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October 29, 1979

MEMORANDUM

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

SUBJECT: Pumps and Controls for Napili Well "C" and Hoanakahua Well "A", 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. 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 the decision is made regarding the proposed action itself, I expect the proposing agency to 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, provide a useful analysis of alternatives to the proposed action.


George R. Ariyoshi

cc: Mr. Eric Soto, Director
Department of Water Supply,
County of Maui

bcc: Mr. Richard L. O'Connell

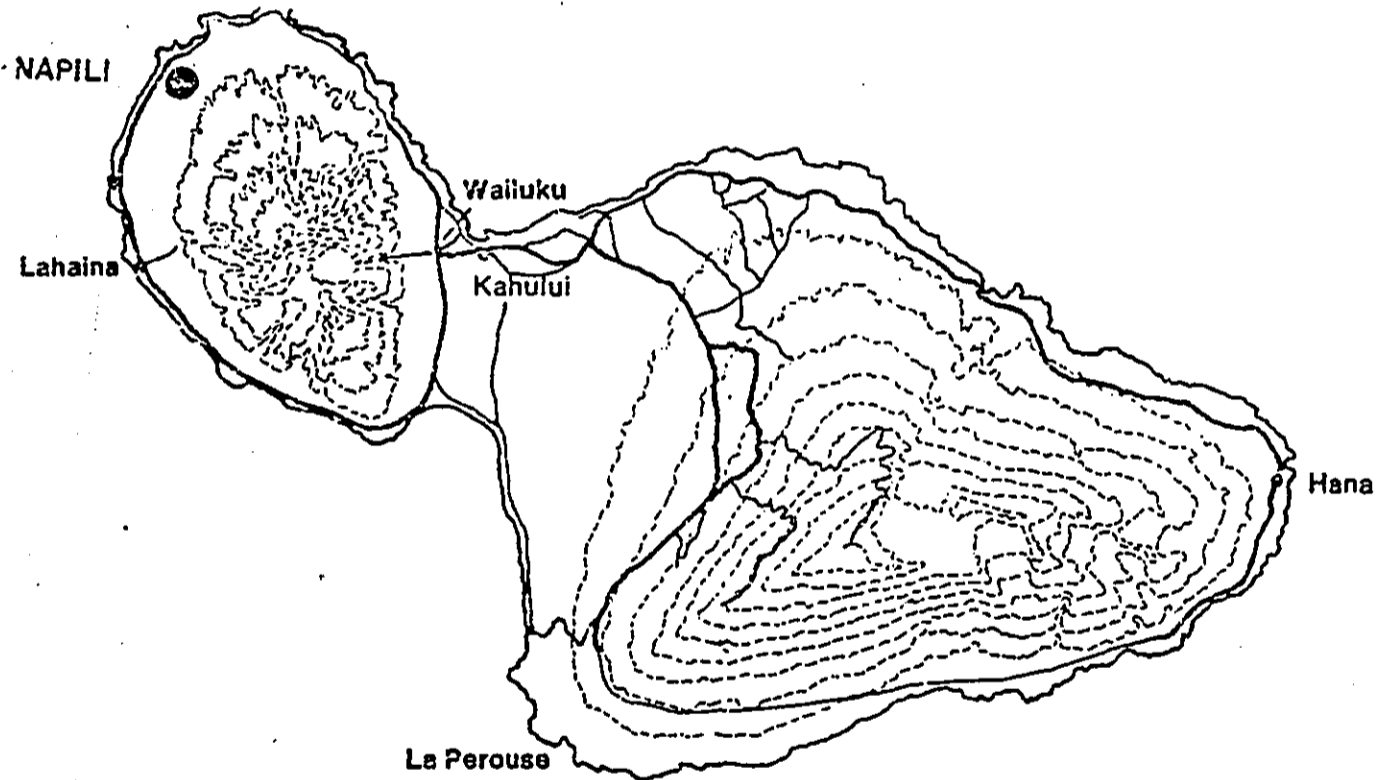
Office of Environmental Quality Control
Office of the Governor
550 Halekauwila Street

Tani Office Building, Third Floor
Honolulu, Hawaii 96811

ENVIRONMENTAL

IMPACT STATEMENT (REVISED)

PUMPS and CONTROLS
for NAPILI WELL "C"
and HONOKAHUA WELL "A"
WEST MAUI WATER PROJECT



DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI

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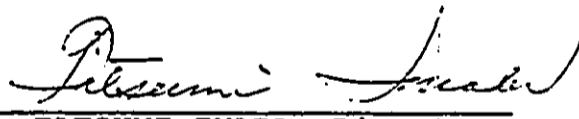
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PUMPS AND CONTROLS FOR
NAPILI WELL "C" AND HONOKAHUA WELL "A"
WEST MAUI WATER PROJECT

REVISED
ENVIRONMENTAL IMPACT STATEMENT

Submitted by
Department of Water Supply, Maui County


TATSUMI IMADA, Director
Department of Water Supply

Prepared by
Division of Water and Land Development
Department of Land and Natural Resources

August, 1979

SUMMARY

This Environmental Impact Statement was prepared to describe a state funded water system project for the County of Maui. As required by the EIS Regulations of the Environmental Quality Commission (pursuant to Chapter 343, Hawaii Revised Statutes), the probable impacts of the proposed action are discussed and the following questions are answered:

1. What is the project?
2. How does the project improve the water system?
3. Why is the project being undertaken?
4. What are the probable impacts of the project?
5. What other projects can improve the water system to the extent expected of this project?

The Project

On June 26, 1978, Water Resources International, Inc. was notified by the Division of Water and Land Development to proceed with the drilling of two 14-inch wells, Napili Well "C" (5338-04) and Honokohua Well "A" (5838-03) in West Maui. Napili Well "C" has been drilled, and was tested in January 1979. Honokahua Well "A" will also be tested in early 1979. The subject of this impact statement is a project to install a 1000 gpm pump in each of the two wells mentioned, and to install pipeline to connect the two wells to the existing county Alaeloa Water Sytem. The Alaeloa system is part of a greater Lahaina District Water System.

The Improvement

The project will increase the domestic water supply to the Lahaina District. Three million gallons per day (mgd) will be added to the Maui County supply capacity through the connection of Napili Well "C" and Honokahua Well "A" to the Alaeloa Water System. The Maui Department of Water Supply will have the option of relegating the presently utilized Honokohau Ditch water to an emergency standby status if a reliable groundwater replacement can be assured for the domestic supply.

The Reason

Development of groundwater provides the surest means of meeting the needs of the Lahaina district. The "General Plan for the Lahaina District" sets aside several areas for resort and apartment uses along an urban coastal strip between Lahaina town and Napili. The adoption of the General Plan indicates that the County intends the district for growth as a resort area. Implementation of the General Plan is evidenced by on-going and planned

sewer and highway improvements in the district. Lahaina is definitely growing; since 1965, the water consumption recorded by the County has increased at a rate of almost 15% compounded annually. Improvements in the water system are needed to keep pace with the growth envisioned by the General Plan. Ultimately, 15 mgd will be required to sustain the fully developed district. Development of water sources through this project complements sewer and highway improvements for the Lahaina District.

The Impacts

Construction impacts will not be significant since the work will be within or adjacent to pineapple fields, and away from homesites and ecosystems for endangered biota. The mere presence of the completed facilities will have little or no impact on the environment or on pineapple plantation operations. The capacity to pump water from Alaeloa will be increased from 2 mgd to 5 mgd, but pumpage of 5 mgd is still only a fraction of the estimated groundwater flux of 31 mgd in the northern part of the district. Only a portion of the groundwater flux can be safely developed. Use of Napili Well "C" and Honokahua Well "A" will provide valuable information as to how much can be safely withdrawn. A building moratorium which was in effect in the district until April 1979, and which has been extended to November 1980, will be modified by the Maui Board of Water Supply if a reliable water supply is assured. Construction will resume, jobs will be added, and new units will be added to the real estate market.

Government is investing in the infrastructure, business is building hotels, labor is adjusting from canefield to resort work, and agricultural interests are diversifying into resort development. All segments of the population appear to be headed in the same direction. In this context, new construction, jobs and opportunities may be considered as favorable impacts.

The Alternatives

Alternative ways of increasing water supply to the Lahaina district include wells and pumps at other sites, manipulation of dike compartment water, treatment of surface water, desalting of brackish water, and recycling of treated sewage. Because the "ultimate" domestic water demand as envisioned by the General Plan for the Lahaina District exceeds 15 mgd and because domestic and agricultural users compete for the same limited supply, the different means of increasing supply are not really alternatives to this proposed action; all may have to be utilized to meet future water demands of the Lahaina district.

The body of this impact statement contains more detailed information on the salient points noted above.

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PUMPS AND CONTROLS FOR NAPILI WELL "C" and
HONOKAHUA WELL "A"

I. Project Description

The project site is in West Maui, in Napili and Honokahua, in the northern sector of the Lahaina District, shown in Figure 1. The objective is to install pumps in two wells - Honokahua "A" (5838-03) and Napili "C" (5338-04)¹ - and to connect these sources to the Maui County Department of Water Supply's Alaeloa Water System, as shown in Figure 2. The proposed facilities are designed to keep pace with the increasing urban needs of the Lahaina District for quality domestic water.

The work will be accomplished in two phases as follows:

Phase I

1. Installation of a 1000 gpm pump in Napili Well "C", plus controls and appurtenances, and a 100,000 gallon control tank.
2. Installation of 600 L.F. of 12" connecting pipeline from Napili Well "C" to the existing Alaeloa System.
3. Installation of 2700 L.F. of 12" transmission main between the 50,000 gallon tank and 1,000,000 gallon tank on Alaeloa Ridge. The proposed main will parallel an existing 8" pipeline.

Phase II

1. Installation of a 1000 gpm pump in Honokahua Well "A", plus controls and appurtenances.
2. Installation of 1000 L.F. of 12" connecting pipeline from Honokahua Well "A" to the existing Alaeloa System at Napili Well "C".

¹Drilling of the wells was begun in June 1978, under Job No. 35-MW-32. Napili Well "C" has been drilled and was tested on January 24, 1979; Honokahua Well "A" also should be completed in early 1979.

The project is funded through Act 226, SLH 1976, item 88-A-4, and Act 10, 1st special session 1977, item A-15. The estimated cost of the proposed improvements is \$650,000 for Phase I, and \$275,000 for Phase II.

Since 1971, several improvements have been completed and added to the Alaeloa Water System, including the drilling of two wells, installation of two 700 gpm pumps, construction of three tanks with a total capacity of 1,150,000 gallons and installation of over 14,000 feet of pipeline (primarily 12-inch diameter transmission mains). Prior to 1971, the water source was surface water from Honokohau Ditch.² The Alaeloa System is part of the County Lahaina District Water System which serves Napili, Alaeloa, Kahana, Honokowai, and Lahaina town.

II. The Environmental Setting

Overview of the Lahaina District. The district is on the western face of what was once the West Maui Volcano. On the north, the district includes Honokohau. The southern part of the boundary is along Manawainui Gulch just outside (west) of Maalaea Bay. The northern and southern segments of the district coastline are sheer cliffs, sometimes indented by small bays and beaches. In between, from Napili to Lahaina town, the coast is an urbanized strip next to a broad fringe of sugar cane and pineapple, with the West Maui Mountain for an imposing backdrop. To the West, unlike the empty expanse of open sea which faces most Hawaiian coasts, the Lahaina horizon is interrupted by the islands of Molokai, Lanai and (for some) Kahoolawe. The attractive vista lends an air of comfort and security to viewers in Lahaina, and undoubtedly contributes to the desirability of the district as a place to live and play.

Historical Background and Economy. The peaks and valleys of the Lahaina economy have been closely associated with past historical events and human needs. Establishment of Lahaina as the heart of the kingdom was followed by relocation of the seat of government to Honolulu; uncontrolled exploitation and virtual depletion of the sandalwood forests eliminated an economic resource; and the impact of the once-prominent whaling trade disappeared as the world turned to more convenient fossil fuels.

²Honokohau Ditch is an extensive ditch-tunnel system which collects surface water from Honokohau, Kaluanui and Honolua Streams in the north and conveys this supply to other areas in the Lahaina District. Although the supply is used primarily for agriculture, the private Kapalua resort system and the County Alaeloa System divert water from Honokohau Ditch.

More recently, the tourist industry challenged the pre-eminence of sugarcane and pineapple as the agricultural interests themselves turned to resort development for economic survival. Hawaiian Statehood attracted a new group of people to West Maui, and probably encouraged the promotion of tourism so much so that the remnants of Lahaina's past have been almost completely overshadowed by the symbols of the district's latest influence -- hotels, resort condominiums and apartment buildings in an almost endless chain from Lahaina to Napili.

The General Plan. Honokohau, in the northern part of the district, is a long and deeply eroded valley which is the source for much of the water which sustains the agriculture of Lahaina. A small community of residences dots the valley floor near the coast. Honokohau is outside of the urban areas designated in the General Plan for the Lahaina District (Hiroshi Kasamoto and Muroda and Tanaka, Inc., December 1968).

Five "community environments" are discussed in the General Plan: Napili-Kapalua, Alaeloa-Kahana, Honokowai, Kaanapali, and Lahaina town. Originally, the Napili-Kapalua Community included four resort hotel areas sited to take advantage of Honokahua, Namalu and Napili Bays and Fleming Beach (see Fig. 3, Water Master Plan Land Use Map). The amended plan now provides for three oceanfront hotel sites at Honokahua, Namalu/Kapalua, and Napili Bays, and one inland site for a hotel or conference center in the Pineapple Hill area. Apartment areas mauka of Oneloa Bay add to the development potential of Napili-Kapalua. The Kapalua Resort includes an existing 18-hole golf course, and another 18-hole course presently under construction.

Alaeloa is set aside for residential use, while Kahana is planned for apartment and hotel development. Honokowai has large areas planned for apartment and hotel uses. Many of the apartment lands are already put to hotel-apartment use, especially those lands makai of the highway.

Kaanapali is a well-known resort area with several elegant hotels along the coast, a resort commercial area, tennis facilities, and two 18-hole golf courses. Lahaina town is more like a typical urban area than the more recently developed resort and apartment areas further north. The town has a historic district whose purpose is to "preserve historic structures and sites within said district and to enable the State and the County to make plans for the restoration of historic structures and sites". (Maui County Historic Districts Ordinance, Article 3, Chapter 8, Zoning) Lahaina town is a contrast of old and new: new shopping centers, old frame buildings housing a hodge-podge of small retail establishments, a "new" hotel designed to look old, a second floating museum to replace an earlier one which sank, pasta at Casa de Grillo or steak at Old Banyan Inn, and a new Civic Center "centered" between Kaanapali and old Lahaina town. (Old Banyan Inn no longer exists)

The State Tourism Study (Office of Tourism, DPED, 1978) lists the following number of units for the Lahaina District resort areas:

Table 1.

<u>Unit Type</u>	<u>Existing</u>	<u>Planned</u>	<u>Proposed</u>	<u>Planned & Proposed</u>	<u>Exist., Planned & Proposed</u>
Hotel	2,842	1,224	4,220	5,244	8,286
Apartment	4,541	764	1,732	2,496	7,037
Total	7,383	1,988	5,952	7,940	15,323

"Planned" units are those firmly committed for implementation; "proposed" units are not firmly committed for implementation.³ The number of planned and proposed units reveal a considerable development potential for tourism in the Lahaina district.

