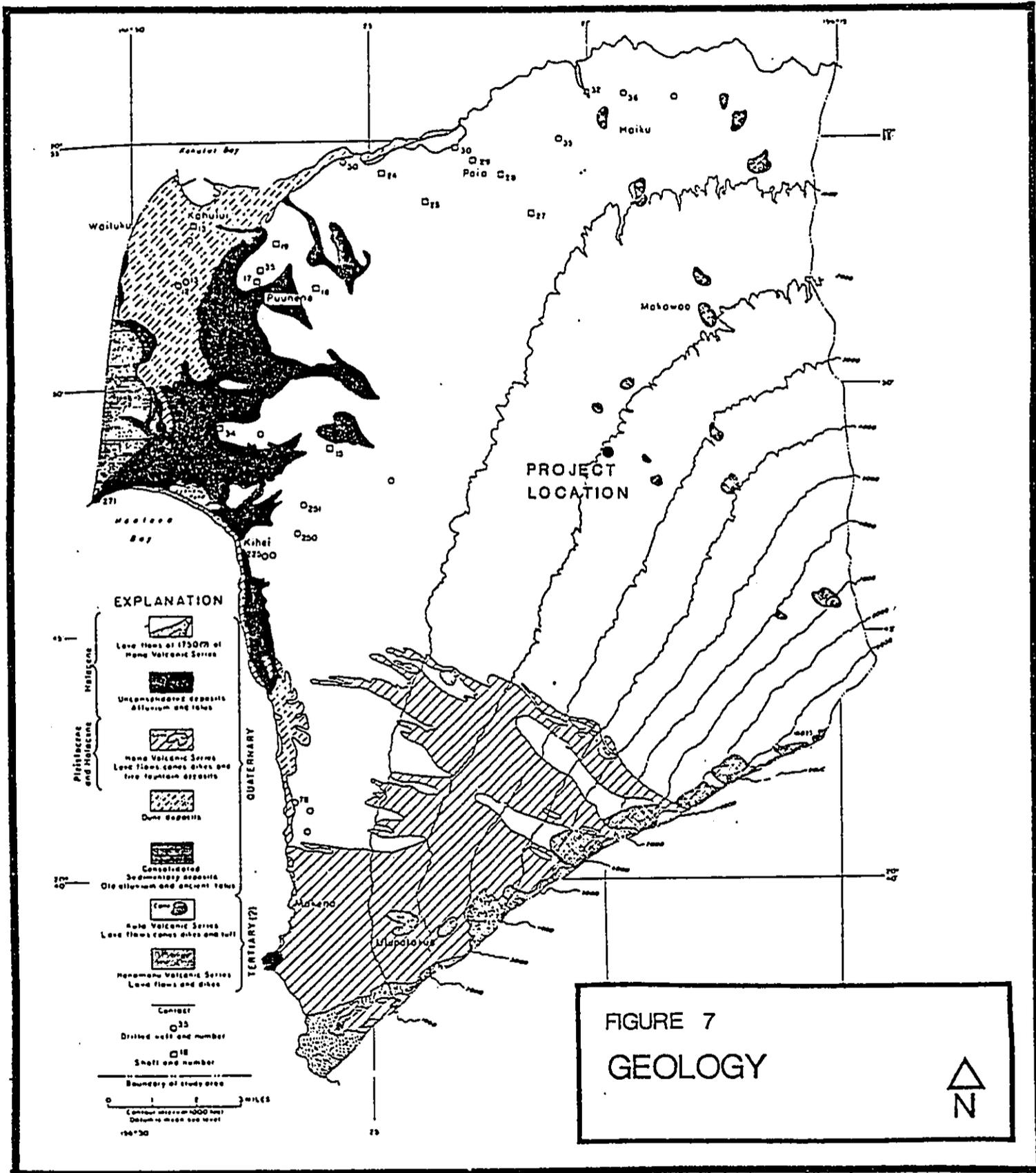


FIGURE 7
 GEOLOGY

Earthquake records indicate future eruptions are possible, and the volcano is considered to be dormant.

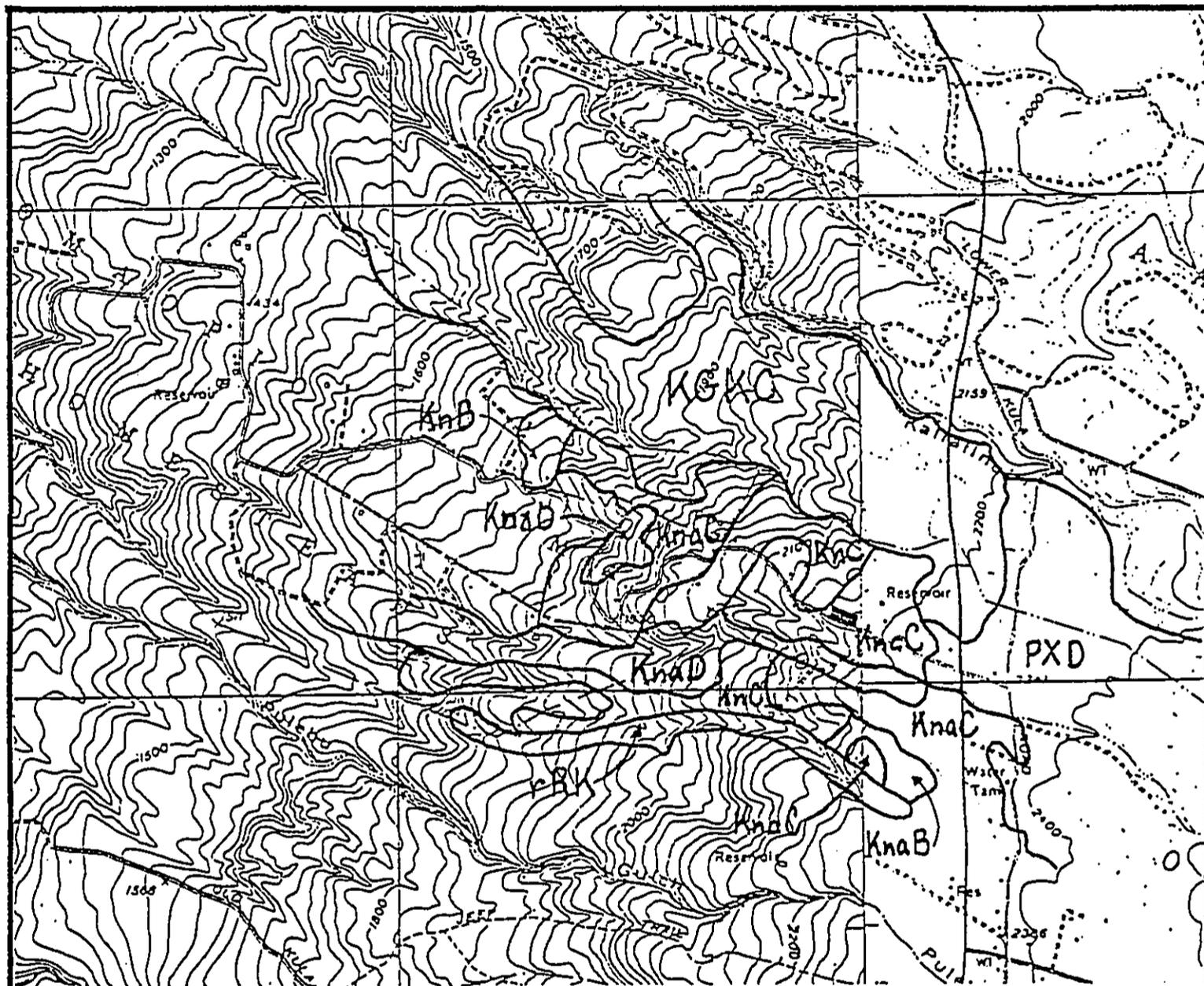
IV. SOILS

The soils in the vicinity of the project site are part of the Puu Pa-Kula-Pane Association. These soils are deep, gently sloping to steep, well-drained soils that have medium-textured or moderately fine textured subsoils. This association occurs on intermediate and high uplands and is used for truck crops, orchards, pasture and wildlife habitat.

The soil on the project site is Keahua silty clay, 7% to 15% slopes (KncC). Runoff is slow to medium, permeability is moderate, and the erosion hazard is slight to moderate. The limitation for septic tank filter fields is slight on slopes of 3% to 7%, moderate on slopes of 7% to 15% and severe on slopes of more than 15%. This soil is generally used for pineapple, pasture and homesites. Note Figure 8.

V. HYDROLOGY/DRAINAGE

Stream flow on the west slope of the Halekala is seasonal and sporadic. The volcanic topography is young and most surface runoff is accommodated by relatively small gulches. Much of the rainfall is



- KnC. KEAHUA SILTY CLAY LOAM
- KnB KEAHUA SILTY CLAY
- KnaC KEAHUA COBBLY SILTY CLAY LOAM
- KncC KEAHUA SILTY CLAY
- KnaB KEAHUA COBBLY SILTY CLAY LOAM
- KnaD KEAHUA COBBLY SILTY CLAY LOAM
- PXD PANE SILT LOAM
- rRK ROCK LAND
- KGKC KAMAOLE VERY STONY SILT LOAM

FIGURE 8
SOILS



absorbed by the ground. During heavy rains, surface runoff from the project site sheet flows northeast through parcels 118 and 26 to the unnamed gulch north of the site. Present runoff from the site is approximately 1.97 cfs (10-year storm).

VI. FLORA

The undeveloped area of the project site has evidently been used as a pasture. The predominant grasses in that area are Kikuyu grass (Pennisetum clandestinum) and stargrass (Cloris divaricata). There are also minor patches of Spanish clover (Desmodium canum), with a few castor beans (Ricinus communis) and koa-haole (Leucaena leucocephala). No rare or endangered species of plants were observed at the project site.

VII. FAUNA

The project site does not support a significant population of birds or mammals. Very few birds were observed during the field survey. Those that were seen included the barred dove (Geopelia striata) and the house sparrow (Passer domesticus). There are a few mice and rats in the area, but they do not present any significant problem [2,2].

The site does not constitute a sensitive wildlife habitat due to its near proximity to a residential area and the unavailability of water.

VIII. NOISE

Noise readings were conducted using a hand-held noise meter (Bruel and Kjaer, Type 2219 Meter). When the two vacuum cooling units began operation, the noise reading recorded was 72 dBA. An increase to 74 dBA was noticed when the vacuum cooling plants were cooling down the produce. When there was a vacuum break at the end of the vacuum cooling cycle, 98 dBA was observed within the structure. At the eastern edge of the property, 57 dBA was recorded when the vacuum was broken. At the western end of the project site, 54 dBA was recorded when the vacuum was broken. On Omaopio Road near the entrance to the existing parking lot 47 dBA was recorded and near the residential area on the opposite side of the property 47 dBA was recorded while the vacuum coolers were operating.

When noise readings were taken of the refrigerated vans, the wind was blowing at 10-20 mph from the northeast. Ambient readings ranged from 48 to 50 dBA. When one van was operating the reading at

the southern boundary of the site (150' from the vans) was 64 BA. When two vans were in operation the reading was 66 dBA. At the north end of the site (35' from the vans), the maximum reading for one van was 61 dBA and for two vans it was 62 dBA. This lower reading is due in part to the fact that the noisy ends of the vans were facing away from the noise meter and in part to the fact that the wind was coming from behind the meter.

IX. LAND USE

Current land use in the vicinity of the project site consists of low density residential to the north, a water tank and pastures to the east and pastures and agriculture to the west and south.

Proposed land use includes the Kula Agricultural Park, which will be located approximately 1.4 miles west of the project site on Pulehu Road. The location of the first increment is shown in Figure 9. It will be donated by Maui Land and Pineapple Company, which will also share in the cost of the required water system [2,3].

The second increment may be located east of the first increment, adjacent to Omaopio Road and Kula Highway. See Figure 9. It would total 362

acres. The land would be obtained by the Department of Land and Natural Resources through a land exchange with Haleakala Ranch.

Use of the park for farming is estimated to begin in approximately one year. A number of farmers have filed letters of intent to use the agricultural park when it is ready. Long-term leases of up to 35 years in length will be provided for the individual tenants. Approximately 24 to 39 acres will be assigned to each park parcel.