The Project Site. The work will be done on the outskirts or fringes of existing pineapple fields in the sub-districts of Alaeloa, Napili and the Ahupuaa of Honokahua. The State has negotiated for acquisition of the well sites from Maui Land and Pineapple Company. Tax Map Key is 4-2-01:1.

Dominant natural vegetation adjacent to the pineapple fields is composed of guava, koa haole, christmas berry and eucalyptus, all of which are introduced plants. The endemic birds of Maui are mostly forest birds and generally would not be found in the pineapple fields. "The exotic birds found in the area probably include ricebirds, cardinals, white-eyes, linnets, barred doves, lace-necked doves, and the native birds -- the migratory plover and turnstone. Game birds such as pheasant and francolins may also be present." (Staff Report, Division of Fish and Game, April 27, 1978).

The facilities will be installed in the lower uplands, makai (west) of the Honokohau Tunnel. The Alaeloa Water System is hydraulically contiguous with the Lahaina District Water System. The sources for the coastal water distribution system are located in the uplands of Napili-Alaeloa, and Kanaha (mauka of Lahaina town). Because private and public sources, and domestic and agricultural systems are interrelated both physically and through use-agreements, any water project on the western slopes of West Maui will have some impact on most sectors of the Lahaina district.

³The commitment for implementation--"firm", "not firm"-- is as defined by prospective developers, and use of the terms "planned" and "proposed" should not be construed or interpreted to mean that approvals have been obtained from government agencies.

Water Systems. Figure 4 is a schematic representation showing the interrelationship of private, public, domestic and agricultural water systems in the Lahaina district. The single most important system is the Honokohau Ditch system which originates in lands owned by Maui Land and Pineapple Co. After capturing the stream waters of Honokohau, Kaluanui and Honolua, the Ditch (oftentimes tunnel) conveys water west and south. The initial diversion of water meets the needs of Maui Land and Pineapple Co. for its agriculture and Kapalua Resort development. Further south, at the southern limits of pineapple cultivation, the County draws Honokohau Ditch water into the Alaeloa System to supplement groundwater sources for domestic use. The bulk of the ditch water continues southward for cane cultivation by Pioneer Mill Co. The Amfac subsidiary augments Honokohau Ditch water with its own development of Honokowai Tunnel, Kahoma Tunnel, and groundwater sources to grow sugar cane and to supply the needs of the Kaanapali Resort area through a private distribution network.

The County system near Lahaina town is supplied by the Kanaha Wells, Waipuka Wells, and, through an agreement with Pioneer Mill Company, surface water from Kanaha Stream. South of Wahikuli Reservoir, the Honokohau Ditch evolves into the Lahaina Ditch complex which is fed by Kauaula Tunnel and Launiupoko Stream. This water is used for cane growing. At the southern end of the Lahaina District, the Olowalu and Ukumehame systems are essentially isolated agricultural facilities.

The County water system in the Lahaina district extends from Napili to Lahaina town. Sources are located in Alaeloa and east (mauka) of Lahaina town. At Alaeloa, besides an intake which draws surface water from Honokohau Ditch, existing sources are Napili Wells "A" and "B", both capable of producing 1 mgd each. Pumps for Napili Well "C" and Honokahua Well "A" (this project) will add another 3 mgd (1.5 mgd each) to source capacity. Mauka of Lahaina town, the County can pump a total of 0.4 mgd from Waipuka Wells 1 and 2, and obtains 1.25 mgd of surface water from Kanaha Stream. Kanaha Wells A and B add 1 mgd to the system. Public water sources are summarized in Table 2. The present supply totals 6.25 mgd. The County considers the largest pumped source (Napili A) as a standby, given the present sources, and deducts 1.0 mgd from the source total to obtain a "system safe yield" of 5.25 mgd for 1978.

By 1980, wells at Napili and Honokahua will add 3.0 mgd to the system; and contingent upon negotiations with Pioneer Mill, Kanaha Stream diversion may be maintained at 1.25 mgd.⁴ At this stage, all sources except Alaeloa Intake water will be

⁴The Kanaha Stream diversion of 1.25 mgd will be treated by the Lahaina Water Treatment Plant which is presently being designed.

groundwater or treated water. The County will then use the Alaeloa 1.6 mgd surface water instead of the 1.0 mgd Napili "A" groundwater as the system standby, for a net "loss" of 0.6 mgd. The safe yield in 1980 is hence expected to be 8.25 mgd.

TABLE 2

Public Water Sources, Lahaina District

1978 Sources:	<u>Alaeloa</u>		<u>Lahaina</u>		<u>Total</u>
	Alaeloa Intake	1.6 mgd	Kanaha Stream	1.25 mgd	
	Napili A (5338-01)	1.0 mgd	Waipuka 1 (5339-01)	0.20 mgd	
	Napili B (5338-02)	1.0 mgd	Waipuka 2 (5339-02)	0.20 mgd	
			Kanaha A (5339-03)	0.5 mgd	
			Kanaha B (5339-04)	<u>0.5 mgd</u>	
		<u>3.6 mgd</u>		2.65 mgd	6.25 mgd
Minus largest pumped source (Napili A)					-(1.0 mgd)
Safe Yield 1978					5.25 mgd
Source					
Additions	Napili C (5338-04)	1.5 mgd			
by 1980:	Honokahua A (5338-03)	<u>1.5 mgd</u>			
		3.0 mgd			+ 3.0 mgd
Substitute Alaeloa 1.6 mgd surface source for Napili A 1.0 mgd as standby					-(0.6 mgd)
Safe Yield 1980					8.25 mgd

Supply and Demand. Figure 6 is a plot of the annual consumption information obtained from Maui County BWS annual reports. The plot reveals a phenomenal increase in consumption from 204 million gallons in 1965 to over 1 billion gallons in 1977. The annual rate of increase has been almost 15% compounded annually.

A more useful figure is average daily consumption, obtained simply by dividing recorded annual consumption by 365 (days). The actual demand on the system is about 10% more than the recorded consumption because of leaks, fireflows, etc. The maximum demand for any given day in the year is about one-and-one-half times the adjusted average daily demand. Water systems are generally designed to meet the demand on the maximum day with an appropriate allowance for fire flow.

Figure 7 includes plots of the average day consumption and maximum day demand since 1969. The system safe yield information of Table 2 is superimposed on the demand curves. The combined plot indicates that even with the newest additions of Kanaha A and B, and Napili B to the system, demand (if growth is unchecked) will outstrip safe yield during 1979. The proposed development of Napili Well "C" and Honokahua Well "A", together with the source addition from Kanaha Stream (Lahaina Water Treatment Plant) will restore the system safe yield above the maximum day demand in 1980. In the meantime, the Maui Board of Water Supply adopted a rule which in effect withholds approval of building permits until April 1979 for the areas served by the County Lahaina District System (Minutes of Special Meeting, July 12, 1978, Board of Water Supply, County of Maui). The building moratorium provides some time for installation of system improvements, and also retards the growth rate for consumption. If development of the district occurs to the extent envisioned by the General Plan, the maximum day demand on the County water system will reach 15 mgd.

Meeting Future Demand. The County of Maui has already begun a program of recycling sewage effluent from the Honokowai Sewage Treatment Plant for use by agricultural interests in Lahaina. As stated previously, negotiations are underway between the County and Pioneer Mill for increasing the diversion from Kanaha Stream, and the development of Napili C and Honokahua A will add to the district supply.

The State and County have proposed a Desalting Facility near Lahaina to be considered by the U. S. Department of Interior's Office of Water Research and Technology under a Desalting Demonstration Program (Public Law 95-84). If the pilot (brackish water) desalting plant is approved for federal funding and in turn proves to be feasible for West Maui, together with the possibility that Maui may be able to generate all of its electricity from indigenous resources by 1985 (Energy Self-Sufficiency for the County of Maui, Hawaii Natural Energy Institute, 1978), a presently untapped source of water may be available to the County in the future.

For the immediate future, however, exploration for and development of fresh groundwater provides the surest means of meeting the needs of the Lahaina district. The most obvious alternative is a system of wells in the northern sector of the district where groundwater flux is high and present development is low. A less conventional scheme for development of water would release dike compartment water during summer months and allow recharge during winter months (Kahakuloa Water Study, Report R-54, Department of Land and Natural Resources, 1977, prepared by Wilson Okamoto & Associates, Inc.).

The County evidently has a wide range of concepts for meeting the water demands of the future: surface water treatment, desalination of brackish water, development of basal groundwater; and manipulation of high level dike storage. All the concepts, including the already implemented recycling of sewage effluent, may be utilized before the full potential of the Lahaina district is realized.

The concepts discussed above indicate ways in which demand might be met. With respect to time, the Department of Water Supply anticipates that the County must have operational 0.65 mgd per year until maximum development of 15 mgd in the year 1993 (An Assessment of the Future Source Water Requirements of the Lahaina Area System, West Maui, Dept. of Water Supply, February 1978).

Sewer and Highway Facilities

Sewer Systems. Implementation of the Lahaina Sewer System and Reclamation Plan to serve the Lahaina-Honokowai-Napili Area has begun with the construction of the first of three stages of the Honokowai Sewage Treatment Plant. Each of the first two stages will be able to treat 3.2 million gallons per day. The third stage will add 7 mgd to the plant capacity. Arrangements have been made for reclamation of the wastewater for agricultural use. However, Honokowai and Napili do not have sewage collection facilities and still use drilled wells and cavitettes for disposal.

Private sewage treatment plants serve the Kaanapali and Kapalua resort areas. Effluent from the Kaanapali plant is recycled for golf course and agricultural irrigation; injection wells are available as a back-up disposal method. Effluent discharge from the Kapalua plant is currently insufficient for recycling; disposal is presently through injection wells.

Highway. Honoapiilani Highway connects Wailuku with the urbanized sites in the Lahaina district. The two-lane roadway is excellent in certain sections with wide shoulders, and narrow and winding in other areas. An on-going program includes present construction and planned improvements between Honokowai and Honokahua.

Soils and Geology

Soils. Surface material at the project site is Honolua Silty Clay (HWC), an acidic silty clay, dark brown at the surface with a reddish brown subsoil. Permeability is moderately rapid; runoff is slow to medium, and the erosion hazard is slight

to moderate for the capability class IIIe soil (Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii, USDA-SCS, University of Hawaii, August 1972).

Geology. Surface rocks are andesites and trachyte of the Honolua Volcanic series. This surface cap is underlain by thin bedded, highly permeable aa and pahoehoe basalts of the Wailuku Volcanic series. The mass of the West Maui mountains was formed by the Wailuku Volcanic series (Geology of the Hawaiian Islands, Harold T. Stearns, Bulletin 8, USGS, 1967).

Hydrology

Annual rainfall exceeds 400 inches at Puu Kukui, the highest point of West Maui, but is less than 15 inches along the coast south of Honokowai. Most of the streams in the district are perennial in their upper reaches, but agricultural diversions reduce the waterways to intermittent flows in their lower reaches. Honokahua and Kahana, the two major streams which flank the project site, do not extend to Puu Kukui and are intermittent throughout their entire lengths.

Groundwater in the mountainous areas is impounded in high-level dike compartments. Makai of the dike-held water, the groundwater occurs in the basal aquifer of Wailuku basalts. Because of the high permeability of the Wailuku basalts, and the lack of significant caprock along the coast, the basal lens is relatively thin. At Napili Well "A", more than two miles inland, the top of the basal lens is less than 5 feet above mean sea level.

The basal water body is recharged by underflow from high-level dike-impounded water, as well as by percolation of rainfall, streamflow and irrigation water. Discharge from the basal lens is by underflow to sea and by pumpage. Hydrologic budgets for sector A (Honokohau to Kahana) and sector B (Kahana to South Ridge Launiupoko) were prepared for the Kahakuloa Water Study (Report R54, Department of Land and Natural Resources, Wilson Okamoto & Associates, Inc., Dec. 1977). Figures 19 and 20 from Report R54 are diagrammatic representations of the budget and show water movement over and through the high and low level aquifers. A close look at the diagrams reveals that, in effect, all groundwater originates with high level rainfall.

In Sector A, of the 133 mgd of average rainfall, 25 mgd is exported to Sector B via the Honokohau Ditch, 64 mgd is "lost" to the atmosphere through evapotranspiration, 13 mgd becomes surface runoff and 31 mgd is recharged to the groundwater reservoir. Sector B rainfall (132 mgd) matches Sector A's, but groundwater flux is larger (43 mgd) than in Sector A primarily because a higher proportion of rainfall occurs on the uplands, and also because of the 25 mgd of imported water. Water movement

within Sector B is large because of the 98 mgd used for cane irrigation. Cane water is obtained as direct rainfall (17 mgd), high-level surface water (19 mgd), groundwater pumpage (37 mgd) and as surface water from Sector A (25 mgd). Because of the mass circulation of groundwater through a cycle of pumping to the cane fields and percolation down to the basal lens, the general quality of Sector B groundwater would probably deteriorate (picking up dissolved solids at the surface) if not for the diluting effect of the 25 mgd of low-chloride surface water obtained from Honokohau Valley.

Even though 25 mgd is exported from Sector A, the groundwater flux of 31 mgd is still quite large. Although the entire flux cannot be safely developed, the present pumpage is only 2 mgd and this project will increase the withdrawal from the basal lens to 5 mgd. Because no large movement of groundwater is needed for irrigation in the northern sector, future exploration for domestic water will probably be focused on Sector A. At least two advantages can be advanced for the use of groundwater to meet the domestic needs of the Lahaina district. First, high quality groundwater need not be treated; and second, low-chloride high level Honokohau ditch water is conserved for irrigation.

III. Relationship of the Action to Land Use Plans, Policies and Controls.

Detailed Land Classification is C50. The overall productivity rating of "C" is the middle value of a five-class productivity rating system. The number 50 refers to a land type which is suitable for pineapple and grazing. The project is a permitted use in C50 lands, under HRS Ch. 205.

The project is in a State Land Use Agriculture District. The proposed government utility facility is a permitted use in the "A" district as defined in the State Land Use District Regulations.

The "General Plan for the Lahaina District" adopted by Maui County sets aside the coastal strip of West Maui for resort, apartment, and residential uses. This project supports county aims by improving the water infrastructure in line with sewer and highway improvements undertaken by the county and State for the planned growth of the Lahaina district.

IV. Probable Impacts and Mitigative Measures

Construction Impacts. Vegetation removal will be negligible. Since the work is confined to or adjacent to pineapple fields, and away from homesites, construction noise and

dust will not adversely affect the present surroundings or residents. Noise, dust, and possible erosion will be no more than that generated by the usual plantation operations. The small land area (2 acres) converted from pineapple cultivation to government utility use is minimal and will have no impact on pineapple production. No breeding, or nesting grounds, nor historic or archaeological sites will be affected.

Impacts from Presence of the Project. The mere presence of the project will have no impact on the environment nor on the pineapple plantation operations.