The maximum size of the park will be determined by the availability of irrigation water. Water will be provided by East Maui Irrigation Company's Wailoa Ditch (old Hamakua ditch). Approximately 2 to 3 MGD will be pumped out to provide for irrigation. The water will not be treated; therefore, it will not be potable water. The minimum size of the park will be determined by development costs which are to be recovered from the lessees in the park.

Seven crops have been selected as being suitable to the proposed agricultural park. They are: carrots, celery, ginger root, head lettuce, bulb onions, bell peppers and field grown tomatoes. All of them, except ginger, have been imported in larger quantities than produced locally, which means that within a fairly

wide latitude local farmers can expand acreage and increase production without much danger of over supply [2,4].

In general, establishment of an agricultural park is expected to encourage the development of the Omaopio-Pulehu area as the major center of diversified agriculture on Maui [2,5]. It is anticipated that by opening up or making available additional land to the farmers, vegetable production will increase by 20% [2,2].

The County plans no duplication in the production of agricultural products from one area to another [2,6]. This policy should act to minimize competition. For example the Haiku area will be developed with guava and passion fruit. The island of Molokai would be devoted to cattle, beans, seed corn, watermelon and other products. The Kihei area will have watermelon, seed corn, tomatoes and aquaculture. The Kula area will have leafy crops and protea. The Hana area will be developed for nursery products.

X. HISTORIC-ARCHAEOLOGICAL SITES

The closest site listed in the State register of historic places is Mana Heiau, located on TMK-2-3-03:131. The heiau is approximately 750 feet west of the project site. Note the TMK map.

No historic or archaeological sites are known to exist on the project site, which has been previously disturbed by the pasture and the existing vacuum cooling plant.

XI. PUBLIC FACILITIES

A. Recreation:

Recreation sites in the vicinity of the project site include several parks, two community centers, and two Game Management Areas. The sites are listed in Table 1 and are shown on Figure 10.

B. Fire and Police:

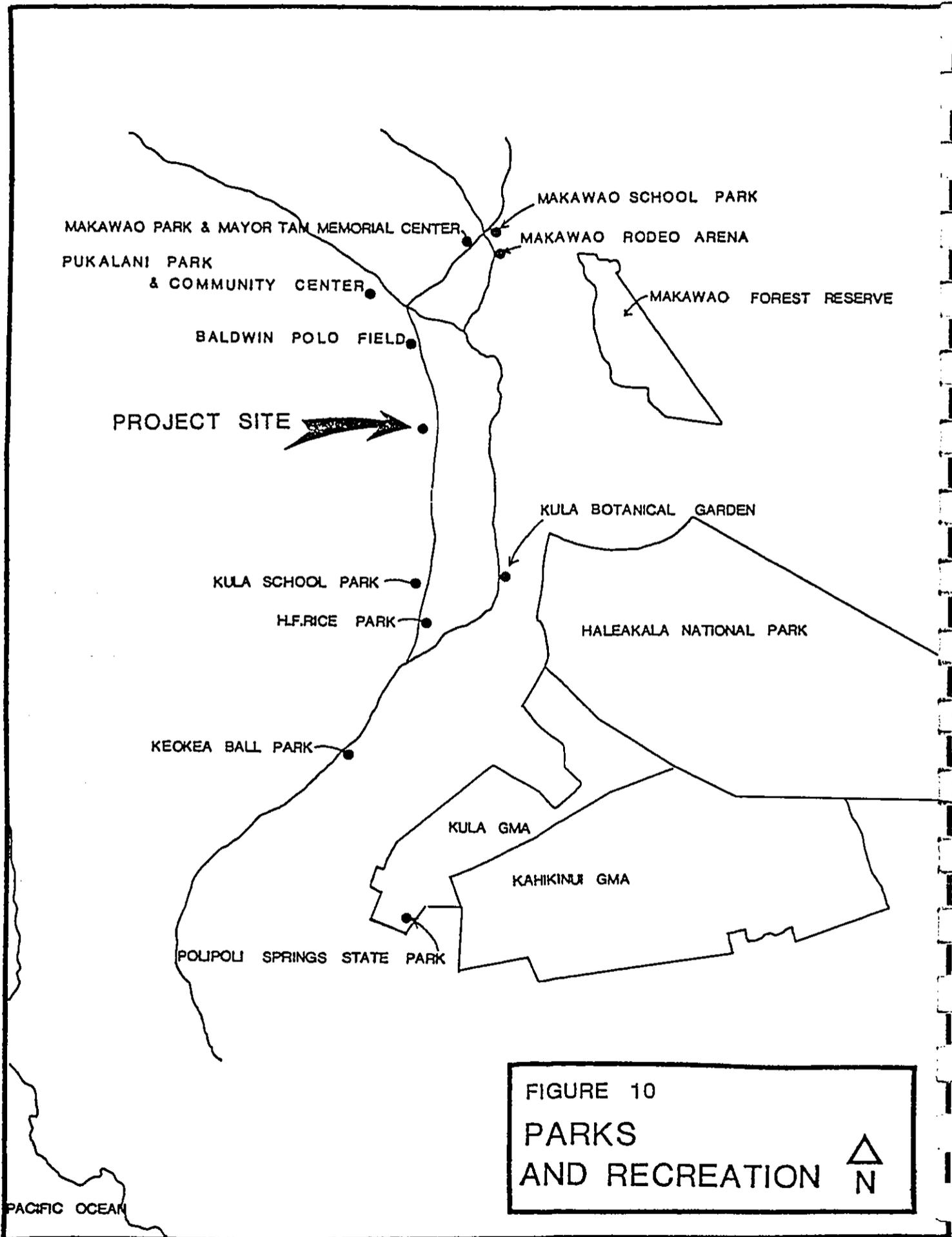
The Makawao Fire Station is located approximately 2.5 miles north of the project site. The site is located within the area served by this station. Response time to the site is approximately 12 minutes [2,7]. The station has two pumpers; one has a 1,000 gallon capacity and the other has a 250 gallon capacity. There are 5 men on duty each shift (each shift is 24 hours in length).

The Maui County Police Department has one beat serving the Kula area which is under the Central Area jurisdiction [2,8]. The area is patrolled at least three times daily (there are three watches with one officer per watch).

TABLE 1
PARKS AND RECREATION FACILITIES

<u>NAME</u>	<u>OWNERSHIP</u>	<u>ACRES</u>	<u>FACILITIES</u>
Makawao School Park	County	6.3 (entire school area)	Playfield
Makawao Park and Mayor Eddie Tam Memorial Center	County	13.7	Baseball, football, horseback riding, social center, gym
Makawao Rodeo Area	Private	N/A	Horseback riding, rodeo
Makawao Forest Reserve	State	2,903	Hunting
Pukalani Park and Community Center	County	5 acres presently, 25 acres total	Basketball, baseball social center
Baldwin Polo Field	Private	N/A	Horseback riding, polo
Kula Botanical Garden	Private	8.2	Garden - native and introduced plants
Kula School Park	State	14.0 (entire school area)	Playfield, basketball
Harold F. Rice Park	County	3.8	Picnic
Keokea Park	County	6	Picnic, baseball
Haleakala National Park	Federal	33 sq. mi.	Hiking, picnic camping
Kula Game Management Area*	State	5,432	Hunting, hiking
Kahikinui Game Management Area*	State	13,183	Hunting, hiking
PoliPoli State Recreation Area	State	2	Hiking, picnic camping

* Within Forest Reserve



C. Water Supply:

There are presently three sources of water supply serving the regions to the north and south of the project site. They are listed below with their average and minimum flows.

<u>Source</u>	<u>Average Flow</u>	<u>Minimum Flow</u>
Waialoa Ditch	170 mgd	18 mgd
Upper Kula (Waikamoi)	2 mgd	5,000 gd
Lower Kula (Waikamoi)	3 mgd	360,000 gd

The minimum flows represent drought periods during which times these sources are unreliable and have caused water shortages in the area.

There is presently a 105.7 million gallon storage capacity in the region provided by a series of dams, reservoirs and water tanks. Another 2 million gallon tank has been added at Omaopio. This 107.7 million gallon total storage capacity can provide about 20-25 days of protection during drought periods at present use rates.

The water distribution system in the vicinity of the project site is part of a network that extends from Haiku school to Ulupalakua. The site is served by an 8-inch and a 4-inch line located on Omaopio Road. Water coming from the Waikamoi water source

flows by gravity along the upper and lower Kula transmission lines and down the various laterals to areas at lower elevations, like Makawao, Pukalani and Omaopio.

In order to relieve some of the drought problems the Maui Department of Water Supply conducted several projects in the region surrounding the project site. The Lower Kula Water Project was one of these and entailed the incremental development of storage tanks, pumps and treatment plants. These improvements were aimed at providing a more stable supply of water during drought periods by pumping it from the Wailoa Ditch source into the Kula distribution system.

In October 1977 the Department of Water Supply initiated the Kula Special Rule, which establishes a moratorium on subdivisions and other growth which would use substantial amounts of water. This rule expires in March 1979; however, since the proposed project is agriculture related, has low water use, and plans no additional or larger water meter, it is exempt from the terms of the Kula Special Rule.

D. Sewerage:

At present no county sewage facilities are provided in the Omaopio-Kula area. Cesspools are used under the standards established by the State Department

of Health. There is a sewerage plan for the Makawao-Pukalani area but not for Kula, thus the Maui Vacuum Cooling Plant will continue to utilize a cesspool.

E. Solid Waste:

Solid waste from the project site is picked up by a local waste disposal company. Excess trash is disposed of at a County-operated landfill. However, there is not much agricultural waste to speak of because the produce is brought to the plant already boxed and on skips.

F. Storm Water Drainage:

As mentioned under "Hydrology-Drainage" in Section 2, storm waters sheet flow towards the gulch north of the site. However, it only rains long enough once or twice a year to cause this to occur [2,2]. The proposed site plan calls for discharge of runoff at a high undeveloped portion of the site in order to maximize infiltration of the runoff within the property.

XII. ECONOMIC CHARACTERISTICS

The existing site processed 6,591,815 pounds in 1977. This amounted to 25% of all the vegetables and melons produced by Maui County that year and 9% of all the vegetables and melons produced in the

State. Vegetable and melon crop sales totalled \$4,814,000 in Maui County in 1977; thus, the share from the vegetables processed by the Maui Vacuum Cooling Plant was approximately \$1,204,000 [2,9].

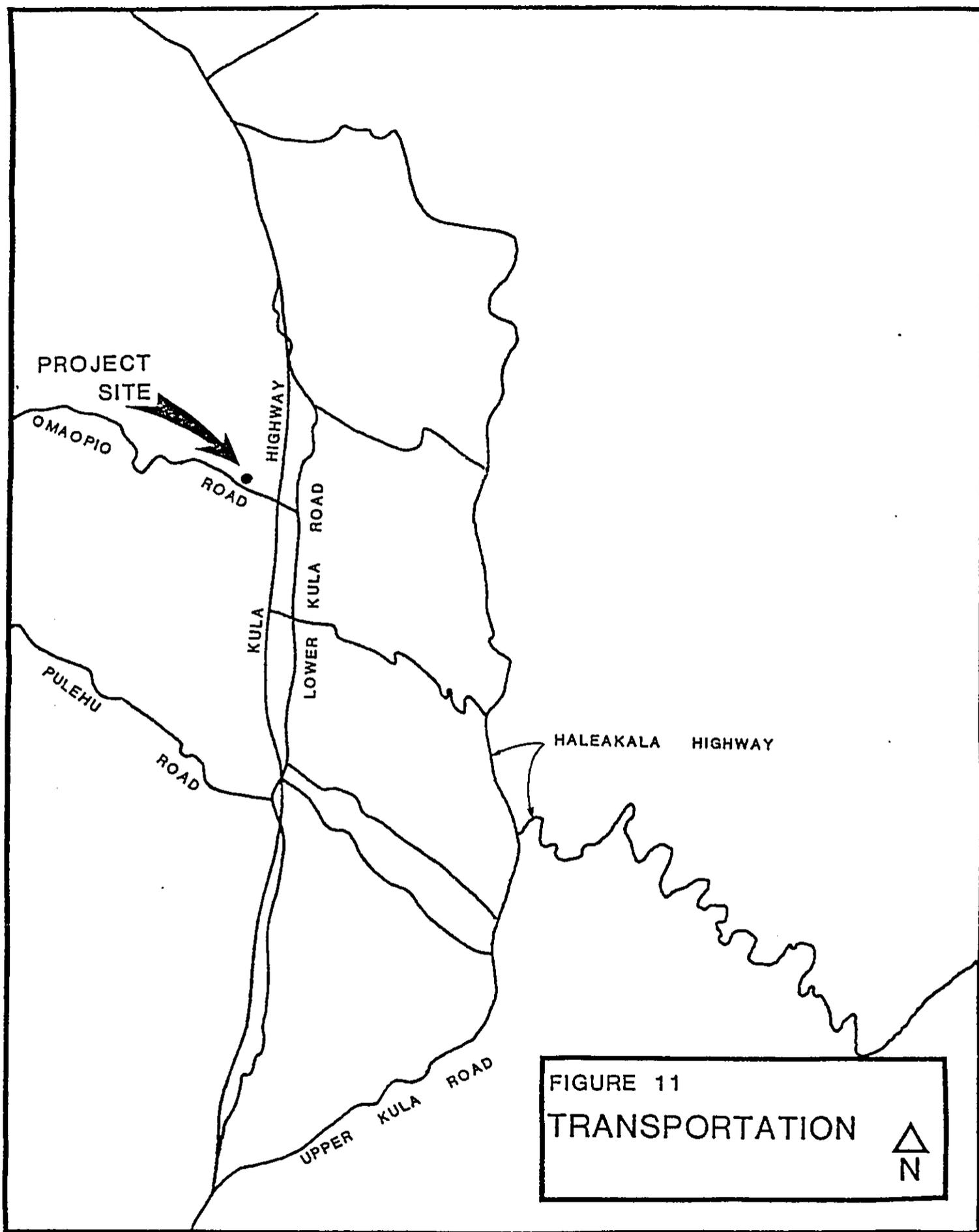
Vegetables and melons ranked third by value of all diversified agriculture from 1975 to 1977. Of these, lettuce, tomatoes and head cabbage were the principal crops. Lettuce is also the primary crop processed at the cooling plant.