Impacts from the Use of the Project Facilities. Although this project will increase groundwater withdrawal from 2 to 5 mgd in Alaeloa, since a groundwater flux of about 31 mgd is maintained in Sector A (between Honokohau and Kahana), the withdrawal of 5 mgd is still only a small fraction of the theoretically developable groundwater. This does not mean that the entire flux can be developed; on the contrary, only a portion is developable. Use of Napili Well "C" and Honokahua Well "A" will provide valuable information as to how much can be safely withdrawn from the basal aquifer. A related concern is that the separation between the two wells furthest apart is only about 2,500 feet. If we assume that the direction of groundwater flow is mauka-makai, the average separation between the flow lines running through the wells is about 600 feet. Use of the wells will be monitored for possible effects of mutual interference .

Honokahua Gulch just north of the project site is deep enough to be a physical barrier to economical extension of the Alaeloa Water System. A decision was made to attempt to maximize groundwater development to minimize pipeline costs. Staff geologists and engineers of the Division of Water and Land Development anticipate that at least 4 mgd and perhaps 5 to 6 mgd can be safely withdrawn from the area between Kahana and Honokahua without adversely affecting the basal aquifer. Water levels and salinity will be monitored in the producing wells to obtain information for operational controls and efficient use of the new sources.

Connection of Napili Well "C" and Honokahua Well "A" to the Alaeloa Water System will increase the source capacity of the Lahaina district by 3 mgd. A building moratorium which was in effect until April 1979, and which has been extended to November 1980, can be lifted by the Maui Board of Water Supply if a reliable water supply is assured. Applications for units now held up by the moratorium will probably proceed as soon as the restriction is withdrawn. Construction activity will increase, providing additional jobs, but also increasing traffic inconvenience. Additional units may be placed on the real estate market, spurring a new round of economic activity in West Maui.

Secondary impacts are difficult to reduce to numbers, but we estimate that this project can support the water needs of an additional 4500 residents in the Lahaina district (see Appendix C). This additional population will also need sewer service, new roads and new homes. As noted previously, the public sector has embarked on a program of water, sewer, and highway improvements and the private sector has several thousand units either definitely planned or proposed for the future of the Lahaina district. In view of this concerted effort by the public and private sectors of the economy to attain the growth objectives in Lahaina, growth is not an adverse impact, and new construction, jobs, and opportunities may be considered as desirable results.

Although any water project will have some impact in Lahaina, no single positive action by itself, whether water development, sewer project or highway improvement, will significantly affect the movement of Lahaina toward becoming a full-fledged resort area. This is not to say that agriculture will be neglected; for indeed, agricultural lands are prominent in the Lahaina master plan. However, public funds are invested in the infrastructure; private capital builds on the land and connects to public systems; the labor force seeks its niche in the new order; and agricultural and resort interests are one and the same. No lines seem to exist between opposing factions. Government and business, through concerted effort, and the general public, through passive acceptance of recent growth, have all "adopted" the "General Plan for the Lahaina District."

V. Unavoidable Adverse Impacts

Construction effects are unavoidable if the project is undertaken, but the impacts are negligible because the work is located in or adjacent to pineapple fields, away from residential areas and endemic biota.

Completion of this project will more than double the present withdrawal capacity from the basal water lens in Alaeloa, but water is a renewable resource, and development of groundwater for domestic use conserves surface water for agricultural use.

The impact of this action on population growth can be estimated, but no single project, facility or system will by itself provide the impetus needed to attain the kind of development envisioned in the General Plan. New construction, new jobs and opportunities may be favorable impacts for a community which appears to be committed to growth. Such growth in Lahaina may be attained at the expense of the present lifestyle enjoyed by many in West Maui.

VI. Alternatives to the Proposed Action

The proposed action basically increases the water supply to the Lahaina district. The supply is increased by connecting two wells to the water system through the use of two 1.5 mgd pumps. Besides increasing the supply, the new groundwater sources may provide the Maui Department of Water Supply with the option to eliminate untreated surface water from Honokohau ditch as a domestic source. If Honokohau ditch water is not used for domestic purposes, the supply to agriculture is increased.

Against the foregoing background, what alternatives are available to produce the same results?

Wells could be drilled in other parts of northern West Maui, but they would be far distant from the existing water system, and would therefore entail a major water development project before one drop could be utilized. This project, by comparison, requires only about 1600 feet of pipeline for connection to the water system.

Treatment of surface water from Honokohau ditch is a possibility, but use of the ditch water would reduce the supply to agriculture. In the immediate vicinity of the project (between Kahana and Honokahua valleys), none of the streams are perennial in any of their reaches, hence no other reliable surface source is available. All other major streams in the Lahaina district are perennial only in their upper reaches primarily because of agricultural diversions.

In Kanaha Valley, mauka of Lahainaluna School, the diversion of surface water is for the County's domestic water system. In 1977 the County diverted an average of 1.25 mgd from Kanaha Stream. The State Division of Water and Land Development has commissioned the engineering firm of Norman Saito Engineering Consultants, Inc. to design a water treatment plant to purify Kanaha Stream water. Treatment of surface water is therefore another alternative which is being actively pursued.

As noted earlier, the State and County have applied for federal funds for a pilot desalting plant under the Desalting Demonstration Program (Public Law 95-84). The Kahakuloa Water Study recommendation of manipulation of dike storage is another possibility which may be considered. All of the different means of developing water are not really alternatives to the proposed action; they are really complementary ways which may all have to be utilized to meet the ultimate future demand of the Lahaina district.

In view of the rapid growth of the district, and the adoption of the General Plan for the Lahaina District as County policy, the no action and postponement alternatives are not realistic. Unless a reversal of County policy, or a retrenching of private initiative or public opposition occurs, this project should be pursued now to keep pace with the planned growth of West Maui.

VII. Parties Consulted, Comments and Responses

The following were consulted in the preparation of this impact statement. Comments received and responses made are also attached.

A. Maui County Agencies

Planning Department
Department of Public Works

B. State Agencies

Department of Health
Department of Agriculture
Division of Fish & Game, DLNR
Office of Environmental Quality Control

C. Others

Maui Land & Pineapple Company, Inc.
Pioneer Mill
Amfac Inc.
John F. Mink

VIII. Figures

- Figure 1. The Lahaina District
- Figure 2. Project Site and State Land Use District
- Figure 3. Water Master Plan Land Use Map
- Figure 4. Lahaina District Water Systems
- Figure 5. The Distribution System in the Lahaina District
- Figure 6A. County System Service Connection
- Figure 6B. County System Annual Water Consumption
- Figure 7. Max. Day Demand and Safe Yield
- Figures 19 and 20 from "Kahakuloa Water Study", Report R-54, DLNR, 1977

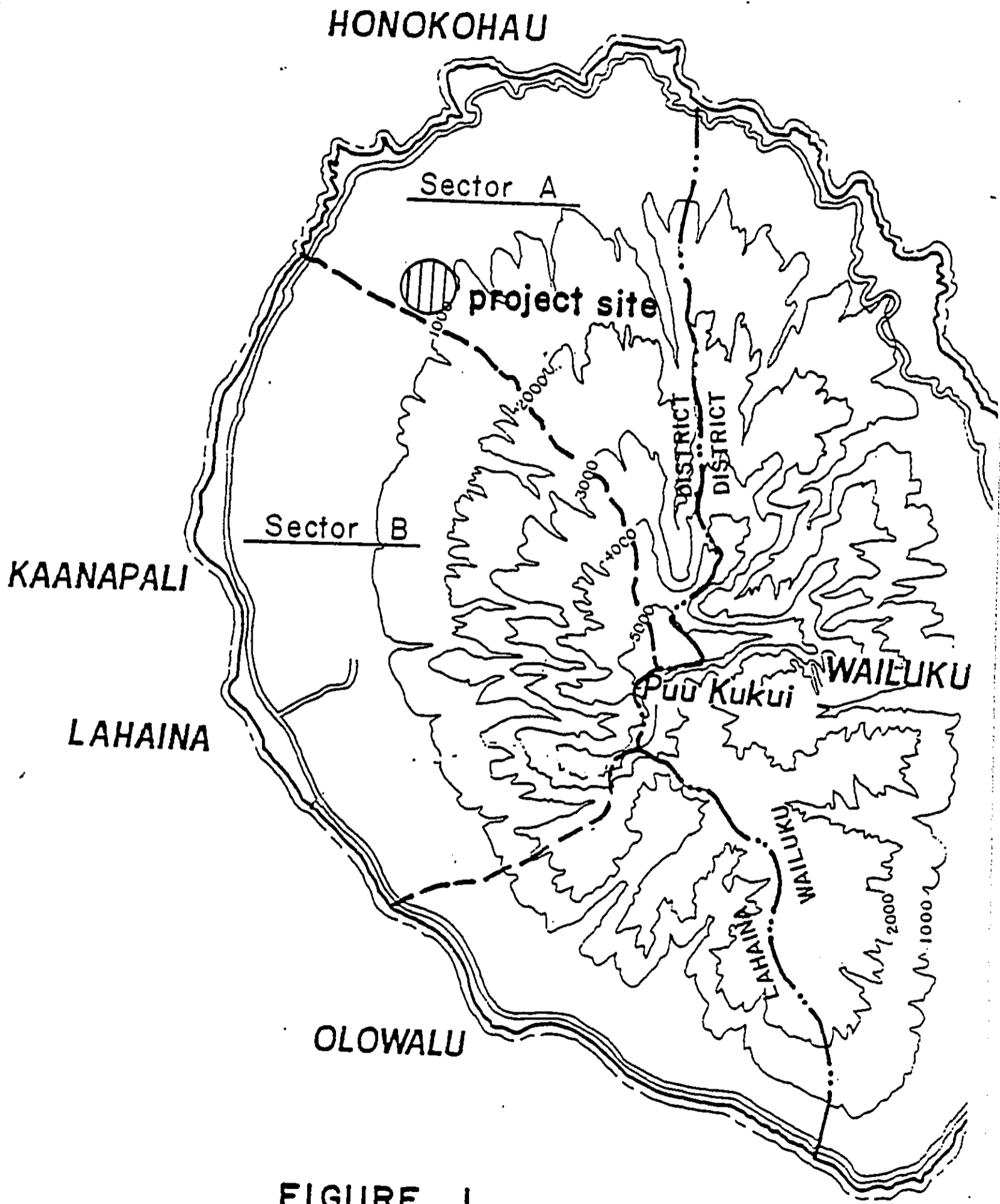


FIGURE 1
THE LAHAINA DISTRICT

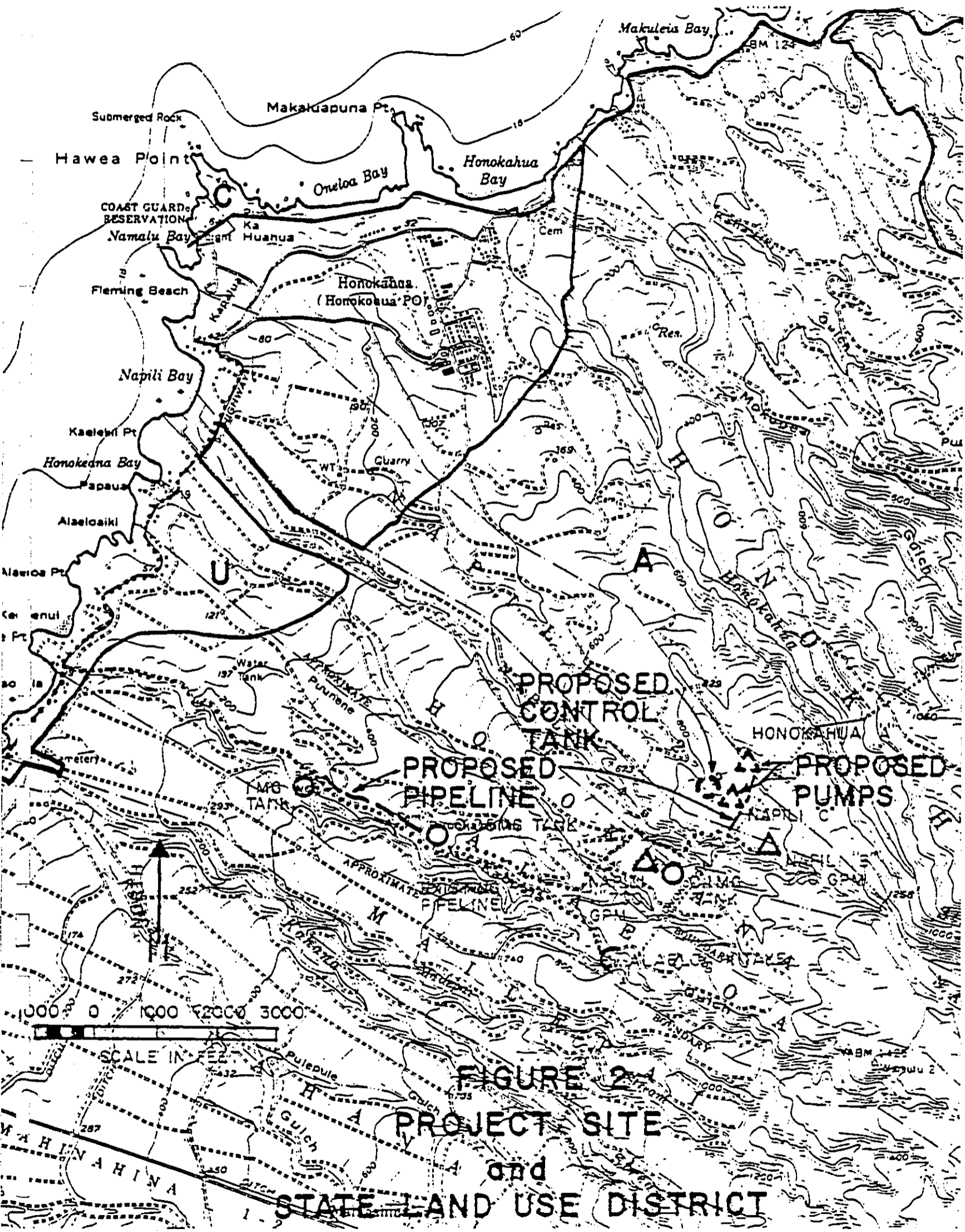
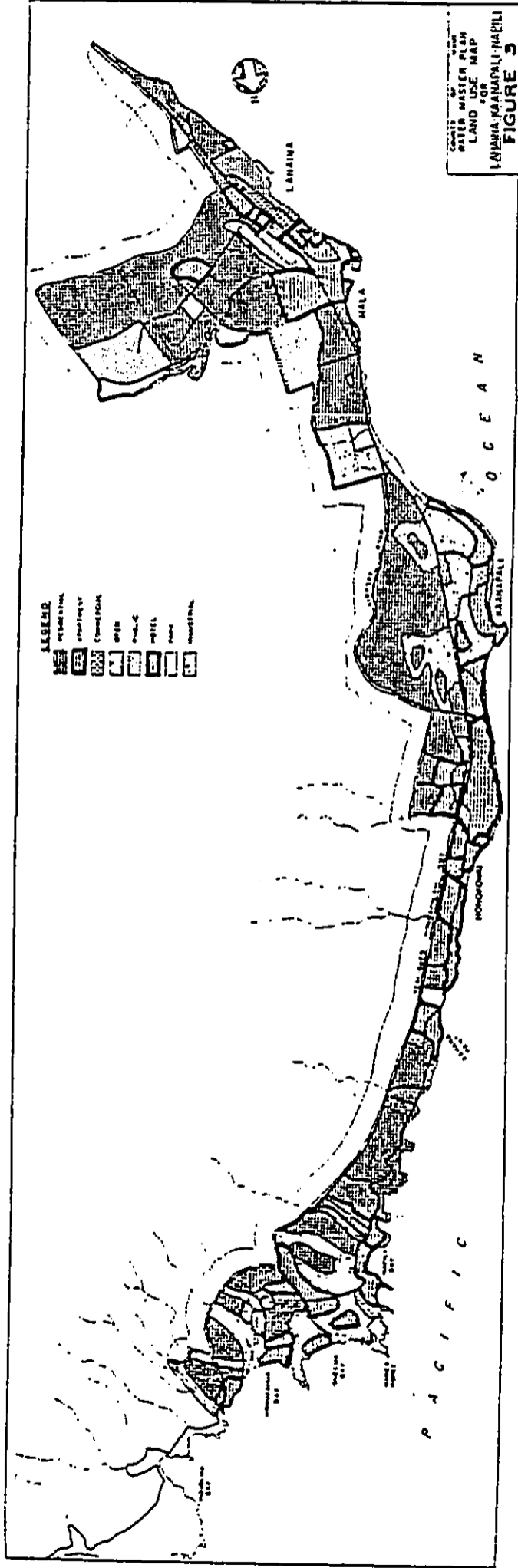


FIGURE 2
PROJECT SITE
and
STATE LAND USE DISTRICT



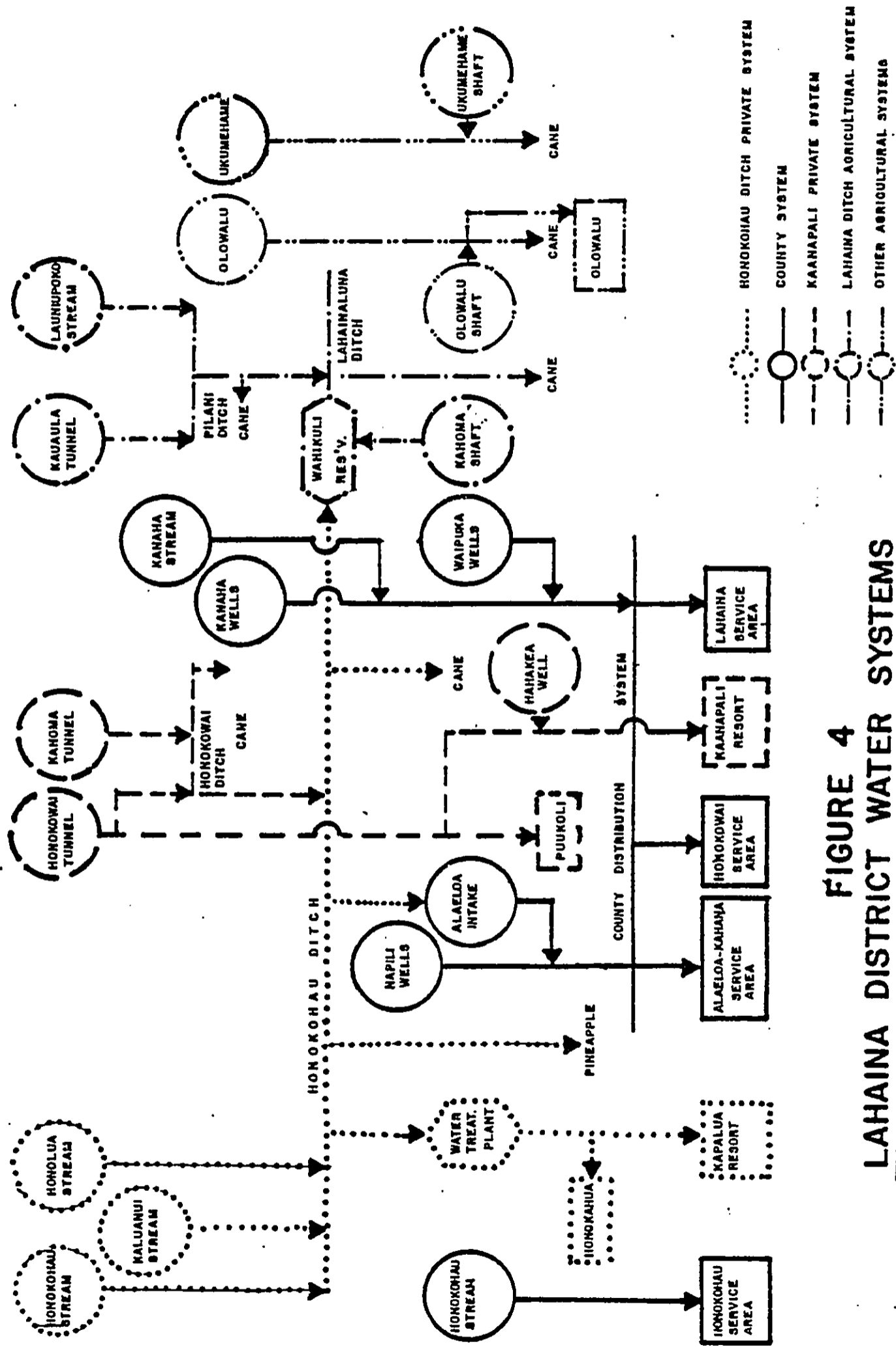
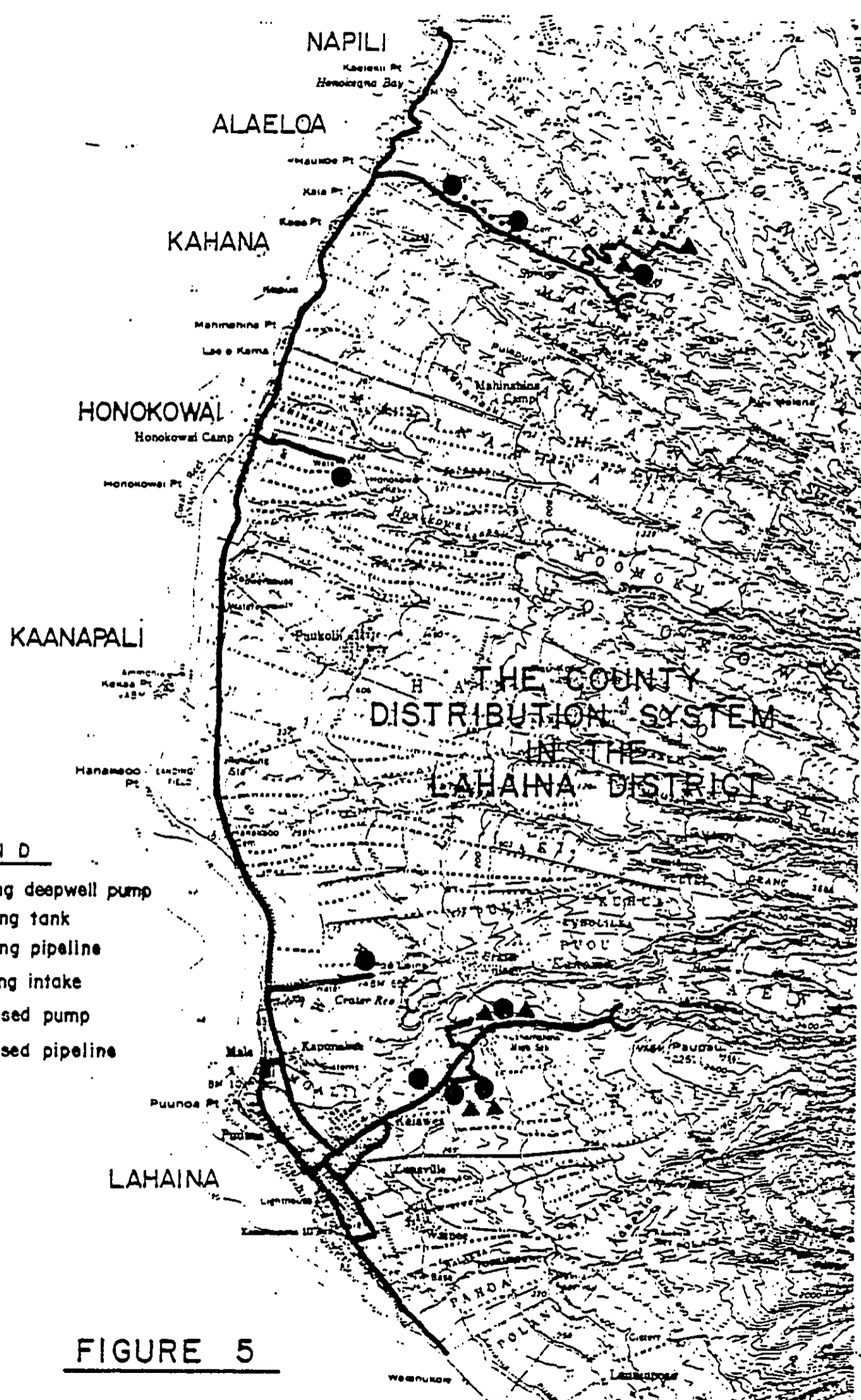


FIGURE 4
LAHAINA DISTRICT WATER SYSTEMS

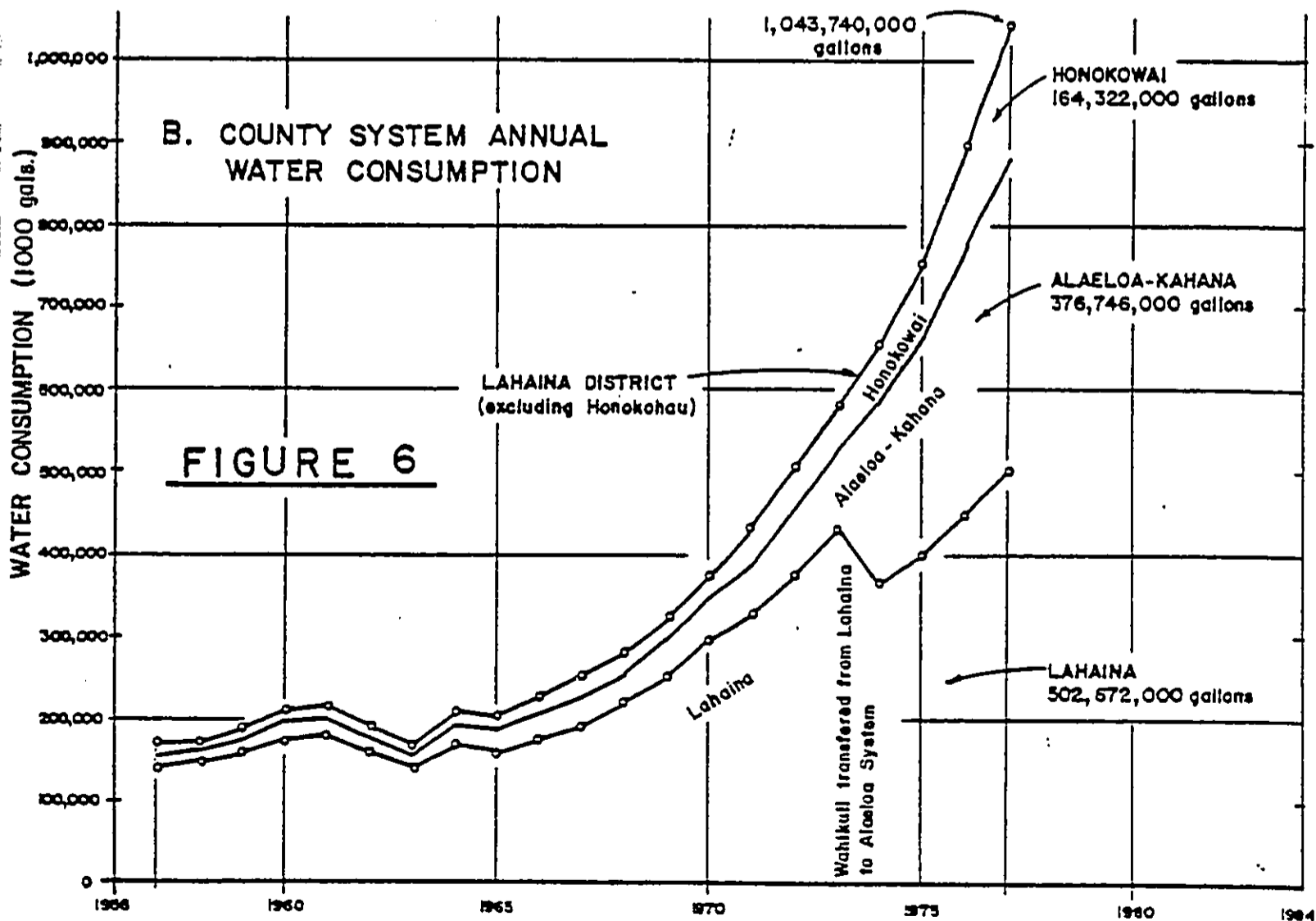
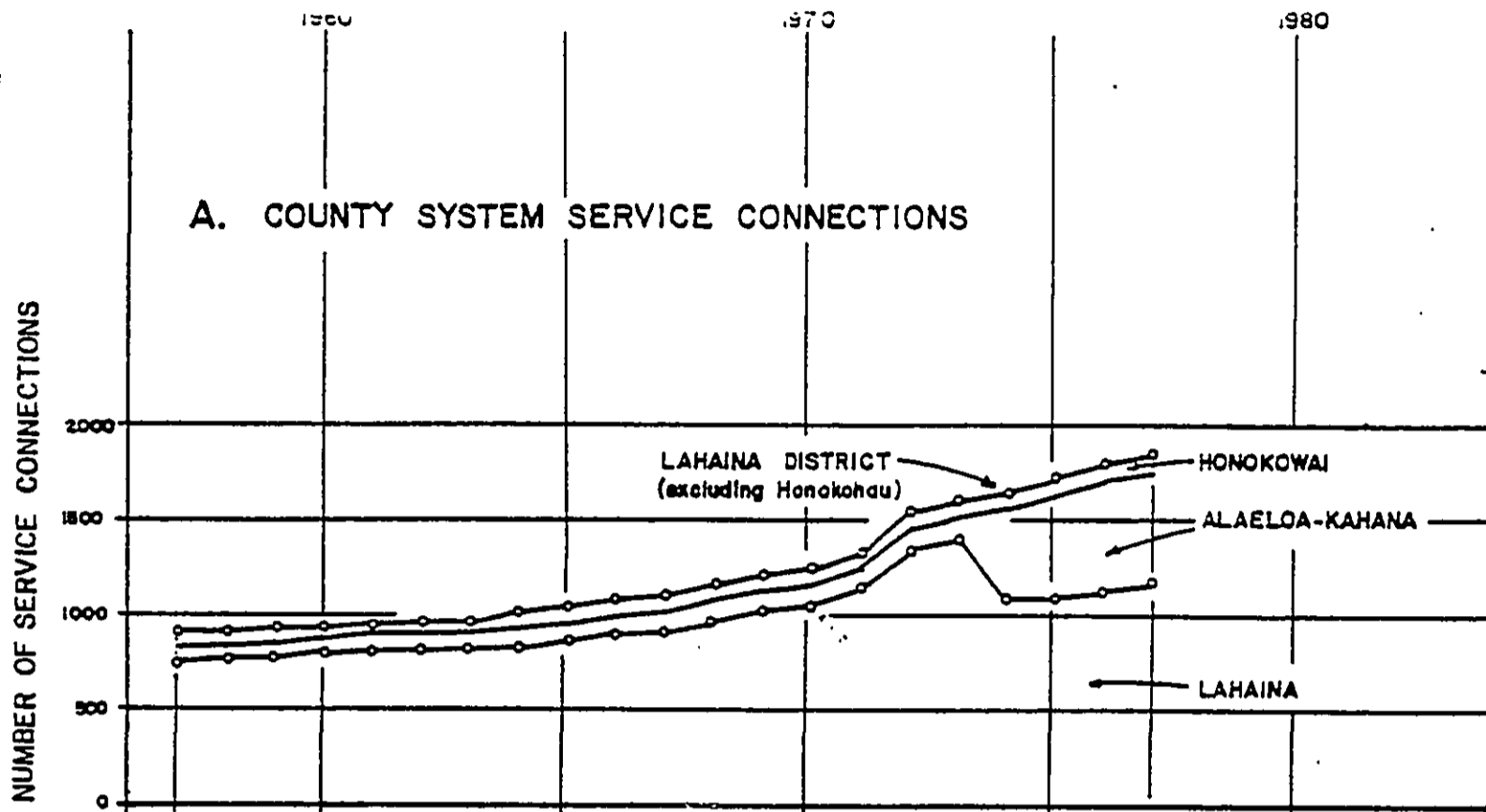