Consumption of lettuce in the state totalled 21,582,000 pounds in 1977. Of this 11,782,000 pounds were imported and 9,800,000 pounds were produced locally. Of the lettuce produced locally, 4,185,000 pounds came from Maui County. Thus, Maui supplied 42.7% of the lettuce grown locally and 19.4% of the lettuce consumed locally. Lettuce production alone produced \$716,000 for Maui County.

The cost of the cooling plant expansion is estimated at approximately \$500,000 and, as discussed in Section 1, funds have already been allocated.

XIII. TRANSPORTATION

The project site is located on Omaopio Road with access from the west and from the east, via the new Kula Highway. Other main roads include Haleakala Highway and Upper Kula Road. Note Figure 11. These roads are all two lanes and are relatively lightly travelled, primarily by farmers and residents



of the area. Haleakala Highway also has visitor traffic. Ownership and average daily traffic (ADT), if available, of these roads are given in Table 2. Traffic counts on Omaopio Road, Kula Highway, Upper Kula Road and Haleakala Highway were taken by the State Department of Transportation in November 1976.

A two-lane road is considered to have reached its capacity when it approaches 10,000 - 14,000 cars per day [2,10]. From the information provided in the table, it can be seen that no road in the vicinity of the project site has a capacity problem at the present time.

Peak hour traffic counts were also made in November 1976 for Haleakala Highway and Upper Kula Road. Peak morning hours are from 7 a.m. to 8 a.m. Peak afternoon hours are from 3:45 p.m. to 4:45 p.m. Note Table 3. The farmers going to or leaving the Maui Vacuum Cooling Plant primarily use the roads in midday. As mentioned, peak use hours at the project site are from 11 a.m. to 3 p.m.

XIV. ENERGY AND COMMUNICATION

Power is supplied to the project site by Maui Electric Company. With the addition of a new 4-skip vacuum cooler and reefer, electrical use at the site will increase by approximately 50% [2,2].

Telephone service is provided in the vicinity of the project site by Hawaiian Telephone Company.

TABLE 2
AVERAGE DAILY TRAFFIC (ADT) COUNTS
KULA, MAUI, NOVEMBER 1976

<u>ROAD</u>	<u>OWNERSHIP</u>	<u>ADT</u>
Omaopio Road	County	
East of Kula Hwy.		1,158
West of Kula Hwy.		499
Kula Hwy.	State	
North of Omaopio Rd.		3,730
South of Omaopio Rd.		3,181
Haleakala Hwy.	State	
North of Upper Kula Rd.		4,643
East of Upper Kula Rd.		1,072
Upper Kula Road	State	
South of Haleakala Hwy.		3,787

TABLE 3
PEAK TRAFFIC, MORNING AND AFTERNOON
KULA, MAUI: NOVEMBER 1976

<u>ROAD</u>	<u>MORNING ADT</u>	<u>% OF DAILY TOTAL</u>	<u>AFTERNOON ADT</u>	<u>% OF DAILY TOTAL</u>
Haleakala Hwy.				
North of Upper Kula Rd.	422	9.0	439	9.5
East of Upper Kula Rd.	91	8.5	92	8.6
Upper Kula Rd.				
South of Haleakala Hwy.	379	10.0	367	9.7

REFERENCES

- [2,1] Final EIS on Haleakala Highway, Pukalani section, Project No. F-037-1(2). November 1976. U.S. Department of Transportation and State of Hawaii Department of Transportation.
- [2,2] Huelsmann, Tom. September, 1978. Personal communication. Manager, Maui Vacuum Cooling Plant. Kula, Maui, Hawaii
- [2,3] Johnson, Bob. September 15, 1978. Agricultural park use a "year away". The Maui News.
- [2,4] Plans and Conceptual Design of an Agricultural Park on Maui. June 1976. Agriculture Planning, Inc. Hilo, Hawaii.
- [2,5] Environmental Assessment, Kula Agricultural Park. County of Maui. Wailuku, Maui, Hawaii.
- [2,6] Soto, Eric. September 12, 1978. Personal communication. Maui County Planning and Economic Development Director. Wailuku, Maui, Hawaii.
- [2,7] Marciel, Capt. Alan. November, 1978. Makawao Fire Department. Makawao, Maui, Hawaii.
- [2,8] Matsunaga, Lt. November, 1978. Maui County Police Department. Wailuku, Maui, Hawaii.
- [2,9] Hawaii Agricultural Reporting Service. June, 1978. Statistics of Hawaiian Agriculture, 1977. U.S. Department of Agriculture and Hawaii Department of Agriculture.
- [2,10] Donald Wolbrink and Associates. 1974. Makawao-Pukalani-Kula General Plan. Prepared for the County of Maui.

land use plans

3

SECTION 3

RELATIONSHIP OF THE PROPOSED ACTION TO LAND
USE PLANS, POLICIES, & CONTROLS FOR THE AREA

I. GENERAL

The land use controls for the project site and surrounding areas are as follows:

Site Land Use

State Land Use Classification: Agriculture

Makawao-Pukalani-Kula General Plan: Prime
Diversified Agriculture

Zoning: Agriculture

Surrounding Land Use

State Land Use Classification: East - Rural and
Agriculture; West - Agriculture; North - Agri-
culture; South - Agriculture.

Makawao-Pukalani-Kula General Plan: East and
West - Prime Diversified Agriculture and General
Agriculture; North - Prime Diversified Agricul-
ture; South - Prime Diversified Agriculture
and County Town.

Zoning: Agriculture

Due to its agricultural nature the proposed project is a permitted use according to the County Zoning Controls. The areas to be served by the project are also in conformance with land use controls.

II. MAKAWAO-PUKALANI-KULA GENERAL PLAN

The General Plan objectives and policies that relate to agriculture are as follows [3,1]:

Objectives

1. To provide for the enhancement and protection of present and future agricultural lands.
2. To discourage land speculation and practices on all agricultural lands.

Policies

1. Encourage the continued expansion of agricultural development through promotion of the use of private and governmental forms of technical and financial assistance.
2. Discourage such uses as "large estate" subdivisions, second homes, or retirement homes from lands well-suited for diversified agriculture unless used for agricultural purposes.
3. Encourage the continued preferential treatment of water for agricultural activities, except in cases of emergency.
4. The zoning range for Prime Diversified Agricultural lands should be two to five acres per parcel depending on the findings of the Agricultural Potential Assessment.

5. Zoning of General Agricultural land should be two acres.
6. Permit additional housing at a density greater than one house per parcel when it is clearly established that the additional house is a "farm dwelling" as provided under the Agricultural District of the State Land Use Commission.
7. Encourage and assist the creation of an agricultural park development in the Kula area.

Not only does the proposed project comply with these objectives and policies; it will actually aid in the attainment of Policies 1 and 7.

III. PROPOSED GOALS AND OBJECTIVES FOR A LONG-RANGE COMPREHENSIVE PLAN FOR MAUI COUNTY

The proposed policies and objectives that relate to agriculture are as follows [3,2]:

Goals

1. Protect, maintain and develop agricultural lands on the islands of Maui, Molokai, Lanai, and Kahoolawe.

Policies

1. Develop land use controls in order to assist agricultural endeavors.

2. Assure sufficient supply of water.
3. Provide an adequate, economical transportation system for people and goods of present traffic and future demands.
4. Assure a relevant and pragmatic vocational education system.
5. Improve methods of agricultural marketing to increase its competitiveness with imports.

The proposed project complies with these goals and policies and directly supports Policy 5. With regard to the Kula Agricultural Park, the document notes that a separate water transmission system will be used to eliminate competition between domestic and agricultural uses. A transmission line will pump water from Wailoa Ditch and bring it up between Pulehu and Omaopio Roads to the Lower Kula Road. This will enable an additional 3 mgd to be used for agricultural purposes, as opposed to tapping the existing line on Lower Kula Road. Since the water will be untreated, it will not encourage urban encroachment into the area.

Another potential water source, according to this document, is the well at Pulehu. The water from this well has a chloride (salt) content of approximately 270 ppm (parts per million). To be classified

as usable agricultural water, the chloride content would have to be reduced to 100 ppm. This is far less costly than desalting sea water.

In conjunction with new water sources, the County will place major emphasis on water conservation. One proposal is for an inverse rate structure. This method assigns low water rates until the point of diminishing returns, with an increasing rate thereafter. This would be done to encourage the use of drip irrigation and other conservation measures.

IV. THE HAWAII STATE PLAN

The new State Plan contains several policies which relate to agriculture. Among those relating directly or indirectly to diversified agriculture are the following [3,3]:

Section 7 (a)(2): Continued growth and development of diversified agriculture throughout the State.

Section 7 (b)(4): Support research and development activities that provide greater efficiency and economic productivity in agriculture.

Section 7 (b)(6): Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.

Section 7 (b)(8): Expand Hawaii's agricultural base by promoting growth and development of flowers, tropical

fruits and plants, feed grains, forestry, food crops, aquaculture and other potential enterprises.

Section 7 (b)(10): Promote economically competitive activities that increase Hawaii's agricultural self-sufficiency.

The proposed project is in compliance with these policies and directly supports Sections 7(b)(4) and 7(b)(10).

REFERENCES

- [3,1] Donald Wolbrink and Associated, Inc. 1974. Makawao-Pukalani-Kula General Plan. Prepared for the County of Maui.
- [3,2] County of Maui. 1977. Proposed Goals and Objectives for a Long Range Comprehensive Plan for Maui County.
- [3,3] State of Hawaii. 1978. The Hawaii State Plan. Department of Planning and Economic Development. Honolulu, Hawaii.

environmental impacts 4

SECTION 4

ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATIVE
MEASURES TO MINIMIZE ADVERSE IMPACTS

I. PRIMARY IMPACTS OF THE PROPOSED PROJECT

A. Short-term Impacts

Short-term impacts, beneficial and adverse, generally result from construction related activities. Consequently, these impacts are of short duration and should not last longer than the duration of the construction period.

1. Economic:

During the construction of the building additions, asphalt concrete paved area, and installation of the new vacuum cooler, there will be infusion of cash into the local economy. This will be a short-term, positive impact for the local economy.

2. Air Quality:

During construction of the building additions and asphalt concrete paved area, there may be some dust generation. This problem, however, is not anticipated to be significant since the soil type at the site (Keahua silty clay) is not subject to significant erosion. With initial grading and development, dust will

be generated. If dust is a significant problem, it will be mitigated in the field by use of appropriate water sprinkling methods.