THE COUNTY
DISTRIBUTION SYSTEM
IN THE
LAHAINA DISTRICT

LEGEND

- ▲ existing deepwell pump
- existing tank
- existing pipeline
- U existing intake
- ▲ proposed pump
- proposed pipeline

FIGURE 5



REFERENCE: "AN ASSESSMENT OF THE
 FUTURE SOURCE WATER REQUIREMENT
 OF THE LAHAINA AREA SYSTEM."
 DEPT. OF WATER SUPPLY - FEB. 1978

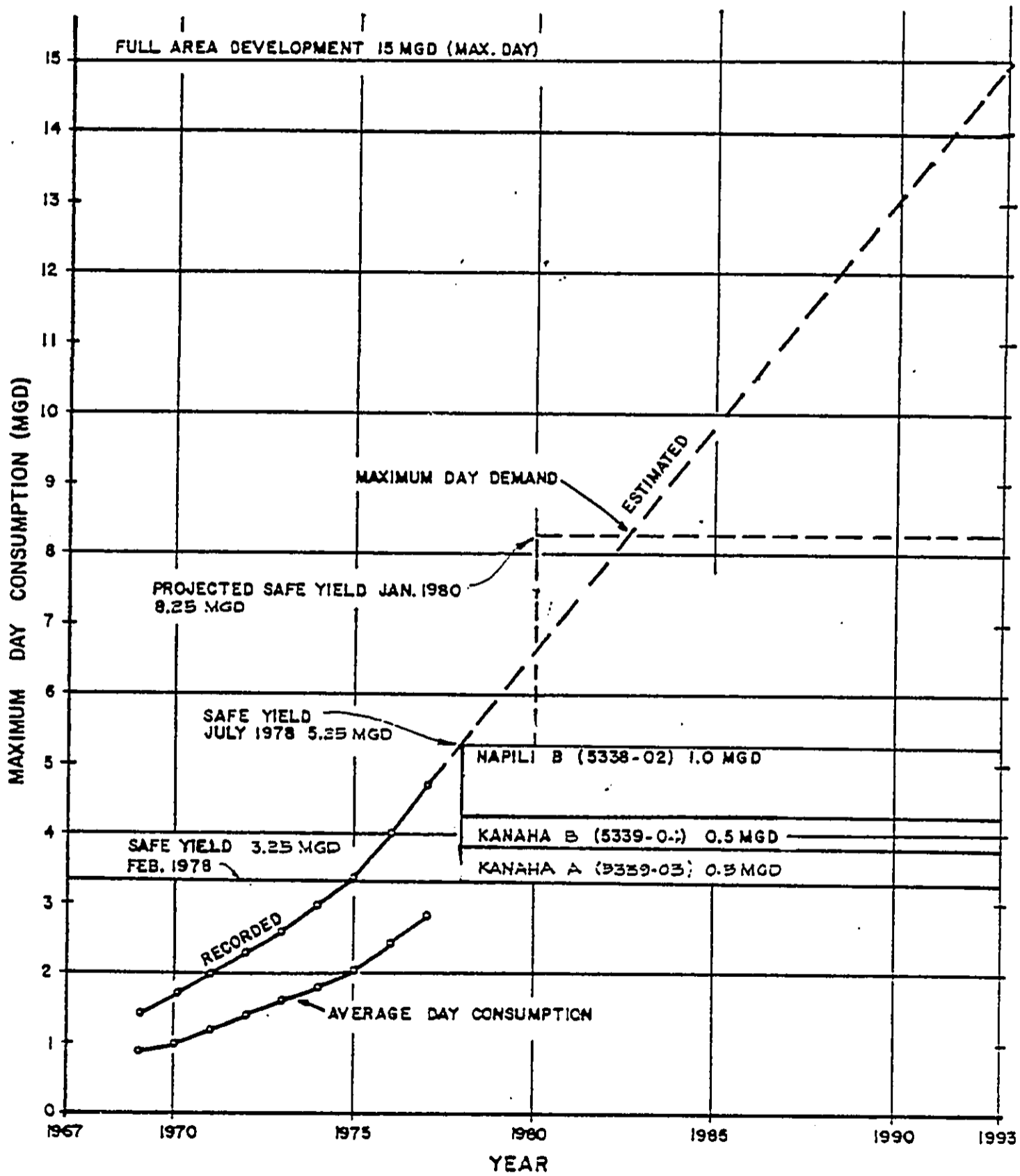
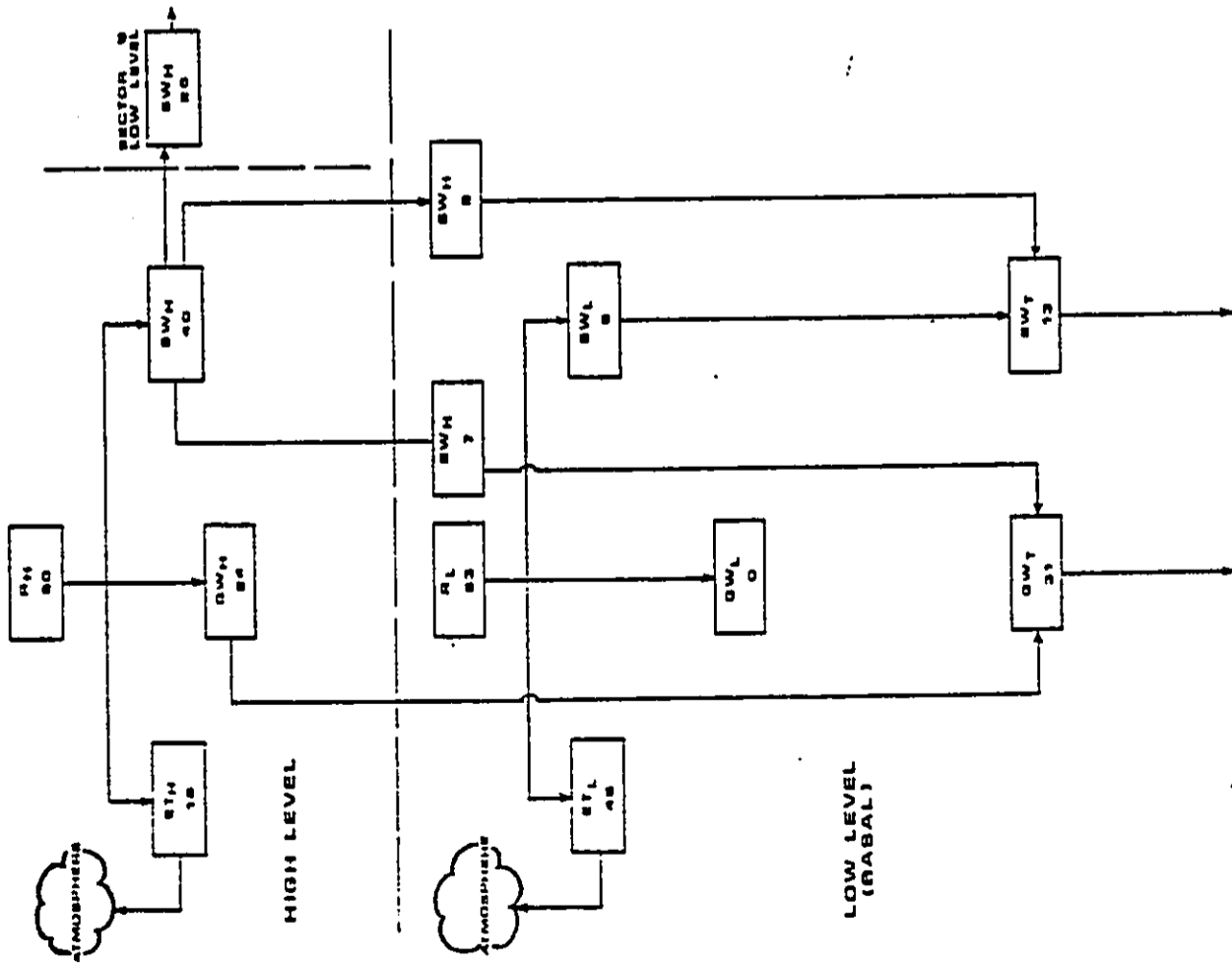


FIGURE 7

MAX. DAY DEMAND AND SAFE YIELD



KEY TO BUDGET SYMBOLS IN FLOW DIAGRAMS

- R : RAINFALL
- ET : EVAPOTRANSPIRATION
- SW : SURFACE WATER
- GW : DEEP GROUNDWATER PERCOLATION
- P : PUMPAGE OF GROUNDWATER, BABAL
- H : HIGH LEVEL
- L : LOW LEVEL, BABAL
- T : TOTAL

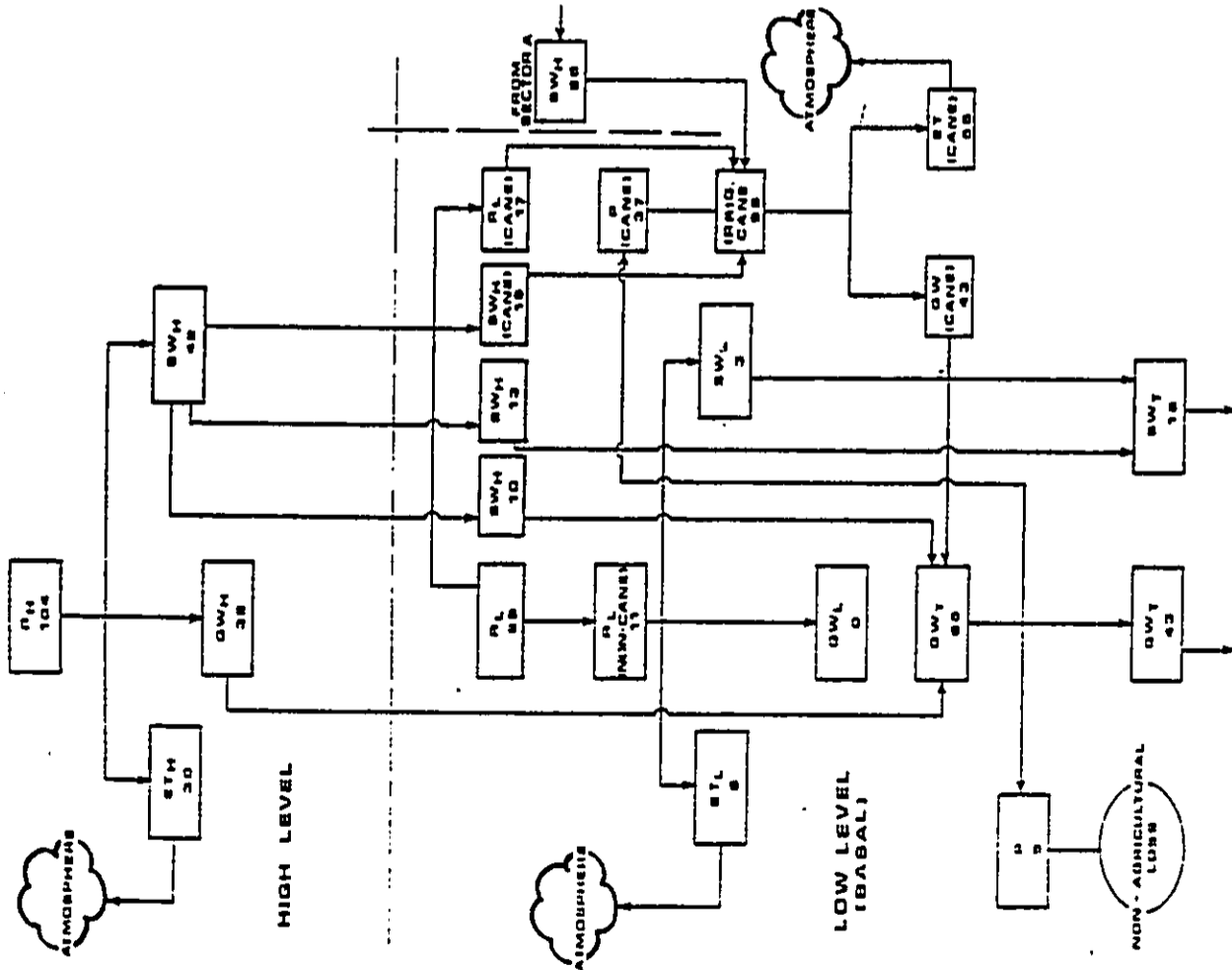
HYDROLOGIC BUDGET
 LAHAINA DISTRICT
 SECTOR A (HONOKOHAU TO
 KAHANA)
 FLOW DIAGRAMS (MOO)

PRESENT DAY CONDITIONS

KEY TO BUDGET SYMBOLS IN FLOW DIAGRAMS

- R : RAINFALL
- ET : EVAPOTRANSPIRATION
- SW : SURFACE WATER
- GW : DEEP GROUNDWATER PERCOLATION
- P : PUMPAGE OF GROUNDWATER, BASAL
- H : HIGH LEVEL
- L : LOW LEVEL
- T : TOTAL

**HYDROLOGIC BUDGET
LAHAINA DISTRICT
SECTOR B (KAHANA TO SOUTH
RIDGE LAUNIUPOKO)
FLOW DIAGRAMS (MGD)**



PRESENT DAY CONDITIONS

IX. References

1. "General Plan for the Lahaina District", Hiroshi Kasamoto and Muroda and Tanaka, Inc., December, 1968.
2. "Water Master Plan for the County of Maui", Prepared by R. M. Towill Corporation, Dec., 1971.
3. "State Tourism Study, Physical Resources", Department of Planning and Economic Development, State of Hawaii, 1978.
4. "An Assessment of the Future Source Water Requirement of the Lahaina Area System", an unpublished report by the Department of Water Supply, February 1978.
5. Minutes of Special Meeting, July 12, 1978, Board of Water Supply, County of Maui.
6. "Kahakuloa Water Study, Report R-54", Department of Land and Natural Resources, 1977, Prepared by Wilson, Okamoto & Associates, Inc.
7. "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii", U. S. Department of Agriculture, Soil Conservation Service, and University of Hawaii, August, 1972.
8. "Geology of the Hawaiian Islands", Bulletin 8, U. S. Geological Survey, Prepared by Harold T. Stearns, 1967.
9. "Detailed Land Classification - Island of Maui", L.S.B. Bulletin No. 7, Land Study Bureau, University of Hawaii, May, 1967.

APPENDIX A

Comments on the EIS-Preparation Notice



AMFAC SUGAR
 700 BISHOP STREET
 P. O. BOX 3230
 HONOLULU, HAWAII 96801
 TELEPHONE: (808) 548-8111

RECEIVED

78 AUG 31 9:37

August 29, 1978

DEPT. OF LAND
& NATURAL RESOURCES
STATE OF HAWAII

Dept. of Land & Natural Resources
 State of Hawaii
 P. O. Box 621
 Honolulu, Hawaii 96809

Attention Mr. W. Y. Thompson
 Chairman of the Board

Gentlemen:

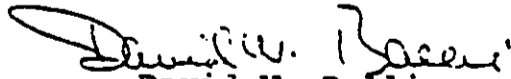
Re: Pumps and Controls at the Honokahau Well A
 and Napili Well C, West Maui Water Project

Thank you for your August 21st request for comments on the preparation notice filed with the Environmental Quality Commission. We would also like to make a delayed comment on your April 11, 1978 letter concerning well drilling for these two wells.

In general, we highly favor ground water development for domestic water in West Maui. Pioneer Mill Company is heavily dependent upon the Honokahau Ditch as a primary mountain water source. Continued and increasing withdrawals from this Ditch directly and severely affect Pioneer's sugar yields. Consistent with this need, Amfac is following a policy of ground water development for its Kaanapali resort in areas closer to Honokowai Valley. Therefore, we feel your site selection is appropriate and further believe it in the best interest of all concerned that all future State wells occupy the sector from Napili toward Honokohau Valley.

If you have any further questions, please feel free to call on us.

Very truly yours,


 David W. Ballie
 President

cc: J. Siemer
 W. Balfour
 J. Loomis
 H. Hamamoto

DEPT. OF LAND
& NATURAL RESOURCES
STATE OF HAWAII
 AUG 31 5 10:05
 RECEIVED

8028

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII



DIVISIONS:
CONVEYANCES
FISH AND GAME
FORESTRY
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

RECEIVED
SEP 12 11:37

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FISH AND GAME
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

September 7, 1978

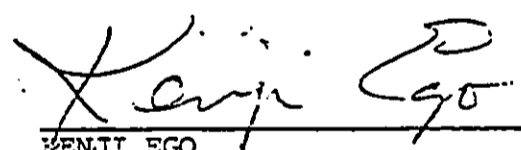
MEMORANDUM

TO: W. Y. Thompson, Chairman and Member
Board of Land and Natural Resources

FROM: Kenji Ego, Director
Division of Fish and Game

SUBJECT: Pumps and Controls for Honokahua Well A and Napili
Well C, West Maui Water Project

No impacts or effects on fish and wildlife values or
resources are foreseen from the subject project. The "Notice of
Determination Environmental Impact Statement Preparation Notice"
adequately describes the biological features of the site.


KENJI EGO

KE:rfm

Good
GEORGE F. ARIYOSHI
GOVERNOR OF HAWAII



RECEIVED
SEP 13 11:00
DEPT. OF LAND
& NATURAL RESOURCES
STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801

September 11, 1978

9047
u

GEORGE A. L. YUEN
DIRECTOR OF HEALTH
Audrey W. Mertz, M.D., M.P.H.
Deputy Director of Health
Henry N. Thompson, M.A.
Deputy Director of Health
James S. Kumagai, Ph.D., P.E.
Deputy Director of Health

In reply, please refer to:
File: EPHD-SS

Mr. W. Y. Thompson
Chairman of the Board
Dept. of Land & Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Thompson:

Subject: Request for Comments on Proposed Environmental Impact
Statement (EIS) for Pumps and Controls for Honokahua
Well A and Napili Well C, West Maui Water Project

Thank you for allowing us to review and comment on the subject
proposed EIS. Please be informed that we have no comments or objections
to this project at this time.

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.

Sincerely,

James S. Kumagai
for JAMES S. KUMAGAI, Ph.D.
Deputy Director for
Environmental Health

GEORGE R. J.
GOVERNOR



8229
JOHN FARIAS JR
CHAIRMAN BOARD OF AGRICULTURE

YUKIO KITAGAWA
DEPUTY TO THE CHAIRMAN

RECEIVED

SEP 21 11:31

STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
1428 SO. KING STREET
HONOLULU, HAWAII 96814

DEPT. OF LAND
NATURAL RESOURCES
STATE OF HAWAII
September 18, 1978

BOARD MEMBERS

SIDNEY G U GOO
MEMBER - AT - LARGE

ERNEST F MORGADO
MEMBER - AT - LARGE

SUZANNE D PETERSON
MEMBER - AT - LARGE

FEDERICO GALDONES
HAWAII MEMBER

JAMES E NISHIDA
KAUAI MEMBER

FRED M OGASAWARA
MAUI MEMBER

WILLIAM Y THOMPSON
EX OFFICIO MEMBER

MEMORANDUM

To: Mr. W. Y. Thompson, Chairman of the Board
Department of Land and Natural Resources

Subject: Pumps and Controls for Honokahua Well A and
Napili Well C, West Maui Water Project

The Department of Agriculture has no comments to offer
on the above-cited project.

Thank you for the opportunity to comment.

JOHN FARIAS, JR.
Chairman, Board of Agriculture

John F. Mink
CONSULTANT
WATER RESOURCES - EARTH SCIENCES
P.O. Box 4452
Honolulu, Hawaii 96813

ED
5 37:47

December 4, 1973

MENT

Robert T. Chuck
Manager-Chief Engineer
DLNR-DOWALD
P.O.Box 373
Honolulu, Hawaii 96809

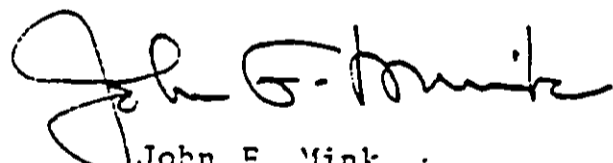
Dear Mr. Chuck:

I am sorry to be so late in replying to the EIS Preparation Notice for the Honokahua Well A and Napili Well C Project.

I find nothing objectionable in the notice and agree that the project is necessary to advantageously balance the total water supply available to the Lahaina District.

I would like to review the final EIS if one is needed.

Sincerely,


John F. Mink

APPENDIX B

Comments on the EIS

GEORGE P. ARIYOSHI
GOVERNOR



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
OFFICE OF THE GOVERNOR
550 MALEKAUWILA ST
ROOM 301
HONOLULU, HAWAII 96813

July 10, 1979

To	RICHARD L. O'CONNELL	Date & Initial
	DIRECTOR	
	TELEPHONE NO.	
	548-6815	
	CHIEF ENGR.	
<input type="checkbox"/>	HANDLE	<input type="checkbox"/> SEE ME
<input type="checkbox"/>	FILE	<input type="checkbox"/> RETURN
<input type="checkbox"/>	CIRCULATE	<input type="checkbox"/> ROUTINE
<input type="checkbox"/>	COMMENT	<input type="checkbox"/> EXPEDITE
	<input type="checkbox"/> PANTS BUTTON	

Tatsumi Imada, Director
Department of Water Supply
County of Maui
Wailuku, Maui, Hawaii 96793

Dear Mr. Imada:

SUBJECT: Environmental Impact Statement for Pumps and Controls for Napili Well "C" and Honokahua Well "A", West Maui Water Project

We have reviewed the subject document and offer the following comments for your consideration:

1. Page 7. The relationship of the continued water moratorium to the proposed project should be discussed. Will the project permit the removal of the moratorium?
2. Page 13. There should be a discussion of the impacts associated with the various feasible alternatives to the proposed project.
3. There should be a discussion of the mitigation measures to be employed during the construction of the project. Also, any necessary approvals required of the project should be listed along with their status.

We trust that these comments will be helpful to you in preparing the revised EIS. An attached sheet lists the commenting agencies and/or organizations.

We thank you for the opportunity to review the EIS. We look forward to the revised statement.

Sincerely,

Richard L. O'Connell
Director

Attachment

List of Commentors on the EIS for Pumps and Controls for
Napili Well "C" and Honokahua Well "A".

State Agencies

	Date
*Dept. of Health	6/10/79
Dept. of Transportation	6/10/79
*Historic Preservation Office	6/5/79
Dept. of Accounting and General Services	6/4/79
Dept. of Defense	5/31/79
*Dept. of Planning and Economic Development	5/30/79

County Agencies

*Dept. of Parks and Recreation	6/21/79
--------------------------------	---------

Federal Agencies

*Soil Conservation Service	6/19/79
*U.S. Army	6/11/79
*U.S. Coast Guard	6/8/79
*Corps of Engineers	6/4/79
*U.S. Navy	5/31/79

Others

*Amfac Sugar	6/4/79
*Maui Land and Pineapple Co.	6/1/79
*Maui Historical Society	5/30/79

*Comment previously forwarded



DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
P. O. BOX 1109
WAILUKU, MAUI, HAWAII 96793

August 6, 1979

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

Dear Mr. O'Connell:

Subject: Pumps and Controls for Napili Well 'C' and
Honokahua Well 'A', West Maui Water Project

We have received your comments and respond as follows:

Comment No. 1, Relationship of moratorium to project. On page 11, we have stated that the moratorium "can be lifted...if a reliable water supply is assured." Other probable impacts are also noted.

Comment No. 2, Impacts associated with feasible alternatives. The social and economic impacts would be the same for all the alternatives. Additional high quality domestic water would be made available, and one of the present obstacles to growth would be reduced, with the likelihood of growth as discussed in the EIS. The differences in the alternatives would be in cost, and with respect to impact on the biophysical elements of the area ecosystem.

Drilling and developing new wells in northern West Maui (the first alternative mentioned on page 13) would entail costs for drilling, testing, transmission and storage which are above and beyond the facilities' outlay proposed for the selected project. The impact on the natural environment could be anywhere from nil to seriously adverse, depending on the site selected for the wells. The proposed project is clearly superior to this alternative. Treatment of surface water from Honokohau Ditch is the second alternative mentioned. The County draws water from the Honokohau Ditch into the Alaeloa System to supplement groundwater sources for domestic use. No "new" water would be added to the Lahaina District by this alternative and any increase taking of water supply would be at the expense of agricultural water. The decrease of agricultural water would be an adverse impact.

"By Water All Things Find Life"

Mr. Richard L. O'Connell
Director - OEQC

- 2 -

August 6, 1979

The proposed project, on the other hand, adds "new" water to the Lahaina district, and does not detract from the agricultural function of Honokohau Ditch.

The third alternative mentioned on page 13 is a water treatment plant above Lahainaluna School. The plant is already under design and is the subject of an ongoing EIS (Notice of Preparation - Lahaina Water Treatment Plant, EQC Bulletin 6/8/79). Again, no "new" water will be added to the Lahaina district.

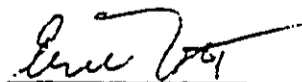
A pilot desalting plant in Lahaina is a strong candidate for federal funds under the Desalting Demonstration Program (P.L. 95-84), as noted in the EIS. Because of the high national ranking and the likelihood that the pilot plant will be federally funded, the desalting plant is not a competitor for State and local funds at this time.

Manipulation of dike storage is the last alternative mentioned. The concept is discussed more fully in the "Kahakuloa Water Study" (Report R-54, Department of Land and Natural Resources, Dec. 1977). Briefly, the drawbacks are that the source is located deep in Honokohau valley (and would require miles of transmission line to transport the water to populated areas), and that the most effective use of the dike compartment water would be to empty the compartment in about three months time and allow six to nine months for recharge of the dike storage (during which time water would not be available for use). Implementation of one or more of the alternatives may become necessary, should demand continue to grow in the future.

Comment No. 3 Mitigation measures during construction. As noted in the EIS, the location of the site away from populated areas, by itself will mitigate much of the construction noise and dust, and the construction of the project will create no more noise, dust and erosion hazard than normally occurs for the operation of the pineapple fields which surround the project sites. In addition, job specifications forewarn contractors of the safeguards required, and periodic construction inspection is maintained to enforce the specifications.

We thank you for your comments and hope we have answered your questions. The revised statement will be submitted soon.

Very truly yours,



Eric Soto, Director
Department of Water Supply

OFFICE OF THE ADJUTANT GENERAL
HONOLULU, HAWAII



VALENTINE A. SIEFERMANN
MAJOR GENERAL
ADJUTANT GENERAL

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
~~PORT REGENT, HONOLULU, HAWAII 96816~~
3949 DIAMOND HEAD ROAD, HONOLULU, HAWAII 96816

HIENG

31 MAY 1979

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

Dear Gentlemen:

Pumps & Controls for Napili Well "C" &
Honokahua Well "A", West Maui Water Project

Thank you for sending us a copy of the "Pumps & Controls for Napili Well
"C" & Honokahua Well "A", West Maui Water Project," Environmental Impact
Statement. We have no comments to offer at this time. The attached
document is returned for your use.

Yours truly,

WAYNE R. TOMOYASU
Major, CE, HARNG
Contr & Engr Officer

Enclosure

GEORGE R. ARIYOSHI
GOVERNOR



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

HIDEO MURAKAMI
COMPTROLLER

MIKE N. TOKUNAGA
DEPUTY COMPTROLLER

LETTER NO. (P) 1541.9

JUN 4 1979

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

Dear Mr. O'Connell:

Subject: EIS for Pumps & Controls for Napili Well
"C" & Honokahua Well "A", West Maui Water
Project

Thank you for this opportunity to review the subject
document.

We have determined that the subject project will not
have any adverse environmental impact on any existing or
planned facilities serviced by our department.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Hideo Murakami".

HIDEO MURAKAMI
State Comptroller



RYOKICHI HIGASHIONNA PH.D.
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON
James R. Carras

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
859 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

June 20, 1979

IN REPLY REFER TO
STP 8.5486

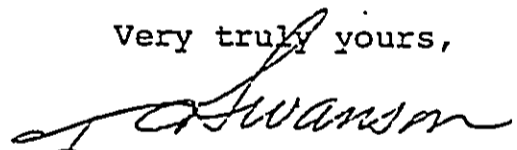
Office of Environmental
Quality Control
550 Halekauwila St., Room 301
Honolulu, Hawaii 96813

Gentlemen:

Subject: EIS - Pumps & Controls for Napili
Well "C" and Honokahua Well "A",
West Maui Water Project

Thank you very much 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.