Exhaust emissions from construction equipment are not expected to significantly affect the air quality of the area. The prevailing trade winds should help to quickly disperse any exhaust gas concentrations.

3. Water Quality:

Since the soil type on the site is Keahua silty clay, 7 to 15% slopes, and rainfall is low, significant erosion and sedimentation are not expected. In addition, most of the construction will take place on the presently developed portion of the site. Approximately 0.25 acres of the pasture will have to be graded in preparation for paving; however, this will not adversely affect water quality.

4. Noise:

During site preparation and construction of building additions, an increase of ambient noise is inevitable. Noise levels (generated by construction machinery) which can be expected during construction are presented in Figure 12.

FIGURE 12
CONSTRUCTION EQUIPMENT NOISE RANGES

		NOISE LEVEL (dba) AT 50 FT					
		60	70	80	90	100	110
EARTH MOVING	COMPACTERS (ROLLERS)		H				
	FRONT LOADERS		—				
	BACKHOES		—				
	TRACTORS		—				
	SCRAPERS, GRADERS			—			
	PAVERS			H			
	TRUCKS			—			
MATERIALS HANDLING	CONCRETE MIXERS		—				
	CONCRETE PUMPS			H			
	CRANES (MOVABLE)		—				
	CRANES (DERRICK)			H			
STATIONARY	PUMPS	H					
	GENERATORS		—				
	COMPRESSORS		—				
IMPACT EQUIPMENT	PNEUMATIC WRENCHES			—			
	JACK HAMMERS AND ROCK DRILLS			—			
	PILE DRIVERS (PEAKS)				—		
OTHER	VIBRATOR		—				
	SAWS		—				

Note: Based on Limited Available Data Samples

Source: Noise From Construction Equipment and Operations Building Equipment, and Home Appliances, EPA, 1971

Impacts of construction noise can be mitigated. The contractor will ensure that mufflers on equipment are in proper operating condition and will limit the hours of construction. The increase in noise will be temporary and should last only for the duration of the construction period.

5. Biological:

Vegetation in the project area is not considered rare or endangered by State or Federal agencies. The majority of species are introduced. Significant impacts on the existing botanical community are not expected.

Terrestrial fauna in the project area are primarily introduced species associated with urbanized areas. Native birds and mammals may visit the area, but the site does not offer suitable habitat because of its near proximity to residential areas and the unavailability of water.

During construction, fauna in the immediate vicinity of construction activities may relocate into adjacent areas, but would be able to return to the site upon completion of construction. Adverse impacts on faunal communities are not

expected because of the proposed action.

6. Archaeological:

There are no known archaeological sites located on the subject property. However, if evidence of a site is discovered during construction, the State Historic Preservation Officer should be notified.

B. Long-term Impacts

Primary long-term impacts, both beneficial and adverse, are those anticipated to result directly from expansion and continued use of the vacuum cooling plant. These are impacts that can be expected for the duration of the plant use.

1. Air Quality:

Expansion of the plant will probably result in some increase in vehicular traffic. However, this is not anticipated to create a significant impact in terms of vehicular emissions.

At present, 45 to 56 skips can be processed on a heavy day. With the average farmer bringing in 4 to 6 skips at a time, this would mean up to 14 round trips are made to the plant in a heavy week. When the plant capacity doubles, the traffic could be expected to double also. This in itself would create a minimal increase

in exhaust emissions, however, since the plant expansion will allow the farmers to bring in virtually all the produce at one time, the number of trips may actually decrease.

2. Water Quality:

Long-term adverse impacts on water quality are not anticipated. The new paved area will not be large enough to increase surface flow significantly.

3. Soils:

The project will not remove a significant amount of agricultural soil from productivity, and thus is not anticipated to have a long-term adverse impact on this resource. Rather, it will allow the increased productivity of surrounding land.

4. Drainage:

Projected runoff is 3.93 cfs, or an increase of 2 cfs. As noted, runoff flows through parcel 26 before entering the gulch to the north. There is a barn located on this parcel, which may possibly be affected by runoff from the site. However, the drainage plan has been designed to maximize infiltration by discharging the

water into a well-vegetated pasture and increasing the drainage path.

5. Biological:

No long-term adverse impacts on flora and fauna are anticipated as a direct result of the proposed project.

6. Archaeological:

The absence of any known sites on the subject property precludes any long-term impact on archaeological resources.

7. Economic:

There will be no significant adverse impact on economic characteristics in the vicinity of the project site or in the County. Funds for the expansion have already been allocated and benefits, in terms of crop sales from increased production, are more than double the estimated cost. This will also allow the expansion of job opportunities in the area.

8. Infrastructure:

a. Electricity:

The additional demand for electricity at the plant will be approximately 50%. This will be due to the new reefer and vacuum cooler, and is not considered to be a significant impact.

b. Water:

Water use at the plant will remain approximately the same. As noted, no additional or larger water meter is planned.

c. Solid Waste:

Solid waste generation will remain approximately the same. Trash will continue to be picked up by a local company.

d. Liquid Waste:

The existing cesspool will be demolished and backfilled to make room for the proposed renovations. A new cesspool will be constructed to Department of Health standards. No substantial increase in effluent is anticipated.

9. Police and Fire:

Security will continue to be maintained by the local police department, which will be reactive in nature. As noted, the response time by the local fire department to the site is approximately 12 minutes. They anticipate no problems with the plant expansion.

10. Traffic:

The driveway and parking areas have been designed to maximize ease of entry and exit

at the site. The expanded paved area will allow increased use of the container vans.

Since the plant is already actively used, a significant increase in traffic because of the proposed project is not anticipated. Traffic on Kula Highway and Haleakala Highway west of Pukalani may increase somewhat, relative to the other roads, if use of the container vans for transport to the docks in Kahului increases. Existing traffic patterns at the site are not a significant problem. As discussed, ADTs on Omaopio Road, Kula Highway, Haleakala Highway, and Upper Kula Road are considerably below capacity. In addition, the farmers primarily use the roads at other than peak traffic hours.

11. Recreation:

The proposed expansion of the plant will not have a significant effect on the parks or recreation resources in the vicinity of the project site.

12. Noise:

The addition of a new 4-skip vacuum cooler will result in some increase in noise over the long-term period. The exact increase is difficult to quantify; however, the net noise due

to the vacuum coolers is still anticipated to fall within the allowable noise levels established in the Public Health Regulations, Chapter 44B. The maximum day or night noise level in Agricultural Districts is 70 dBA at the boundary of the site.

Also, to mitigate the potential noise, the vacuum release valve will be located within the building with a muffler. The new unit will be quieter than the old ones. The compressor will be installed within the building. Assuming a vacuum break of 100 dBA, perceived as a very loud "pop", the employees within the building are permitted (OSHA regulations) up to a two-hour exposure/day. It is unlikely that they will be exposed to this level. The OSHA regulations allow exposure to 90 dBA for up to 8 hours.

The refrigerated vans may be parked and in operation at the site for several hours at a time. The noise from refrigeration units on the vans may be a source of annoyance for nearby residents, particularly during the evening hours. The nearest residences are approximately 80 and 120 feet away.

As noted in Section 2.VIII., the noise

from the vans is affected by wind direction and the location of the vans. The noisy end of the vans will be facing west, toward the undeveloped portion of the property. One of the new building additions (#1 in Figure 4) will buffer the noise from the adjacent parcels to the north-northeast. Also, trees will be planted around the perimeter of the site. Two hundred fifty Monterey pine seedlings are being prepared.

If these measures are not sufficient to reduce the noise levels, a solid wall can be constructed around the parking lot.

II. SECONDARY IMPACTS OF THE PROPOSED PROJECT

A. Land Use

Use of this site for a vacuum cooling plant will preclude certain other actions for the land. Therefore, actions incompatible with the intent of the plant will not be permitted. In addition, it will enhance agricultural use of surrounding lands. This is not considered to be an adverse effect, as it would comply with all land use plans and controls for the area.

B. Water Supply:

The development of surrounding areas for farms will require an increase in the water supply for the general area. As discussed in Section 3, this will be accomplished by pumping untreated water up from Wailoa Ditch and potential use of desalted water from wells in the area. In addition, conservation measures will be enforced (also discussed in Section 3).

C. Air Quality:

The development of surrounding areas for farms will cause some increase in dust and drift from chemical sprays. Proper management of the agricultural land should minimize these impacts. The extremely low housing densities will also serve to minimize potential conflicts, in that few households will be affected by any increase in dust.

D. Use of Pesticides and Other Chemicals:

The following discussion is taken from the Environmental Assessment for the Kula Agricultural Park:

Pesticides and other chemicals will be utilized by tenants for destroying, repelling or mitigating organisms or plants which would be detrimental to the intended crop. Ideally, a pesticide should control the undesirable agent, without being

detrimental to humans or other non-target animal or plant life within the environment.

Insecticides commonly used by the farmers are nonpersistent organophosphates such as malathion, dibrom, diazinon, etc. However, farmers, as well as ranchers and the general public, cannot use toxic chemicals as they have done in the past.

The use of agricultural chemicals is regulated by the U.S. Environmental Protection Agency (EPA). The 1972 Federal Environmental Pesticide Control Act prohibits the sale of injurious chemicals unless labeling is present to prevent injury to man and adverse effects upon the environment. It also requires all pesticide applicators to be certified.

Federal and State regulations prohibit the indiscriminate use of chemicals that are highly toxic to mammals and nearby plant life. This includes regulations on aerial applications of chemicals with drift damage potential, herbicides with high drift damage potential, noxious odors, proper disposal and other similar concerns to protect the general public and environment.

The EPA has also banned the use of DDT which was found to accumulate in the environment and in fatty tissues of mammals. Recently, chlordane and heptachlor were also removed from use.

At wind conditions of 15-18 knots, spray drift can be expected 10-25 yards downwind, depending upon the spray pressure and height of the spray boom. Insecticides and herbicide anticipated for use on vegetable and ornamental crops within the Kula Agri-

cultural Park are not expected to damage other beneficial plants near the park.

The use of agricultural chemicals is presently subject to close scrutiny and control by various Federal and State agencies. The State Department of Agriculture certifies farmers and enforces regulations regarding application of agricultural chemicals. Thus, the danger of damaging the environment is greatly diminished.

The University of Hawaii's Cooperative Extension Service currently conducts training sessions for farmers on the safe and proper use of toxic chemicals. Arrangements will be made to insure that all tenants of the agricultural park have the benefit of such training.

Proper management of the agricultural park will control spraying practices near parcel boundaries to minimize any potential problems due to drift. Generally, proper utilization of approved chemicals will prevent adverse effects.

E. Economic:

If the surrounding area is developed to its maximum potential for agricultural use, it could result in a substantial increase in income for Maui County. New jobs would be created and local produce would be available at a relatively lower cost in the markets.

adverse environmental effects

5

SECTION 5

PROBABLE ADVERSE ENVIRONMENTAL IMPACTS
WHICH CANNOT BE AVOIDED

This section will briefly discuss probable adverse environmental impacts and mitigative measures when applicable, and the rationale for proceeding with the proposed action notwithstanding unavoidable effects.

I. PRIMARY SHORT-TERM IMPACTS

A. Probable Impacts and Mitigative Measures

During construction of the building additions and asphalt concrete paved area, there will be an increase in existing noise. This will be of short duration, lasting for the construction period, and will be mitigated by the contractor ensuring proper functioning of mufflers on equipment and by limiting the hours of construction.

Grading for the paved area may result in some dust problems. If dust should be a serious problem, it will be mitigated by water sprinkling.

During construction of the driveway, there may be some disruption of the traffic patterns on Omaopio Road. This disruption will last only for the duration of this portion of development, so it should not result in significant adverse impacts with proper direction of traffic and scheduling of construction.

Fuel emissions from construction vehicles are inevitable; however, the level of emissions should be quite insignificant and are not anticipated to result in adverse environmental impacts.

B. Reasons for Proceeding

The probable short-term adverse impacts encountered during the construction phase of the proposed expansion are minor and can be controlled by using acceptable mitigative measures.

II. PRIMARY LONG-TERM IMPACTS

A. Probable Impacts and Mitigative Measures

Clearing and grubbing of some existing pasture vegetation will be required for the AC paved area and for the driveway. Only those portions required will be cleared of vegetation. The cleared areas will be paved, so no erosion is expected.

Adverse impacts to fire, police, electrical, sewage, and refuse disposal are not anticipated. Existing physical and biological aspects of the site should not be significantly affected by the proposed action.