Very truly yours,


Charles O. Swanson
Ryokichi Higashionna

UNIVERSITY OF HAWAII

Water Resources Research Center

Office of the Director

23 July 1979

Office of Environmental Quality Commission
550 Halekaiwila Street, Room 301
Honolulu, Hawaii 96813

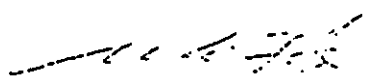
SUBJECT: Review of EIS - Pumps and Controls for Napili Well "C"
and Honokahua Well "A", West Maui Water Project

Dear Sir:

Thank you for sending the subject EIS for our review and
comment.

We have no comment to offer on this EIS.

Sincerely,


Yu-Si Fok, Professor
WRRC Faculty EIS Review Coordinator

YSF:jm

cc: Dr. Chun
Mr. Gee
Dr. Peterson
Dept. of Water Supply, County of Maui



Maui Land & Pineapple Company, Inc.

NOTE - Please send all the other comments to [unclear] Also F-J D

To	Fr	RE	Date & Initial
	<input checked="" type="checkbox"/>	DIRECTOR	6-14 JAD
	<input checked="" type="checkbox"/>	DEPUTY SECRETARY	6-14 JAD
	<input checked="" type="checkbox"/>	CHIEF ENGR.	
		DEPT. OF WATER SUPPLY	
		MAUI	

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Copy to DeWitt

June 1, 1979

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

Gentlemen:

I am returning the copy of the Environmental Impact Statement for the Pumps & Controls for Napili Well "C" & Honokahua Well "A", which you kindly submitted to us for review.

In our opinion, the EIS is well done, accurate and complete. I have a few minor comments, however, in connection with the general description of the community, which is, as you know, a rapidly changing one. These primarily refer to page 3 of the report.

- (1) The Kapalua Resort has another 18-hole golf course under construction.
- (2) Kaanapali has two full-length 18-hole golf courses.
- (3) Lahaina has only one historic district.
- (4) The Old Banyan Inn mentioned has been torn down and replaced by a major specialty shopping center.

Finally, if you do redo this as I point out, I would appreciate your referring to our company as Maui Land & Pineapple Company, Inc. (page 14).

As you know, we fully support this project and are happy to cooperate with the State and County in the development of additional water for West Maui.

Sincerely,

Colin C. Cameron
President

CCC
sm
enclosure

cc: Department of Water Supply,
County of Maui

P. O. Box 187
Kahului, Maui, Hawaii 96732
Telephone (808) 877-3351

LEGAL AID SOCIETY OF HAWAII

MAUI BRANCH
2257 MAIN STREET
WAILUKU, MAUI, HAWAII 96793
TELEPHONE (808) 244-3731

MELVIN M. M. MASUDA, ESQ
Executive Director

June 8, 1979

Mr. Robert Chuck, Division Chief
Division of Water and Land Development
Department of Land and
Natural Resources
1151 Punchbowl
Honolulu, Hawaii 96813

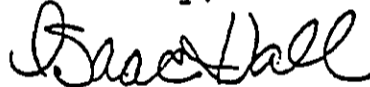
Re: Environmental Impact Statement--Napili and
Honokahau Wells

Gentlemen:

Kindly furnish the undersigned with copies
of any environmental impact statement(s) prepared in
connection with construction of two new wells located
at Napili and Honokahau.

Should there be any costs in connection with
this request, please bill Legal Aid. Thank you for
your anticipated cooperation.

Sincerely,



ISAAC DAVIS HALL
Attorney at Law

IDH:smf

June 14, 1979

Mr. Isaac D. Hall, Attorney at Law
Legal Aid Society of Hawaii,
Maui Branch
2287 Main St.
Wailuku, Hawaii 96793

Dear Mr. Hall:

Pumps and Controls for Napili Well "C"
and Honokahua Well "A", West Maui, Hi.

As requested, we are sending you the Environmental Impact Statement for the above project. The EIS was filed with the Environmental Quality Commission on or about May 24, 1979 and is listed in the June 8, 1979 issue of the EQC Bulletin.

We have also included a copy of the Negative Declaration for the drilling of the two wells, filed in May, 1978. Since well drilling is exploratory in nature, and since further work is contingent on locating a reliable source of water, this type of exploratory work is usually handled as a separate project (from pump installation). Well drilling and testing has been completed for Napili Well "C" and is almost complete for Honokahua Well "A".

Please contact us if you have any further questions.

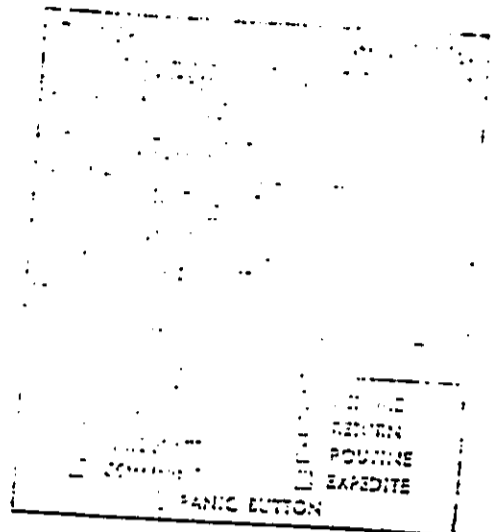
Very truly yours,

Robert T. Chuck
ROBERT T. CHUCK
Manager-Chief Engineer

X
LA:jes
Enc.

RE 124
79 JUN 7 10 40 AM '79
DEPT. OF WATER SUPPLY
COUNTY OF MAUI

June 5, 1979



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

Dear Sirs:

**SUBJECT: Pumps & Controls for Napili Well "C"
and Honokahua Well "A", West Maui Water
Project**

After reviewing the Environmental Impact Statement for the above named construction we concur that the proposed construction will have no effect on any known archaeological or historical site. Further since the majority of the impact will be confined to areas that have historically been planted in pineapple the probability of impact on unknown sites is very low. therefore this office has no reservations for the project to proceed.

In the event that any unanticipated sites or remains such as shell, bone or charcoal deposits; human burials; rock or coral alignments, pavings, or walls are encountered during construction, please inform the applicant to stop work and contact this office immediately.

Sincerely yours,

Balston H. Nagata
Acting Director
Historic Preservation Program

cc: Dept. of Water Supply
County of Maui



AMFAC SUGAR
 700 BISHOP STREET
 P. O. BOX 3230
 HONOLULU, HAWAII 96801
 TELEPHONE: (808) 546-8111

To	Fr	Date & Initial
	<input checked="" type="checkbox"/>	DIRECTOR 6-4-79
	<input checked="" type="checkbox"/>	DEPUTY
	<input type="checkbox"/>	SECRETARY
	<input checked="" type="checkbox"/>	CHIEF ENGINEER
	<input type="checkbox"/>	PLANT MANAGER
	<input type="checkbox"/>	FIELD SUPERVISOR
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	<input type="checkbox"/>	RESEARCH & DEVELOPMENT
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	<input type="checkbox"/>	PLANT SECURITY

HANDLE
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*Copy to
 Board
 6/6*

June 4, 1979

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

Gentlemen:

Amfac, Inc.'s Sugar Division has reviewed your Environmental Impact Statement (EIS) on pumps and wells, Napili "C" and Honokahau "A", for the West Maui project.

We have no objections to the plan and agree that the project is necessary for the residential users and for the continued growth of the area. It will benefit agriculture by preserving the low chloride, high level ditch water for irrigation.

Thank you for sending me the draft and for soliciting my comments. If you don't mind, I will keep the EIS for future reference.

Very truly yours,

AMFAC SUGAR

David W. Ballie
 David W. Ballie
 President

DWB:sk

cc: Board of Water Supply ✓
 Maui County
 P. O. Box 1109
 Wailuku, HI 96793

J. Loomis



Maui Historical Society

P. O. Box 1018

May 30, 1979

Hale Hoikeike - 1841

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

Gentlemen:

Thank you for sending us the enclosed Environmental Impact Statement for Pumps and Controls for Napili Well "C" and Honokahua Well "A", West Maui Water Project.

We have no further comments to make at this time, as we believe the importance of this project overrides the necessity for a complete archaeological survey of the area.

Sincerely,

Virginia Wirtz
(Mrs) Virginia Wirtz, Museum Director

cc: Dept. of Water Supply
County of Maui

To	Fr	CS	Date
	<input checked="" type="checkbox"/>	DIRECTOR	
	<input checked="" type="checkbox"/>	MANAGER	
	<input checked="" type="checkbox"/>	Wailuku, Hawaii 96793	
	<input checked="" type="checkbox"/>	CHIEF ENGINEER	6/4
	<input checked="" type="checkbox"/>	FISCAL	
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	<input checked="" type="checkbox"/>	SECRETARY	
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STATE OF HAWAII
 DEPARTMENT OF PLANNING AND
 ECONOMIC DEVELOPMENT
 P. O. Box 2359
 Honolulu, Hawaii 96804

May 30, 1979

To	Fr	Date & Initial
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		SECRETARY
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Mr. Richard L. O'Connell
 Director
 Office of Environmental Quality Control
 550 Halekauwila Street, Room 301
 Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Subject: Environmental Impact Statement: Pump and
 Controls for Napili Well "C" and Honokahua
 Well "A," West Maui Water Project

We have reviewed the subject EIS and find that it has adequately assessed the major environmental impacts which can be anticipated from the implementation of this project.

Thank you for the opportunity to review and comment upon this document.

Sincerely,

HIDETO KONO

cc: Dept. of Water Supply
 County of Maui

file

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*13-1000
hand/c*

RECEIVED

1979 JUN 22 PM 4 31

June 21, 1979

DEPT. OF WATER SUPPLY
COUNTY OF MAUI

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

Dear Sir:

Subject: EIS for Pumps and Controls for Napili Well
"G" and Honokowai Well "A", West Maui Water
Project

We have reviewed the above Environmental Impact
Statement and have no comments to make on the above-
cited project.

Thank you for the opportunity to comment.

Sincerely,

(Mrs.) Helen Luuwai
Director of Parks

cc: Dept. of Water Supply ✓

JUN 21 1979 8:13

READ

cc to Dowse 6/25/79

3/5/79

To	Fr	Date & Initial
	✓	
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11 JUN 1979

SEE ME RETURN

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79 JUN 15 9 20

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DEPT. OF WATER SUPPLY
COUNTY OF MAUI

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

*Copy to
D. J. W.*

Gentlemen:

The Environmental Impact Statement (EIS) for Pumps and Controls for Napili Well "C" and Honokahua Well "A", West Maui Water Project has been reviewed and we have no comments to offer at this time. There are no Army installations or activities in the vicinity of the proposed project.

The EIS is returned in accordance with your request.

Sincerely,

CARL P. RODOLPH
Colonel, CE
Director of Engineering and Housing

1 Incl
As stated

Original signed by *RZ Shiman*

Copy Furnished:
✓ Department of Water Supply
County of Maui
P.O. Box 1109
Wailuku, Maui, Hawaii 96793

HEADQUARTERS
FOURTEENTH NAVAL DISTRICT

BOX 110
FPO SAN FRANCISCO 96310
Pearl Harbor, HI 96860

To	Fr	IN REPLY REFER TO:	Date & Initial
		DIRECTOR 002A	JWC:amr
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		SECRETARY	
			31 MAY 1979
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179 JUN 1 1979
DEPT OF WATER SUPPLY
COUNTY OF MAUI

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

Gentlemen:

Environmental Impact Statement
Pumps and Controls for Napili Well "C" and Honokahua Well "A"
West Maui Water Project

The Navy has reviewed the Environmental Impact Statement for
Pumps and Controls for Napili Well "C" and Honokahua Well "A" and has
no comments to offer. As requested, the subject EIS is returned.

The opportunity to review the EIS is appreciated.

Sincerely,

J. W. CARL
Lieutenant Commander, CEC, USN
Deputy District Civil Engineer
By direction of the Commandant

Copy to:
Dept of Water Supply
County of Maui
P.O. Box 1109
Wailuku, Maui, HI 96793



DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU

TO	DATE	INITIALS
DIRECTOR	6/5	JD
DEPUTY		
SECRETARY		

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 PATRIC BLOSSON

3797
Copy to DAULD
6/2

June 1979

DEPARTMENT OF THE ARMY
ENGINEER DISTRICT
HONOLULU, HAWAII
OFFICE OF WATER SUPPLY

PODED-PV

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

Dear Mr. Imada:

We have reviewed the Environmental Impact Statement for the Pumps and Controls for Napili Well "C" and Honokahua Well "A", West Maui Water Project, Alealoa, Napili and Honokaua, Maui, that was forwarded to us by the Office of Environmental Quality Control. The project does not affect any of our on-going studies or areas of jurisdiction. We appreciate the opportunity of participating in the review process.

Sincerely yours,

Chuan-feng
KISUK CHEUNG
Chief, Engineering Division

CF: w/incl
Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

7
3
2
1
7



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

COMMANDER (mep)

Fourteenth Coast Guard District

To	Fr	Prince Kalahele Federal Bldg
		300 Ala Moana Blvd
		Honolulu, Hawaii 96850
		Phone: 808-546-7510
		SECRETARY
		16475
		EIS #14-79-11
		8 June 1979
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Office of Environmental Quality Control
State of Hawaii
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Gentlemen:

Staff review of the "Environmental Impact Statement for Pumps & Controls for Napili Well "C" and Honokahua Well "A", West Maui Water Project at Alaeloa, Napili and Honokahua, Maui" has been completed, and the Coast Guard has no objections or comments to offer on the project.

*Copy to
Dowling
6/14/79*

The opportunity to review and comment on the EIS is appreciated.

Sincerely,

S. L. WILSON
Captain, U. S. Coast Guard
Chief of Staff
Fourteenth Coast Guard District

Copy to:
~~Dept. of Water Supply~~
EPA Region IX
Commandant (G-WEP-7)

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

P. O. Box 50004, Honolulu, HI 96850

June 19, 1979

779 JUN 20 1979
DEPARTMENT OF WATER SUPPLY
MAUI
Mr. Richard L. O'Connell
Director, Office of Environmental
Quality Control
550 Halekauwila St., Room 301
Honolulu, Hawaii 96813

*John
Camp
Copy to
Hawaii State
Library*

Dear Mr. O'Connell:

Subject: Pumps & Controls for Napili Well "C" & Honokahua Well
"A", West Maui Water Project, Alaeloa, Napili, and
Honokahua, Maui

We have reviewed the subject environmental impact statement and have
no comments to offer.

Thank you for the opportunity to review this document.