Maintenance of the plant will require a commitment for the duration of the plant. The site is being used for vacuum cooling at the present time and is being maintained by the Maui Produce Processing

Cooperative. The cost of maintaining the plant in its existing condition was approximately \$ 40,000 during the last year. This includes personnel, equipment, and expendable items necessary for plant maintenance. The proposed expansion should not require annual funds in significant excess of the above amount; however, the cost of such maintenance can be expected to increase annually. With any further expansion, there would also be an increase in cost.

B. Reasons for Proceeding

Selective clearing of pasture vegetation is necessary for implementation of the plant expansion. Pasture vegetation consists primarily of common weeds, grass and shrubs and no significant adverse impacts are anticipated.

Although expansion of the plant will require a commitment of funds, it will result in an increase in agricultural income to the residents of Kula and to Maui County as a whole.

III. SECONDARY IMPACTS

A. Probable Impacts and Mitigative Measures

Use of this parcel of land for the vacuum cooling plant purposes precludes uses incompatible with such a plant.

B. Reasons for Proceeding

The long-term beneficial impact of increased

alternatives 6

SECTION 6

ALTERNATIVES TO THE PROPOSED ACTION

This section will discuss the alternatives to the proposed action that have been considered.

I. NO ACTION

A no action alternative would not accomplish the objectives of the Department of Agriculture. These objectives are: to increase the agricultural productivity of the area and the competitiveness of the local produce and to provide an opportunity for increased agricultural employment.

Since the site is presently used for vacuum cooling purposes, no action would result in maximum use or overuse of the facility. This would deter from proper maintenance and would not provide the farmers with an opportunity to expand their operations.

II. ALTERNATIVE SITES

Alternative expansion sites were not evaluated because the existing site has adequate room for expansion. This site is in close proximity to the farms in the Omao-pio-Kula area and is already being used for vacuum cooling purposes. Expansion on this parcel is desirable since the cost of land acquisition is not a factor and since many improvements have already been made.

III. ALTERNATIVE USES AND DEVELOPMENT CONCEPTS

During the review of the proposed expansion, some of the other suggested uses included the installation of two fuel pumps (one for diesel oil and one for ethyl or regular gas), construction of a new truck scale and scale house and installation of three more 4-skip vacuum coolers. These uses are compatible with that of the vacuum cooling plant, and there is potentially room for these uses if desired at a later date.



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resource commitment 7

SECTION 7

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

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

State funds, labor, construction and building materials and fuel will be committed to the project. Additional maintenance and operation, manpower and funds will be required. Restroom facilities and a shower will require water. The agricultural designation for this area, which will be enhanced by the project, will prohibit residential and resort developments to a large extent.

short term uses
long term productivity 8

SECTION 8

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

This section will include a brief discussion of 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 a discussion of the extent to which the proposed action forecloses future options, narrows the range of beneficial uses of the environment, or poses long-term risks to health or safety.

The proposed actions developed for the Maui Vacuum Cooling Plant expansion have considered the environmental attributes of the area, public desires for agricultural uses of the area, and employment needs of the people. The proposed actions, when implemented, will enhance the natural and cultural resources of this area. An opportunity to increase agricultural efficiency and production will be available to residents of the Kula-Omaopio area, without destroying or impairing features and values which can be preserved.

The proposed actions will not involve trade-offs between short-term losses, foreclose future agricultural options, narrow the range of beneficial use of the environment, or pose long-term risks to health and safety.

The proposed actions for the Maui Vacuum Cooling Plant will enhance agricultural opportunities by providing an efficient and effective method of enhancing marketability of local produce, and will aid in the future expansion of agricultural lands in the area.

government policy 9
offsetting adverse effects

SECTION 9

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

As indicated in Section 5, Anticipated Environmental Impacts and Mitigative Measures to Minimize Adverse Impacts, most of the adverse impacts are short-term and related to construction activities. All adverse impacts anticipated from implementation of the proposed actions are insignificant when compared to the benefits to be gained. The development of this area as a major center of diversified agriculture will be in accordance with the goals and objectives presented in the 1978 Hawaii State Plan and the 1974 Makawao-Pukalani-Kula General Plan. Basic plan goals, such as the protection of agricultural land and increased agricultural productivity, will be accomplished with the implementation of the project with minimal adverse environmental effects.

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approvals 10

SECTION 10

LIST OF NECESSARY APPROVALS

1. The following will be required from the County of Maui, Department of Public Works:
 - a. Grading permit
 - b. Building permit

2. The State Department of Health will review the design and location of the cesspool prior to construction.

**persons
consulted**

11

SECTION 11

ORGANIZATIONS AND PERSONS CONSULTED*

State of Hawaii

Department of Agriculture
Mr. John Farias, Jr.

Department of Health
Environmental Protection & Health Services Division

Department of Land and Natural Resources
Mr. William Thompson

Department of Planning & Economic Development
Mr. Hideto Kono

Department of Transportation
Admiral E. Alvey Wright

County of Maui

Planning Department
County of Maui
Mr. Toshio Ishikawa
200 S. High Street
Wailuku, Maui, Hawaii 96793

Department of Public Works
Mr. Wayne Uemae
200 S. High Street
Wailuku, Maui, Hawaii 96793

Department of Economic Development
County of Maui
Mr. Eric Soto
200 S. High Street
Wailuku, Maui, Hawaii 96793

Department of Water Supply
County of Maui
Mr. Tatsumi Imada
P.O. Box 1109
Wailuku, Maui, Hawaii 96793

* No written comments were received during the review
of the Notice of Preparation.

Other

Maui Electric
210 Kam Avenue
Kahului, Maui, Hawaii 96732

Gasco Inc., Maui Division
70 Hana Highway
Kahului, Maui, Hawaii 96732

Maui Produce Processing Cooperative
RR 1, Box 610
Kula, Maui, Hawaii 96790

Pacific Land Incorporated
Mr. Bim Wilson
70 Church Street
Wailuku, Maui, Hawaii 96793

**e.i.s. responses
and comments**

12

SECTION 12

AGENCIES, ORGANIZATIONS AND PERSONS CONSULTED
IN EIS REVIEW PROCESS

The following list includes organizations to whom the EIS was sent during the review period. Those with an asterisk are those from whom comments with its corresponding response follow this list in the order given in the list.

	<u>Page No.</u>
<u>Federal Government</u>	
* United States Air Force Headquarters, 15th Air Base Wing	12-4
* United States Department of Agriculture, Soil Conservation Service	12-5
* United States Army Engineer District, Honolulu	12-6
* United States Army Support Command Hawaii, Division of Facilities Engineer	12-8
United States Coast Guard	
* United States Department of the Interior, Fish and Wildlife Service, Division of Ecological Services	12-9
* United States Navy, Headquarters Fourteenth Naval District	12-10
<u>State of Hawaii</u>	
Department of Accounting and General Services	
* Department of Agriculture	12-11

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<u>State of Hawaii, continued</u>	
Department of Defense	
* Department of Health	12-12
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Department of Land and Natural Resources, State Historic Preservation Officer	
* Department of Planning and Economic Development	12-14
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* Office of Environmental Quality Control, Office of the Governor	12-17
University of Hawaii, Environmental Center	
* University of Hawaii, Water Resources Research Center	12-20
<u>County of Maui</u>	
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Department of Parks and Recreation	
Department of Public Works	
* Department of Water Supply	12-21
Economic Development Agency	
* Planning Department	12-22

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Others

* Chandler P. Brown, Resident	12-23
* Gasco Inc., Maui Division	12-24
* Hawaiian Telephone Company	12-25
* Maui Electric	12-26
Maui Produce Processing Cooperative	
* Pacific Land Incorporated, Mr. Bim Wilson	12-27

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 15TH AIR FORCE WING (PACAF)
HICKAM AIR FORCE BASE, HAWAII 96853

12 JAN 1979

TO: DEEV (Mr Hakashima, 449-1831)

FROM: Environmental Impact Statement (EIS) for the Haul Vacuum Cooling Plant
Improvements, Onaopio, Hukawao, Maui, Hawaii

Office of Environmental Quality Control
550 Halekauwila Street
Room 301
Honolulu, Hawaii 96813

1. This office has reviewed the subject EIS and has no comment to render relative to the proposed project.
2. We greatly appreciate your cooperative efforts in keeping the Air Force apprised of your project and thank you for the opportunity to review the document.

Copy sent by

ROBERT Q. K. CHING
Chief, Engrg & Envtl Plng Div
Directorate of Civil Engineering

1 Atch
EIS

Cy to: Dept. of Accounting and
General Services
1151 Punchbowl St.
Honolulu, Hawaii 96813

GEORGE AIBYOSIA
GOVERNOR

HIIDFO MURAKAMI
COMPTROLLER
JANE H. TOKUJIMA
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 103, HONOLULU, HAWAII 96849

LETTER NO. _____

February 8, 1979

Mr. Robert Q. K. Ching, Chief
Engineering and Environmental Planning Division
Directorate of Civil Engineering
Headquarters 15th Air Base Wing
Hickam Air Force Base, Hawaii 96853

Dear Mr. Ching:

SUBJECT: Haul Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact
Statement.

Very truly yours,

Hiidfo Murakami
HIIDFO MURAKAMI
State Comptroller

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

P. O. Box 50004, Honolulu, HI 96850
DESIGN BRANCH-DPW-DAGS
January 16, 1979

Office of Environmental Quality Control
550 Halekuanila St., Room 301
Honolulu, Hawaii 96813

Department of Accounting
and General Services
1151 Punchbowl Street
Honolulu, Hawaii 96813

Gentlemen:

Subject: EIS for the Maui Vacuum Cooling Plant Improvements
Oonopio, Hukawao, Maui, Hawaii

We have reviewed the subject EIS and have no comments to offer.

Thank you for the opportunity to review this document.

Sincerely,

Jack F. Kanalz
Jack F. Kanalz
State Conservationist



GEORGE A. ARIOCSI
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 111, HONOLULU, HAWAII 96804

February 8, 1979

LETTER NO. _____

HIDEO HURAKAMI
COMPTROLLER
MEEM. TORIYAGA
DEPUTY COMPTROLLER

Mr. Jack P. Kanalz, State Conservationist
Soil Conservation Service
U.S. Department of Agriculture
P.O. Box 50004
Honolulu, Hawaii 96850

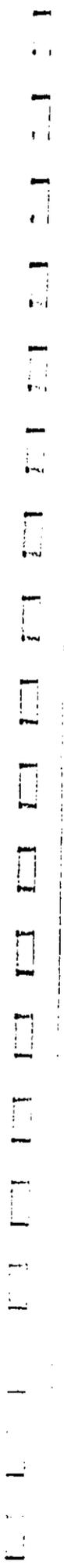
Dear Mr. Kanalz:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact
Statement.

Very truly yours,

Hideo Hurakami
HIDEO HURAKAMI
State Comptroller





DEPARTMENT OF THE ARMY

U. S. ARMY ENGINEER DISTRICT, HONOLULU
BUILDING 230
FT. SHAFTER, HAWAII 96838

FODED-PV

16 January 1979

GEORGE R. AHYOSH
COMPTROLLER



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 119 HONOLULU, HAWAII 96849

LETTER NO. _____

HIDEO HIRAKAWA
COMPTROLLER
MIKE N. ICHIMADA
DEPUTY COMPTROLLER

February 8, 1979

Mr. Hideo Hirakawa, Comptroller
Department of Accounting and General Services
State of Hawaii
1151 Punchbowl Street
Honolulu, Hawaii 96813

Mr. Kisuk Cheung, Chief
Engineering Division
U.S. Army Engineer District, Honolulu
Building 230
Ft. Shafter, Hawaii 96858

Dear Mr. Hirakawa:

Dear Mr. Cheung:

In response to the Environmental Impact Statement (EIS) for the Maui Vacuum Cooling Plant that was forwarded to us by the Office of Environmental Quality Control on or about 22 December 1978, we find that the project does not affect any U.S. Army Corps of Engineers projects or areas of jurisdiction. The project site lies outside of any identified flood hazard areas as delineated on the preliminary Flood Insurance Rate Maps for the Hakawao area, as prepared for the U.S. Department of Housing and Urban Development, Federal Insurance Administration. The site is situated in an area of undetermined, but possible, flood hazard.

**SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement**

Thank you for reviewing the Environmental Impact Statement. We appreciate your comments that the project does not affect any U.S. Army Corps of Engineers projects or areas of jurisdiction and that the project site lies outside of any identified flood hazard areas as delineated on the preliminary Flood Insurance Rate Maps.

We thank you for the opportunity of reviewing the Environmental Impact Statement for the project.

You also state that the site is situated in an area of undetermined, but possible, flood hazard, and we offer the following response for your consideration.

Sincerely yours,

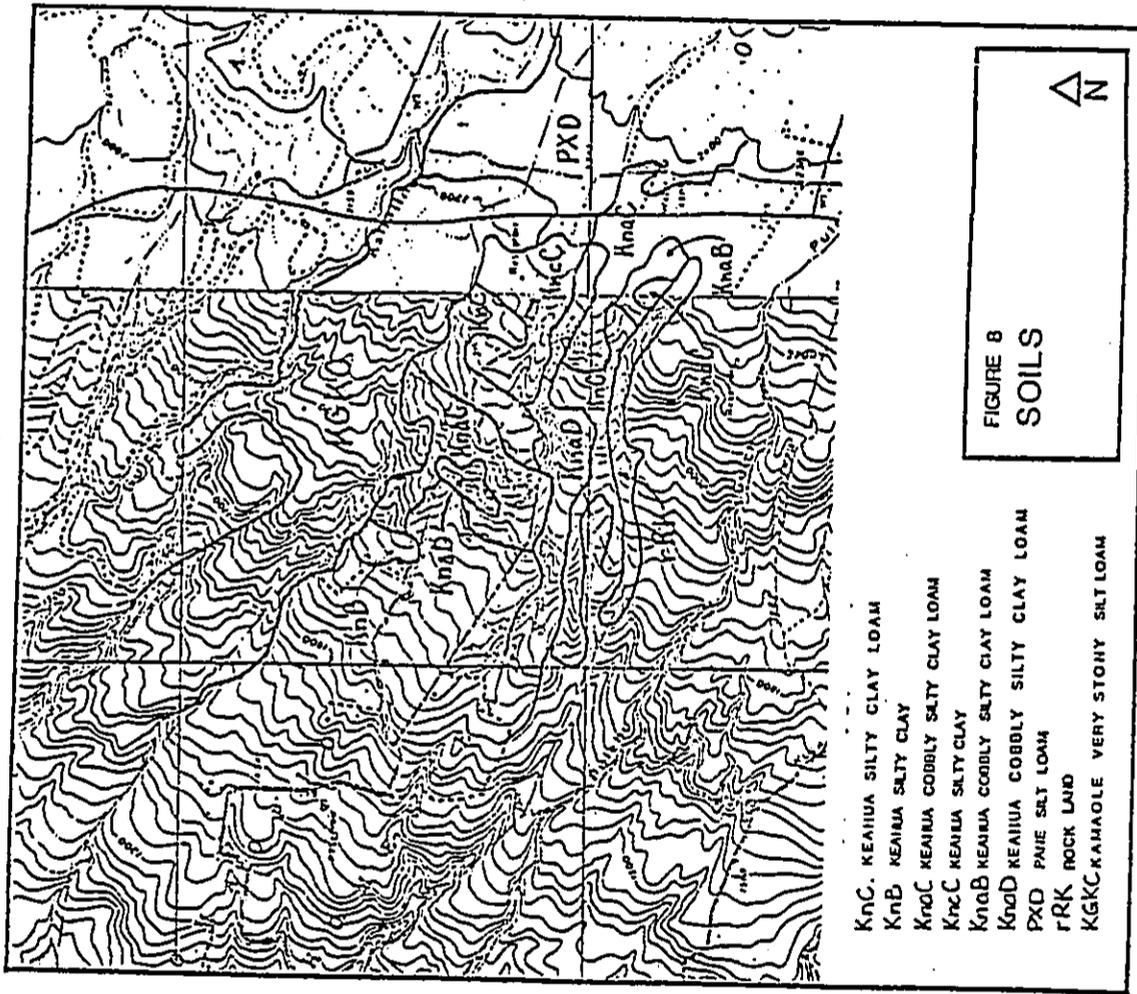
Kisuk Cheung
KISUK CHEUNG
Chief, Engineering Division

CF:
Office of Environmental Quality Control
State of Hawaii
550 Halekuanila Street, Room 301
Honolulu, Hawaii 96813
Incl - Maui Vacuum Cooling Plant EIS

The manager of the Maui Vacuum Cooling Plant has indicated to us that there is no history of flooding in the vicinity of the plant, which has been in operation since 1971. The Agricultural Reporting Service listed the rainfall reading for the week of January 8-14, 1979 as 3.4 inches at Kula Sanitorium and 6.4 inches at Wailuku. Despite the heavy rains over the last month, there has been no flooding, or near flooding, at the project site. Please refer to Figure 8 on page 2-7, showing the project location on a knoll.

Very truly yours,

Hideo Hirakawa
HIDEO HIRAKAWA
State Comptroller



- KnC. KEAHUA SILTY CLAY LOAM
- KnB KEAHUA SILTY CLAY
- KncC KEAHUA COBBLY SILTY CLAY LOAM
- KncB KEAHUA SILTY CLAY
- KnaD KEAHUA COBBLY SILTY CLAY LOAM
- PXD PAHE SILT LOAM
- rRK ROCK LAND
- KGKC KAMAOLE VERY STONY SILT LOAM

FIGURE B
SOILS

2-7

HIDEO MURAKAMI
COMPTROLLER
NAME N. TOKUHAGA
DEPUTY COMPTROLLER



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 119 HONOLULU HAWAII 96810

LETTER NO. _____

GEORGE A. ARYOSSE
GOVERNOR

February 8, 1979

19 JAN 1979

APZV-EH-EB

Office of Environmental Quality Control
550 Halekuanii Street, Room 301
Honolulu, Hawaii 96813

Gentlemen:

Reference is made to your letter requesting comments on the Environmental Impact Statement (EIS) for Maui Vacuum Cooling Plant Improvements, Oaheo, Maui.

Subject EIS has been reviewed and we have no comments to offer. There are no Army installations or activities near the proposed project. The document is returned in accordance with your request.

Sincerely,

1 Incl

As stated

Copy furnished:

Department of Accounting
and General Services
1151 Punchbowl Street
Honolulu, Hawaii 96813

CARL P. RODOLPH
Colonel, CE

Director of Engineering and Housing

1111 K. P. H. S.
LTC, Col. J of The

Colonel Carl P. Rodolph, CE
Director of Engineering and Housing
U.S. Army Corps of Engineers
Fort Shafter, Hawaii 96858

Dear Colonel Rodolph:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact Statement.

Very truly yours,

Hideo Murakami
HIDEO MURAKAMI
State Comptroller



United States Department of the Interior

FISH AND WILDLIFE SERVICE
300 ALA MOANA BOULEVARD
P.O. BOX 50167
HONOLULU, HAWAII 96850

ES
ROOM 6307

January 9, 1979

Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Re: Maui Vacuum Cooling
Plant Improvements
Makawao, Maui

Dear Sir:

We have reviewed the referenced Environmental Impact Statement and find that it adequately discusses the potential impact of this plant on fish and wildlife resources.

We have no objection to the EIS or to the plant itself.

We appreciate this opportunity to comment.

Sincerely yours,
Reginald E. Koll

Maurice H. Taylor
Field Supervisor
Division of Ecological
Services

cc: IIA
RMEFS
IIDE&G
DAGS State of Hawaii



Save Energy and You Serve America!



GEORGE A. ANTOSH
COMPTROLLER

HIDEO MURAKAMI
COMPTROLLER

MIEMI TOMIYAMA
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P.O. BOX 118 HONOLULU, HAWAII 96818

LETTER NO. _____

February 8, 1979

Mr. Maurice H. Taylor,
Field Supervisor
Division of Ecological Services
U.S. Fish and Wildlife Service
P.O. Box 50167
Honolulu, Hawaii 96850

Dear Mr. Taylor:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact Statement.

Very truly yours,

Hideo Murakami
HIDEO MURAKAMI
State Comptroller

HEADQUARTERS
FOURTEENTH NAVAL DISTRICT
1401
PEARL HARBOR, HAWAII

RECEIVED
0628 JUN
SEP 2524

29 DEC 1978

GEORGE B. ANTOSH
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P O BOX 110 HONOLULU, HAWAII 96880

HIDEO HURAKAHI
COMPTROLLER
MARLEN TORIYAGA
DEPUTY COMPTROLLER

LETTER NO. _____

February 8, 1979

Environmental Quality Commission
Office of the Governor
State of Hawaii
550 Halekuanila Street, Room 301
Honolulu, Hawaii 96813

Gentlemen:

Environmental Impact Statement for the
Maui Vacuum Cooling Plant Improvements

The Environmental Impact Statement for the Maui Vacuum Cooling

Plant Improvements has been reviewed and the Navy has no comments to
offer. The subject EIS will be retained by this Command for record
purposes.

The opportunity to review the EIS is appreciated.
Sincerely,

L. H. RUFF
Captain, USN
District Civil Engineer
By direction of the Commandant

Copy to:
ULQC
D/65

Captain L. H. Ruff, CEC, USN
District Civil Engineer
Fourteenth Naval District
Box 110
Pearl Harbor, Hawaii 96880

Dear Captain Ruff:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact
Statement.

Very truly yours,

Hideo Hurakahi
HIDEO HURAKAHI
State Comptroller

GEORGE A. ADYOSIS
GOVERNOR



JOHN FARIAS, JR.
CHAIRMAN, BOARD OF AGRICULTURE
TUMU KAIKAI
DEPUTY TO THE CHAIRMAN

GEORGE A. ADYOSIS
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
1420 SOUTH KING STREET
HONOLULU, HAWAII 96814

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 119 HONOLULU, HAWAII 96810

HIDFO MURAKAMI
COMPTROLLER
MIFE N. TORIUNAGA
DEPUTY COMPTROLLER

LETTER NO. _____

January 4, 1979

February 8, 1979

MEMORANDUM:

To: Environmental Quality Control, Office of
Subject: EIS for the Maui Vacuum Cooling Plant Improvements,
Oaiaipio, Ikiakoo, Maui

Mr. John Farias, Jr., Chairman
Board of Agriculture
Department of Agriculture
State of Hawaii
1420 South King Street
Honolulu, Hawaii 96814

The Department of Agriculture has no comments to offer on
the above-cited Environmental Impact Statement.

Dear Mr. Farias:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

We appreciate the opportunity to comment. The document is
returned, herewith, for your files.

Thank you for reviewing the Environmental Impact
Statement.

Very truly yours,

JOHN FARIAS, JR.
Chairman, Board of Agriculture

Hidfo Murakami

HIDFO MURAKAMI
State Comptroller

cc: Department of Accounting & General Services





STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 349
HONOLULU HAWAII 96809

January 11, 1979

GEORGE A. YEMM
GOVERNOR OF HAWAII

GEORGE A. YEMM
GOVERNOR OF HAWAII
Deputy Director of Health
Deputy Director of Health

GEORGE A. YEMM
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P.O. BOX 119 HONOLULU HAWAII 96809

February 8, 1979

WIDE O. HIRAIWA
COMPTROLLER
MIKE N. TORIKUNIGA
DEPUTY COMPTROLLER

LETTER NO. _____

HEZIRAHIMURI

To: Mr. Hideo Hironaka, Comptroller
Department of Accounting & General Services

From: Deputy Director for Environmental Health

Subject: Environmental Impact Statement (EIS) for Maui Vacuum Cooling Plant
Improvements, Onopio, Hahione, Maui

Thank you for allowing us to review and comment on the subject EIS.
On the basis that the project will comply with all applicable Public Health
Regulations, please be informed that we have no objections to this project.

We submit the following comments for your information and consideration:

1. Section 2, item XI E - Excess trash should be disposed at municipal
landfill, not a "dump."
2. Section 4, item 1. - Noise will be a nuisance for nearby residences,
B, no. 12 especially at nights.
3. Section 4, item 11, - Strict controls for chemical spray drift must
be initiated.

We realize that the statements are general in nature due to preliminary
plans being the sole source of discussion. We, therefore, reserve the right
to impose future environmental restrictions on the project at the time final
plans are submitted to this office for review.