Sincerely,

Donald A. Kanalz
ACTING

Jack P. Kanalz
State Conservationist

Enclosure: EIS

cc:
Department of Water Supply
County of Maui
P. O. Box 1109
Wailuku, Maui, HI 96793



1475

David
Amfac

AMFAC SUGAR
700 BISHOP STREET
P. O. BOX 3230
HONOLULU, HAWAII 96801
TELEPHONE: (808) 546-8111

RECEIVED

79 MAR 14 A10:16

DEPT OF LAND
& NATURAL RESOURCES
STATE OF HAWAII

March 13, 1979

Mr. Susumu Ono
Chairman of the Board
Dept. of Land and
Natural Resources
P. O. Box 621
Honolulu, HI 96809

RECEIVED
MAR 14 10:44
STATE OF HAWAII

Dear Mr. Ono:

Thank you for your March 5, 1979 letter requesting our comments on the Environmental Impact Statement for pumps and controls for Napili Well "C" and Honokahua Well "A", West Maui Water Project.

We are again in favor of the project and believe that my letter of August 29, 1978 covers the details of our position.

Very truly yours,

AMFAC SUGAR

David
David W. Ballie
President

March 19, 1979

Mr. David W. Ballie
President
Amfac Sugar
P. O. Box 3230
Honolulu, Hawaii 96801

Dear Mr. Ballie:

Pump and Controls for Napili
Well "C" and Honokahua Well "A"

Thank you for your reply to our request for comments on our EIS for the above project. You may have noticed that your previous comments were attached to the draft EIS.

We appreciate your support of this water development project in the Lahaina district. Please do not hesitate to contact us if further thoughts come to mind.

Very truly yours,

Susumu Ono

SUSUMU ONO
Chairman of the Board

RTC:LA:jes



Maui Land & Pineapple Company, Inc.

March 13, 1979

Mr. Susumu Ono
Chairman of the Board
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Ono:

Subject: Pumps and Controls for Napili Well "C" and
Honokahua Well "A", West Maui Water Project

As you know, we fully support the Napili Well "C" and Honokahua Well "A" water projects which will benefit both agricultural and residential users of West Maui.

Your department's draft Environmental Impact Statement which you kindly submitted to me for review is basically a complete and sound document and we have no quarrel with it.

There are, however, a couple of minor changes which might be made prior to the final EIS.

First, it appears from both the text on Page 3 and Fig. 3 which sets out the master plan land use map for West Maui, that an old master plan may have been used. In particular, the statement in the text indicates that there are "four resort hotel areas sited to take advantage of Honokahua, Namalu and Napili Bays and Fleming Beach." The master plan has been amended to provide for three oceanfront hotel sites in this area at Honokahua, Namalu/Kapalua and Napili Bays, and one inland site for a hotel or conference center in the Pineapple Hill area.

The second correction I would make would be on Page 8 referring to private sewage treatment plants at Kaanapali and Kapalua resort areas. Although the effluent from the Kaanapali plant is recycled for golf course and agricultural irrigation, it is not yet the case with the Kapalua system where the flow is currently insufficient for this purpose, so that the disposal is provided at the present time through injection wells.

Sincerely,

Colin C. Cameron
President

P. O. Box 187
Kahului, Maui, Hawaii 96732
Telephone (908) 877-3351

1475

RECEIVED

MAR 15 8:49

DEPT. OF LAND
AND NATURAL RESOURCES
STATE OF HAWAII

MAR 16 10:19

Maui

March 19, 1979

Mr. Colin C. Cameron, President
Maui Land & Pineapple Company, Inc.
P. O. Box 187
Kahului, Hawaii 96732

Dear Mr. Cameron:

Pump and Controls for Napili Well "C"
and Honokahua Well "A"

Thank you for your comments on our draft EIS for the above project. We will correct our EIS regarding the master plan and sewage effluent recycling as you have pointed out, before we file the final document with the Environmental Quality Commission.

We appreciate your kind assistance and support for this project, and look forward to working with you in the future to seek solutions to the problems of meeting the growing demands for water in the Lahaina district.

Very truly yours,

SUSUMU ONO
Chairman of the Board

RTC:LA:jes



COUNTY OF MAUI
PLANNING DEPARTMENT
200 S. HIGH STREET
WAILUKU, MAUI HAWAII 96793

March 16, 1979

Mr. Susumu Ono
Department of Land
and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Ono:

Re: Pumps and Controls for Napili Well "C" and Honokahua
Well "A", West Maui Water Project.

This acknowledges receipt of your letter, with enclosures,
dated March 5, 1979, requesting a review of the Draft Environmental
Impact Statement for the above captioned project. Our comments are
as follows:

1. We suggest that paragraph five (5) on page 3 be reviewed to reflect more accurately the purpose and rationale for the establishment of the Lahaina Historic District.
2. It would be essential to explain more completely the data contained in Table 1 (p.4). For example, does the definition of "proposed" mean projects approved by the appropriate governmental agency but not committed for implementation by the developers?
3. Based on current information, we believe it would be desirable to review paragraph three (3), (p. 11), relative to the water moratorium situation for West Maui Area.
4. We believe it would be proper to revise paragraph five (5), (page 11) to clarify the possible misinterpretation that Lahaina area will become totally urbanized as a resort area. The Lahaina General Plan and the County Administration policies indicate that the present agricultural uses of land will be maintained as a significant land use element for West Maui.
5. We suggest that the phrase "...such growth in Lahaina may be attained at the expense of the present lifestyle engaged by many in West Maui," be clarified, paragraph three (3), (p. 12).

Thank you for the opportunity to review the subject document.
Please contact my office should you have any questions.

Yours very truly,



TOSH ISHIKAWA
Planning Director

cc Mr. T. Imada, Director
Dept. of Water Supply

March 28, 1979

Mr. Toshio Ishikawa
Director
Department of Planning
County of Maui
Wailuku, Hawaii 96793

Dear Mr. Ishikawa:

Pumps and Controls for Napili Well "C"
and Honokahua Well "A", West Maui Water
Project, Maui, Hawaii

Thank you for your comments on our EIS. We respond to your comments as follows:

1. Although we neglected to footnote the quotation in paragraph five(5), the purpose stated is a quote from the "General Plan for the Lahaina District" by Hiroshi Kasamoto and Muroda and Tanaka, Inc. We will expand on the purpose and rationale for the establishment of the Lahaina Historic District as noted in the Maui County Historic Districts Ordinance.
2. The terms "planned" and "proposed" are as used in the "State Tourism Study" (DPED, 1978). Our interpretation of the use of the words in the study is that "proposed" is less certain of implementation than "planned" units. We will add to the EIS that the commitment for implementation ("firm", "not firm") is as defined by prospective developers, and the use of the terms "planned" and "proposed" should not be construed or interpreted to mean that approvals have been obtained from governmental agencies.
3. The moratorium issue will be updated.
4. We agree that paragraph five(5), page 11, should be revised to present a better balanced picture of agriculture.

Mr. Toshio Ishikawa

-2-

March 28, 1979

5. The statement is only conjecture on our part, but all indications are that a considerable potential exists for urban development in the Lahaina district, especially since sewer, highway and water improvements are underway. We do not believe that the present lifestyle will be retained if the district realizes its growth potential, but we should add that this is only speculation on our part.

We would appreciate receiving information on the General Plan, historic districts, or any material pertinent to the project which would update the statements we have expressed in the draft EIS. As noted on the title sheet, the final EIS will be submitted by the Maui Department of Water Supply. As preparers of the EIS, we will respond directly to comments received prior to filing of the final EIS. After filing, responses will be made through the Maui Department of Water Supply.

Very truly yours,

SUSUMU ONO
Chairman of the Board

Jey
RTC:LA:jes

cc: Department of Water Supply, Maui

DEWALD

1702

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII



RECEIVED

GEORGE A. L. YUEN
DIRECTOR OF HEALTH

REC'D
23 11:24
DEPARTMENT

STATE OF HAWAII
DEPARTMENT OF HEALTH

79 MAR 22 12:57

Audrey W. Mertz, M.D., M.P.H.
Deputy Director of Health
Henry N. Thompson, M.A.
Deputy Director of Health

P.O. Box 3378
HONOLULU, HAWAII 96801

March 21, 1979

DEPT. OF LAND
& NATURAL RESOURCES
STATE OF HAWAII

James S. Kumagai, Ph.D., P.E.
Deputy Director of Health

In reply, please refer to:
File: EPHS-SS

MEMORANDUM

To: Mr. Susumu Ono, Chairman of the Board
Department of Land & Natural Resources

From: Deputy Director for Environmental Health

Subject: Environmental Impact Statement (EIS) for Pumps and Controls
for Napili Well "C" and Honokahua Well "A", West Maui
Water Project

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 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
for JAMES S. KUMAGAI, Ph.D.

cc: Office of Environmental Quality Control



Maui Historical Society

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P. O. Box 1018

Wailuku, Hawaii 96793

March 26, 1979

Hale Hoikeike - 1841

DEPT. OF LAND AND NATURAL RESOURCES
STATE OF HAWAII

Mr. Susumu Ono, Chairman
State Dept. of Land & Natural Resources
P.O.Box 621
Honolulu, Hawaii 96809

1979 MAR 29 10:00 AM
MAIL ROOM

Dear Mr. Ono,

Re: EIS-Preparation Notice for Napili Well "C" and Honokahua Well "A" Project

This seems to be a very carefully and thoroughly documented project. My only concern is a statement on Page 10 of the report, under Section IV. Probable Impacts. Under paragraph i: Construction Impacts, the last sentence states "No breeding, or nesting grounds, nor historic or archaeological sites will be affected." I am wondering if an archaeological survey of that area was ever done, and if so, by whom? We have no record in our files of such a survey. Admittedly, we are not always notified of such surveys, though we should be alerted to them, and copies of any reports of archaeological surveys should be sent to our office.

I would like to request that we be put on the mailing list for any such reports done for your department in the future. It would be extremely helpful, since we are constantly getting inquiries on whether there are sites in various areas. We have an extensive research library on Maui County, and would be very glad of any information as to what is being done in the county.

Sincerely,

Virginia Wirtz
(Mrs) Virginia Wirtz, Museum Director

April 5, 1979

Mrs. Virginia Wirtz
Museum Director
Maui Historical Society
P. O. Box 1018
Wailuku, Hawaii 96793

Dear Mrs. Wirtz:

Pumps and Controls for Napili
Well "C" and Honokahua Well "A"

Thank you for your comments on our draft EIS for the above project. Regarding probable impacts on archaeological sites, we did not conduct a survey of the area, since the well sites were formerly portions of pineapple fields. Our statement that no archaeological sites will be affected by this project was based solely on the above observation.

Your request to be put on the mailing list for reports of archaeological surveys has been sent to the State Parks, Outdoor Recreation and Historic Sites Division. We appreciate the time you have spent in reviewing our draft EIS and your kind words regarding the contents of the EIS document. Please do not hesitate to contact us if you have any further comments or questions.

Very truly yours,

SUSUMU ONO
Chairman of the Board

RTC:LA:jes

John F. Mink

CONSULTANT
WATER RESOURCES - EARTH SCIENCES

P.O. Box 4452
Honolulu, Hawaii 96813

March 31, 1979

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STATE OF HAWAII
DEPT. OF LAND AND
NATURAL RESOURCES

Mr. Susumu Ono
Chairman of the Board
State Dept. Land and Nat. Res.
PO Box 621
Honolulu, Hawaii 96809

Dear Mr. Ono:

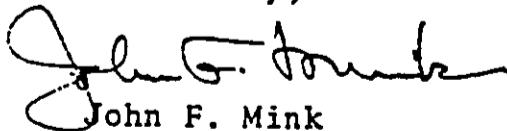
Thank you for sending me the draft copy of the Environmental Impact Statement relating to the completion of the wells at Napili and Honokahua in West Maui.

I believe the recommendation to complete the project is justified. However, in the text of the statement two items of information are presented in such a way as to be potentially misleading to future planning. The first deals with the computed flux of groundwater (31 mgd) in the northern sector of the Kahaina District---- by implication a reader could very well conclude that the total of 31 mgd is developable as a water resource. This is not so; only a portion of it could be safely developed. A qualifying statement to that effect needs to be made where the 31 mgd is mentioned, on pages ii, 9, and 10.

The second item concerns the estimated number of people that the net gain of 2.4 mgd provided by the project would serve. In Appendix C a computation is made giving a total of 3,612 persons. If indeed only this small number of people consumed the 2.4 mgd, the daily per capita consumption would amount to 665 gal., only a third of the normal per capita consumption on Oahu. I know of no planning of domestic water supply in Hawaii that is based on such a large per capita consumption. More likely, about 10,000 could be adequately served.

On page 9 in paragraph 1, I believe Honokahua is meant rather than Honokohau.

Sincerely,


John F. Mink

April 11, 1979

Mr. John F. Mink
P. O. Box 4452
Honolulu, Hawaii 96813

Dear Mr. Mink:

Pumps and Controls for Napili
Well "C" and Honokahua Well "A",
West Maui Water Project

Thank you for your comments on our draft EIS for
the above project.

Your work as a consultant for Wilson, Okamoto and
Associates on the Kahakuloa Water Study has been a
valuable reference for us, and we agree that the
statement on groundwater flux should be qualified. We
will also review and qualify our statement on the
estimate of supportable population to distinguish
between resident and de facto population for the
Lahaina district.

Very truly yours,

SUSUMU ONO
Chairman of the Board

RTC:LA:jes

APPENDIX C. ESTIMATE OF RESIDENT POPULATION WHICH
CAN BE SUPPORTED BY THIS PROJECT

Secondary impacts are difficult to reduce to numbers. However, a very rough estimate of the additional number of residents which can be served by this project is made as follows:

1. The average daily consumption in the district during 1977 was 2.859 mgd. The maximum day consumption is usually about one-and-one-half times the average day, or 4.289 mgd.

$$2.859 \times 1.5 = 4.289 \text{ mgd}$$

2. During 1977, the BWS had 1845 service connections. The average number of connections which was served by each million gallons of supply was:

$$\frac{1845}{4.289 \text{ mgd}} = 430 \text{ connections/mgd of supply}$$

3. This project will add 3 mgd to the total supply. By making the Alaeloa surface intake supply of 1.6 mgd the standby, instead of the present 1 mgd pump source, the net gain in supply is 2.4 mgd obtained thus:

$$\begin{aligned} 3 \text{ mgd} - 1.6 \text{ mgd} + 1 \text{ mgd} &= 2.4 \text{ mgd} \\ (\text{new}) - (\text{substitute standby}) &= (\text{net gain}) \end{aligned}$$

4. The number of new connections which can be accommodated by the net gain in supply is:

$$2.4 \text{ mgd} \times 430 \text{ conn/mgd} = 1032 \text{ connections}$$

5. In 1976, the State estimates that 8000 persons resided in the Lahaina district, and the BWS served 1799 meter connections. The average number of residents per connection is:

$$\frac{8000 \text{ residents}}{1799 \text{ connections}} = 4.4 \text{ residents/connection}$$

6. The number of residents which can be accommodated by the net gain in supply is:

$$1032 \text{ connections} \times 4.4 \text{ residents/connection} = 4541 \text{ residents}$$

Use of 2.4 mgd by 4541 residents amounts to a maximum day consumption of 529 gals./resident/day. This can be compared with the "actual" 1977 maximum day consumption of 4,289,000 gallons by about 8120 residents (1845 connections x 4.4 residents per connection) which indicates consumption of 528 gal./resident/day. The consumption figure is high because the number of visitors is not included in the "resident" population figures used above.

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

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