James S. Kumagai
JAMES S. KUMAGAI, Ph.D.

cc: Office of Environmental Quality Control
HILO, Maui

Dr. James S. Kumagai, Ph.D.
Department of Health
State of Hawaii
1250 Punchbowl Street
Honolulu, Hawaii

Dear Dr. Kumagai:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact
Statement. We will present our responses in the order
of your comments.

1. Section 2, item XI.E.
This sentence will be revised to read "Excess trash
is disposed of at a County-operated landfill."
2. Section 4, item I.U.12.
Thank you for your comment. This information will
be included in the Revised EIS.
3. Section 4, item II.D.
This discussion refers to secondary impacts caused
by use of pesticides at the Kula Agricultural Park, not
on-site use of pesticides. Controls for chemical spray
drift are not within the scope of the Environmental Impact
Statement.

Very truly yours,
Hideo Hironaka
HIDEO HIRONAKA
State Comptroller

STATE OF HAWAII
DEPARTMENT OF TEACHING AND
TECHNICAL EDUCATION
P. O. Box 2359
Honolulu, Hawaii 96813

December 21, 1978

Ref. No. 7906

Mr. Richard O'Connell
Director
Office of Environmental Quality
Control
550 Halekauwila Street
Room 301
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Subject: EIS for the Maui Vacuum Cooling Plant Improvements,
Maui, Hawaii

Our review of the document finds that the proposed improvements
pose no significant adverse impacts environmentally, but should result
in long-term benefits in the agricultural economy of Maui.

Sincerely,

HIDEO KURO

cc: ✓ the Honorable Hideo Kuro
State Comptroller
Department of Accounting and General
Services



GEORGE ANTONIO
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 119 HONOLULU, HAWAII 96810

February 8, 1979

Mr. Hideto Kono, Director
Department of Planning and
Economic Development
State of Hawaii
P.O. Box 2359
Honolulu, Hawaii 96804

Dear Mr. Hall:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact
Statement.

Very truly yours,


HIDEO KURO
State Comptroller

HIDEO KURO
COMPTROLLER

MAHE N. TOKIYAMA
DEPUTY COMPTROLLER

LETTER NO. _____

GEORGE R. ARYOSH
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF SOCIAL SERVICES AND HOUSING
HAWAII HOUSING AUTHORITY
P. O. BOX 17907
HONOLULU, HAWAII 96817

FRANKLIN D. SUND
SICILIANO
WILLIAM A. HALL
ACTING EXECUTIVE DIRECTOR

RE REPLY REFER
TO:

December 27, 1978

MEMORANDUM

TO: Office of Environmental Quality Control
FROM: William A. Hall, Acting Executive Director
SUBJECT: Environmental Impact Statement
Title: Maui Vacuum Cooling Plant Improvements,
Onaopio, Makawao, Maui
Location: Onaopio, Makawao, Maui
Classification: Agency Action

The Hawaii Housing Authority has reviewed the subject Environmental Impact Statement and has no comments to offer.
Thank you for allowing us the opportunity to review the EIS.

12
11
15

WILLIAM A. HALL
C. H. H. H. H. H.

Acting Executive Director

cc: DAGG/
DSSH



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 118 HONOLULU, HAWAII 96810

LETTER NO. _____

February 8, 1979

Mr. William A. Hall
Acting Executive Director
Hawaii Housing Authority
Department of Social Services
and Housing
State of Hawaii
P.O. Box 17907
Honolulu, Hawaii 96817

Dear Mr. Hall:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact Statement.

Very truly yours,

Hideo Murakami
HIDEO MURAKAMI
State Comptroller





GEORGE W. ARIYOSHI
GOVERNOR

HIDEO MURAKAMI
COMPTROLLER
MAKEMU TOKUNAGA
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 111, HONOLULU, HAWAII 96813

LETTER NO. _____

January 9, 1979 STP 8-5252

February 8, 1979

Mr. Donald Brenner
Chairman
Environmental Quality Commission
550 Hahaione St., Room 301
Honolulu, Hawaii 96813

Dr. Ryokichi Higashionna, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Brenner:

Dear Mr. Higashionna:

Subject: Environmental Impact Statement
Maui Vacuum Cooling Plant
Onaopu, Hikoavao, Maui

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for giving us the opportunity to review and comment on the above-captioned document. We have no comments to offer which could improve the document.

Thank you for reviewing the Environmental Impact Statement.

Very truly yours,

Very truly yours,

ALK:jk

cc: LT-P
DAGS

Ryokichi Higashionna

[Signature]
HIDEO MURAKAMI
State Comptroller



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
OFFICE OF THE GOVERNOR
325 PIKE PLAZA #31

ROOM 308
HONOLULU, HAWAII 96813

January 16, 1979

RICHARD L. O'CONNELL
DIRECTOR
TELEPHONE NO.
3488615

As of this date, we have received a total of fifteen (15) comments as indicated on the attached list.

This Office has not attempted to summarize comments made by other reviewers. Careful consideration be given to each comment made by each reviewer.

We appreciate the opportunity to review this EIS and hope that our comments will be helpful to you in the preparation of the revised statement.

Attachment

MEMORANDUM

TO: Hideo Murakami, Comptroller
Department of Accounting and General Services

FROM: Richard L. O'Connell, Director *R. O'Connell*
Office of Environmental Quality Control

SUBJECT: Environmental Impact Statement for Maui Vacuum Cooling Plant Improvements, Kula, Maui

We have reviewed the subject environmental impact statement and offer the following comments for your consideration:

1. Are the farmers charged for the use of the facility?
2. It appears that there are several properties between the project site and the unnamed gulch to the North. Are residences located on these parcels? Would runoff from the site toward the gulch affect these parcels?
3. The project site should be shown on figures 6 and 7.
4. There should be a discussion of structural noise mitigation measures (berms, walls, etc.) since noise appears to represent a significant adverse environmental impact. This discussion should include noise from the parked refrigerated trailers.
5. Comments if any, and responses made during the consultation process, should be included in the EIS.

The State EIS Regulations allow the accepting authority or his authorized representative to consider responses received after the fourteen day response period. This Office will exercise that option and will consider responses after the fourteen day period.



List of commentors on the Environmental Impact Statement for Haul Vacuum Cooling Plant (DAGS).

<u>State Agencies</u>	<u>Comment date</u>
*Dept. of Agriculture	1/4/79
*Dept. of Defense	1/3/79
*Dept. of Health	1/11/79
Dept. of Land and Natural Resources	1/9/79
*Dept. of Planning and Economic Development	12/21/78
Dept. of Transportation	1/9/79
*Hawaii Housing Authority (DSSH)	12/27/78
<u>County of Maui</u>	
*Planning Dept.	1/4/79
<u>Federal Agencies</u>	
*U.S. Fish and Wildlife Service	1/9/79
*14th Naval District	12/29/78
<u>Others</u>	
Hawaiian Telephone Co.	1/9/79
Bim Wilson	1/3/79
Gasco	1/2/79
*Haul Electric	1/2/79
*Chandler R. Brown	1/1/79
*Comment previously forwarded	



GEORGE ARIYOSHI
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 118 HONOLULU, HAWAII 96813

HIDEO MURAMAKI
COMPTROLLER

MIKE H. TORIHARA
DEPUTY COMPTROLLER

LETTER NO. _____

February 8, 1979

Mr. Richard O'Connell, Director
Office of Environmental Quality Control
Office of the Governor
State of Hawaii
550 Halekauwila Street
Room 301
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

SUBJECT: Haul Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact Statement. We will present our responses in the order of your comments.

1. The farmers using the facilities are charged a fee based on the amount of produce processed. The present rate is \$0.75 per 100 pounds.
2. Runoff from the project site flows northeast through THK 2-3-03:26 before entering the gulch to the north. There is a barn located on this parcel, which may possibly be affected by runoff from the site. However, the runoff emanating from the improvements constructed on the site has been designed to maximize infiltration of the runoff by discharging the water into a well-vegetated pasture and increasing the drainage path. Present runoff from the site is approximately 1.97 cfs (10-year storm) and projected runoff is 3.93 cfs, or an increase of about 2 cfs.

3. Thank you for your comment. This information will be included in the Revised EIS.

Mr. Richard O'Connor, Director
February 8, 1979
Page Two

4. Thank you for your comment. A discussion of structural noise mitigation measures will be included in the Revised EIS, including noise from the parked refrigerated vans. It will include, but not be limited to, the following measures: placing the vacuum release for the new unit within the building and installing a muffler, installing the compressor for the new reefer unit within the building, facing the noisy end of the vans towards the undeveloped portion of the property, and building a wall around a portion of the property.
5. One comment was received in response to the Notice of Preparation for the subject EIS. This will be included in the Revised EIS.

Very truly yours,


HIDEO MURAKAMI
State Comptroller

UNIVERSITY OF HAWAII

Water Resources Research Center

January 18, 1979



GEORGE R. HUNTOWSKI
Deputy Director

HIDEO MURAKAMI
COMPTROLLER

MAE M. TOMIHAGA
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 191, HONOLULU, HAWAII 96819

LETTER NO. _____

February 8, 1979

Environmental Quality Commission
550 Halekauwila Street, Rm. 301
Honolulu, Hawaii 96813

Dear Sir:

SUBJECT: Review of EIS for the Haul Vacuum Cooling Plant
Improvements, Haupio, Makawao, Maui

Thank you for sending the subject EIS for our review and comment.
This EIS is well organized, and we have no comments on items related
to water resources.

Sincerely,

Yi-Si Fok, Professor
Faculty EIS Review Coordinator

cc: Dept. of Accounting and General Services
1150 Punchbowl Street, Hon., HI. 96813
Dr. Chun
Dr. Young
Mr. Gee

Mr. Yi-Si Fok, Professor
Faculty EIS Review Coordinator
Water Resources Research Center
University of Hawaii
2540 Dole Street
Honolulu, Hawaii 96822

Dear Mr. Fok:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact
Statement.

Very truly yours,

HIDEO MURAKAMI
State Comptroller

2540 Dole Street, Honolulu, Hawaii 96822
STATE OF HAWAII DEPARTMENT OF PUBLIC WORKS



DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI

P. O. BOX 1109
MAILURU, MAUI, HAWAII 96793

GEORGE R. ARVOSH
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS

P. O. BOX 174, HONOLULU, HAWAII 96848

HEO HURAKAHI
COMPTROLLER

MAHE N. TOKUNAGA
DEPUTY COMPTROLLER

LETTER NO. _____

January 18, 1979

State of Hawaii
Environmental Quality Commission
Office of the Governor
550 Halekanihale Street, Room 301
Honolulu, HI 96813

SUBJECT: EIS FOR THE MAUI VACUUM COOLING PLANT IMPROVEMENTS, ORAOPPIO,
HAWAII, MAUI, HI

The County of Maui Department of Water Supply is in favor of the proposed improvement to the Maui Vacuum Cooling Plant. We request that appropriate action be taken:

1. For the realignment of a portion of the Department of Water Supply's water tank site to accommodate the extension of the proposed project and including a provision for disposal of collection and run-off water from both properties.
2. To provide adequate fire protection equipment and facilities to the building.

Sincerely,

Tatsumi Imada
Tatsumi Imada, Director

CK/tm

cc: Engr. file

February 8, 1979

Mr. Tatsumi Imada, Director
Department of Water Supply
County of Maui
P.O. Box 1109
Mailuru, Maui, Hawaii 96793

Dear Mr. Imada:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact Statement. We will present our responses in the order of your comments.

1. Appropriate action has been taken for the realignment of a portion of the Department of Water Supply's water tank site. The drainage design of the proposed expansion will accommodate storm runoff from the project site and the water tank site.
2. The facility will be supplied with fire extinguishers. In addition, the response time from the Makawao Fire Station is approximately 12 minutes, as discussed in Section 2, item XI.D.

Very truly yours,

Heo Hurakahi
HEO HURAKAHI
State Comptroller

GEORGE R. ANTOSH
GOVERNOR



HIDEO MURAKAMI
COMPTROLLER
MIKE H. TORIYAMA
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 111, HONOLULU, HAWAII 96810

LETTER NO. _____

January 4, 1979

February 8, 1979

Office of Environmental
Quality Control
550 Halekauwila St.
Room 301
Honolulu, Hawaii 96813

Gentlemen:

Re: FIS for the Maui Vacuum Cooling Plant Improvements,
Omaoio, Maui

We have reviewed the Environmental Impact Statement for the
above proposed project at Omaoio, Maui, and have no comments except
to state that the said project is consistent with the County's
General Plan and Program for diversified agriculture.

Thank you for the opportunity to review the FIS document.

Yours very truly,

TOSHI ISHIKAWA
Planning Director

cc BACS

Mr. Tosh Ishikawa, Director
Planning Department
County of Maui
200 S. High Street
Haliuku, Maui, Hawaii 96793

Dear Mr. Ishikawa:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact
Statement.

Very truly yours,

Hideo Murakami
HIDEO MURAKAMI
State Comptroller

CHANDLER P. BROWN
INTERNATIONAL COLONY CLUB #26
LAHAINA, MAUI, HAWAII, 96761

1/1/79

Office of Environmental Quality Control
550 Mokuauiaua St. Room 301
Honolulu, HI 96813

I am a resident of Maui and enthusiastically support the plans for a detour to the Maui Ocean Embankment Plant on Emmaus Road in Maui.

Our economy is dramatically dependent on energy and tourism, both of which are greatly reduced and collapse very rapidly for reasons quite beyond control of our local government - anything we can do to local airlines and bus lines will increase the intolerable ocean transportation we stand to lose and in this case we will lose our own community's considerable contribution to the local economy from such efforts.

Yours truly,
Chandler P. Brown

12-23



GEORGE R. ARIOSA
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 115 HONOLULU HAWAII 96810

HIDEO HUPAKAHI
COMPTROLLER
MAELEN TORUNAGA
DEPUTY COMPTROLLER

LETTER NO. _____

February 8, 1979

Mr. Chandler P. Brown
International Colony Club, #26
Lahaina, Maui, Hawaii 96761

Dear Mr. Brown:

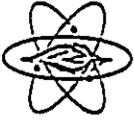
SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact Statement.

Very truly yours,

Hideo Hupakahi
HIDEO HUPAKAHI
State Comptroller





GASCO, INC.

A PRIVATE REGISTERED PUBLIC COMPANY
MAUI DIVISION 791 HANA HIGHWAY
KAHULUI, MAUI HI 96732

JEROME S. SANO
BRANCH MANAGER, MAUI

GEORGE R. ARITOSH
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 118 HONOLULU, HAWAII 96818

HIDEO HURAKAMI
COMPTROLLER

MIEE N TORIYAMA
DEPUTY COMPTROLLER

LETTER NO. _____

January 2, 1979

State of Hawaii
Office of Environmental Quality Control
550 Halekanihale St. Room 301
Honolulu, HI 96813

Dear Sir:

SUBJECT: EIS for the Maui Vacuum Cooling Plant Improvements,
Omaopio, Hakapao, Maui

This is to acknowledge receipt and review of the subject
environmental statement. We have no comments to offer on this
document.

As requested, please find enclosed the EIS document.

Thank you for the opportunity of reviewing the document.

Very truly yours,

JEROME S. SANO
BRANCH MANAGER

JSS/snf
Maui - 1/79
Enclosure
cc: H. Lee

February 8, 1979

Mr. Jerome S. Sano, Branch Manager
Maui Division
Gasco, Inc.
70 Hana Highway
Kahului, Maui, Hawaii 96732

Dear Mr. Sano:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact
Statement.

Very truly yours,

HIDEO HURAKAMI
State Comptroller

ENV
H-W/M

MAUI ELECTRIC COMPANY, LIMITED
210 KALEIHAHEHA AVENUE • KAHULUI, MAUI, HAWAII 96732 • TELEPHONE 877-3374

January 2, 1979

GEORGE R. ARYOSHI
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 118, HONOLULU, HAWAII 96848

HIDEO MURAKAMI
COMPTROLLER
MIKE M. TOKUNAGA
DEPUTY COMPTROLLER

LETTER NO. _____

February 8, 1979

OFFICE OF ENVIRONMENTAL QUALITY CONTROL
State of Hawaii
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Subject: EIS For Maui Vacuum Cooling Plant Improvements
Omaopio, Makawao, Maui

We have reviewed subject Environmental Impact Statement and have no comments to make. Returned herewith is the document, as requested.

T. H. SATO
T. H. SATO
Manager, Engineering

Enc.
cc: Accounting & General Services Dept.

Mr. T. M. Sato, Manager
Engineering Division
Maui Electric Company, Ltd.
210 Kamehameha Avenue
Kahului, Maui, Hawaii 96732

Dear Mr. Sato:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact Statement.

Very truly yours,
Hideo Murakami
HIDEO MURAKAMI
State Comptroller

MEMORANDUM

DATE: JANUARY 3, 1979
TO: OFFICE OF ENVIRONMENTAL QUALITY CONTROL
DEPT. OF ACCOUNTING & GENERAL SERVICE
FROM: BIM WILSON OWNER TRK 2-3-03-155
ATTN: IN FACT FOR PROPERTY OWNER 2-3-03-156
SUBJECT: EIS MAUI VACUUM COOLING PLANT

Please note from the outset, I am in favor of this project, but desire to protect my property and my brothers property, from adverse impact from this addition as much as possible.

For your information, please note the following corrections:

SECTION 2 I. CLIMATE Page 2-1 The normal trade winds blow from a south westerly direction, or from the project towards my property, rather the north easterly direction as stated.

II TOPOGRAPHY Page 2-4 The subject parcel is bounded on the north by my property. My property is bounded on the north by Jack Vockrodk's property TRK 2-3-03-154. Jack Vockrodk's property is bounded on the north by the gulch mentioned.

VIII NOISE Page 2-9 Last paragraph

While I was not present on the noise testing, I believe the DBA level to be louder "near the residential area on the opposite side of the property," (my property) due to the south westerly trades.

SECTION 4 page 4-10 The nearest residence (mine) is located approximately 80 feet away instead of 400 as stated. This means the noise level at my home using the formula on page 4-10 would be about 67 DBA. It is noted that the noise level allowed in Agricultural District is 70 DBA, very close to the DBA level at my home.

CONCLUSION

An increase noise level is of course not desirable for the 2 properties that I represent.

It would be desirable from our point of view for the project to do extensive planting near the exhaust area and on the boundary between our 2 properties to help reduce the noise level. I have already planted Norfolk pine and Oleander between us. Our property is considerably lower than the project property and our plants will have a difficult time reaching a height to protect us from the noise.

The best planting area to help this situation would be as shown on the attached Site Plans as marked in yellow. If possible additional planting within the hedge, such as bananas or other leafy plants should help reduce the noise level considerably. I appreciate the opportunity to express myself on this project and would be very happy to meet your representative at the site to clarify and discuss my concerns on this project.

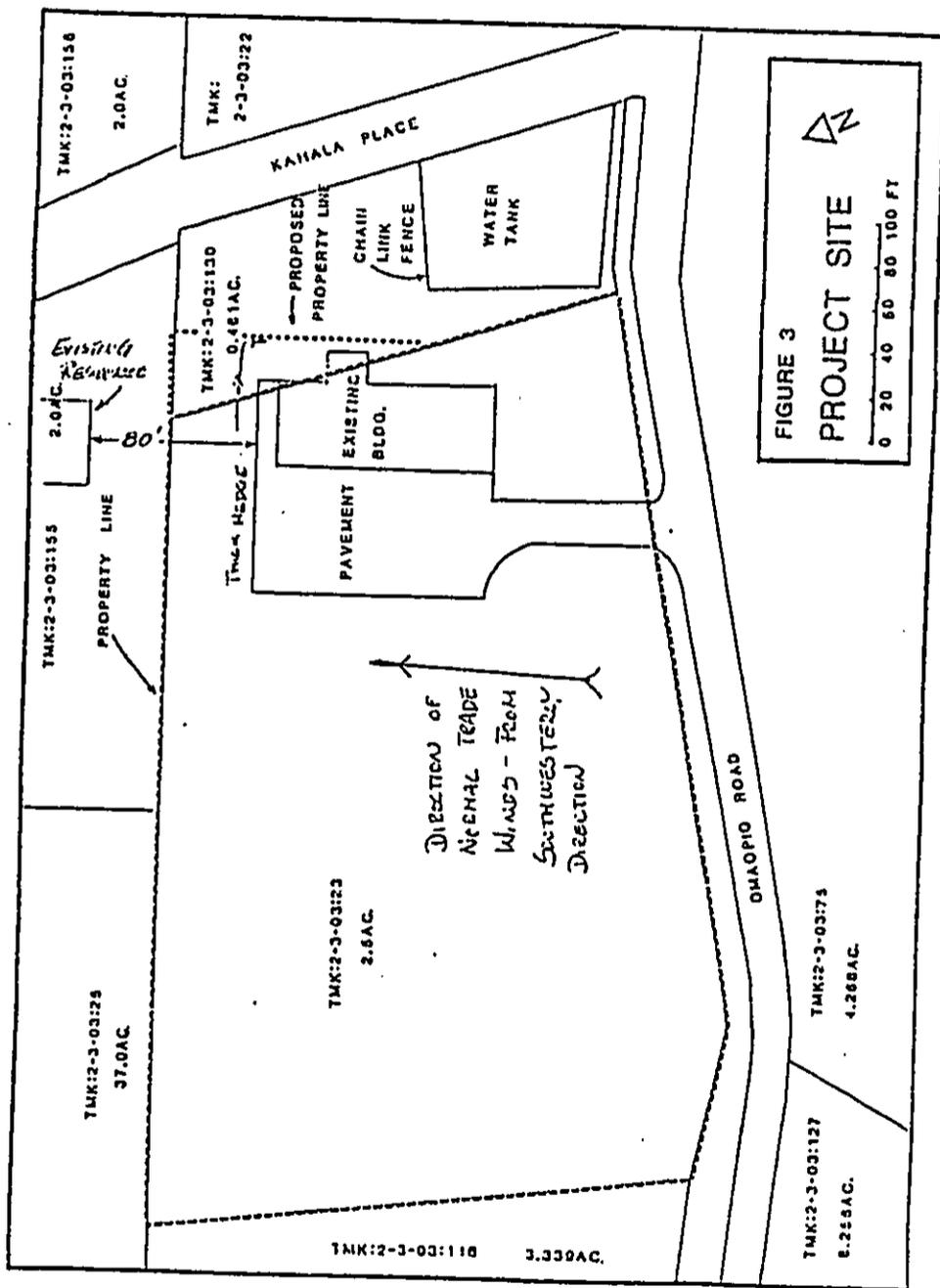


FIGURE 3
 PROJECT SITE
 0 20 40 60 80 100 FT

1-6

GEORGE H. ANIYOSHI
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 119 HONOLULU, HAWAII 96810

HIDEO MURAKAMI
COMPTROLLER
MIKE H. TORIYAGA
DEPUTY COMPTROLLER

LETTER NO. _____

February 8, 1979

Mr. Bim Wilson
Pacific Land Incorporated
79 Church Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Wilson:

SUBJECT: Maui Vacuum Cooling Plant Improvements
Environmental Impact Statement

Thank you for reviewing the Environmental Impact Statement. We will present our responses in the order of your comments.

1. Page 2-1

Trade winds in Hawaii, by definition, blow from the northeast because they are generated by the Pacific High, which generally lies northeast of Hawaii. However, the presence of Haleakala deflects these winds to some extent, allowing local winds to predominate at certain times of the year. An example would be the wind pattern you mention. On both days (8-26 and 12-26-78) that EISC conducted field investigations, the wind was blowing from a northeast direction.

2. Page 2-4

Thank you for your comment. This information will be included in the Revised EIS.

3. Page 2-9

The noise readings given in the last paragraph of this section were recorded when the vacuum coolers were operating, but not while the vacuum was broken. Ambient readings taken four months later were 48 dBA and 49 dBA on the northern end of the property, slightly higher due to the prevailing winds.

Mr. Bim Wilson
February 8, 1979
Page Two

4. Page 4-10

Thank you for your comment. This information will be included in the Revised EIS.

Plantings, as you have suggested, will be added as a mitigative measure to reduce noise that may be experienced by neighboring households. Some 250 Monterey pine trees will be planted around the north and east sides of the building, as well as around the perimeter of the site. In addition, please note that one of the new building additions (#1 in Figure 4) will also help to buffer the noise that will be generated in your direction by the refrigerated vans. The reefer end of these vans will be directed west, towards the open pasture. Finally, the new vacuum cooling unit will be installed with a muffler and will actually be quieter than the old units.

Very truly yours,

HIDEO MURAKAMI
State Comptroller



