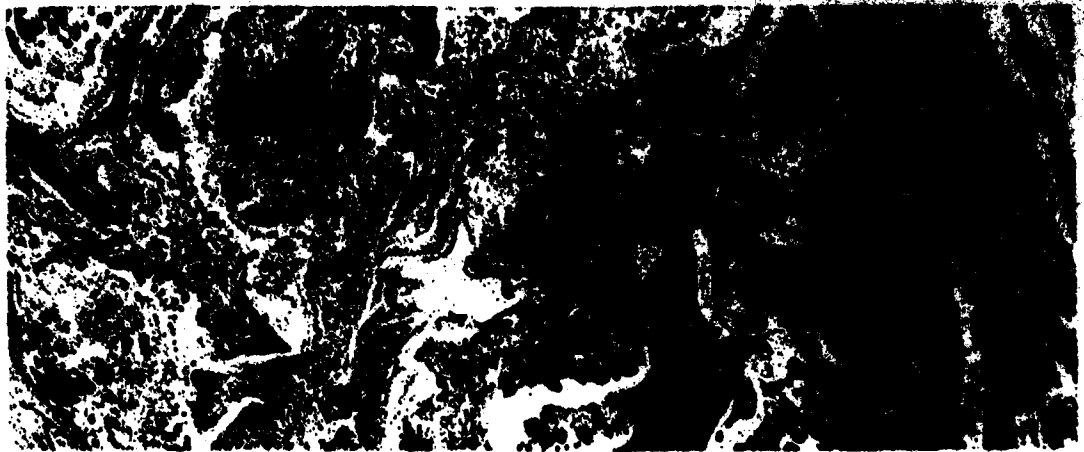


MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

ADA 128221



A Cultural History Overview
of the Kahoma Stream
Flood Control Project, Lahaina, Maui
and Ma'alaea Small Boat Harbor Project
Ma'alaea, Maui, Hawaii

BY
PAULINE KING JOERGER
MICHAEL W. KASCHKO

DTIC
MAY 17 1983
A

DTIC FILE COPY



hawaii marine research

This document has been approved
for public release and sale; its
distribution is unlimited.

honolulu

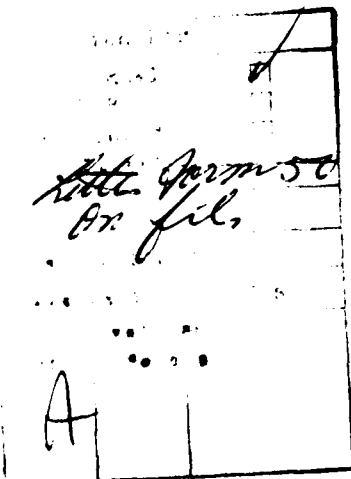
88 05 16 098

A Cultural History Overview of the Kahoma Stream Flood Control Project, Lahaina, Maui and the Ma'alaea Small Boat Harbor Project, Ma'alaea, Maui, Hawaii

By
Pauline King Joerger
Michael W. Kaschko

Prepared for the
Corps of Engineers, Pacific Ocean Division
Department of the Army
Contract No. DACW85-79-C-0012

²⁴
September 1979



Hawaii Marine Research, Inc., Honolulu

CONTENTS

Introduction	1
Discussion of the Sites	5
Mala Wharf	5
Historical Overview	5
Archaeological Overview	12
Previous Research and its Implications	13
Ma'alaea Small Boat Harbor	15
Evaluations of Eligibility and Recommendations	20
Ma'alaea Small Boat Harbor Surfing Site	20
'Alamihi Fishpond	20
Recommendations	21
References	23

LIST OF FIGURES

Figure 1	Study Area for Kahoma Flood Control Project, Lahaina, Maui	2
Figure 2	Ma'alaea Small Boat Harbor, Ma'alaea, Maui	3
Figure 3	Government Survey Map, 'Alamihī Fishpond Area, 1908	8
Figure 4	Government Survey Map, 'Alamihī Fishpond Area, 1917	9
Figure 5	Board of Harbor Commissions Map, 'Alamihī Fishpond Area, 1940	11
Figure 6	Hawaiian Government Survey Map, Ma'alaea Bay, 1883	19

INTRODUCTION

The U.S. Army Corps of Engineers, Pacific Ocean Division, requested that Hawaii Marine Research conduct a historical study of the Mala Wharf and Ma'alaea Small Boat Harbor Surfing Site, and an archaeological overview of the recent research near the Mala Wharf area. The intent of this study was to provide sufficient information for the U.S. Army Corps of Engineers to assess the probable impacts of any projects they may initiate in those areas on significant cultural resources. Both areas are evaluated below as to their eligibility for inclusion on the National Register of Historic Places.

This report was prepared from informant data and existing reports, published and unpublished, in depositories on Oahu and Maui. No archaeological field work was conducted. The area of concern at Mala Wharf is indicated in Figure 1. The Ma'alaea Small Boat Harbor is depicted in Figure 2. Both of these maps were supplied by the Corps of Engineers.

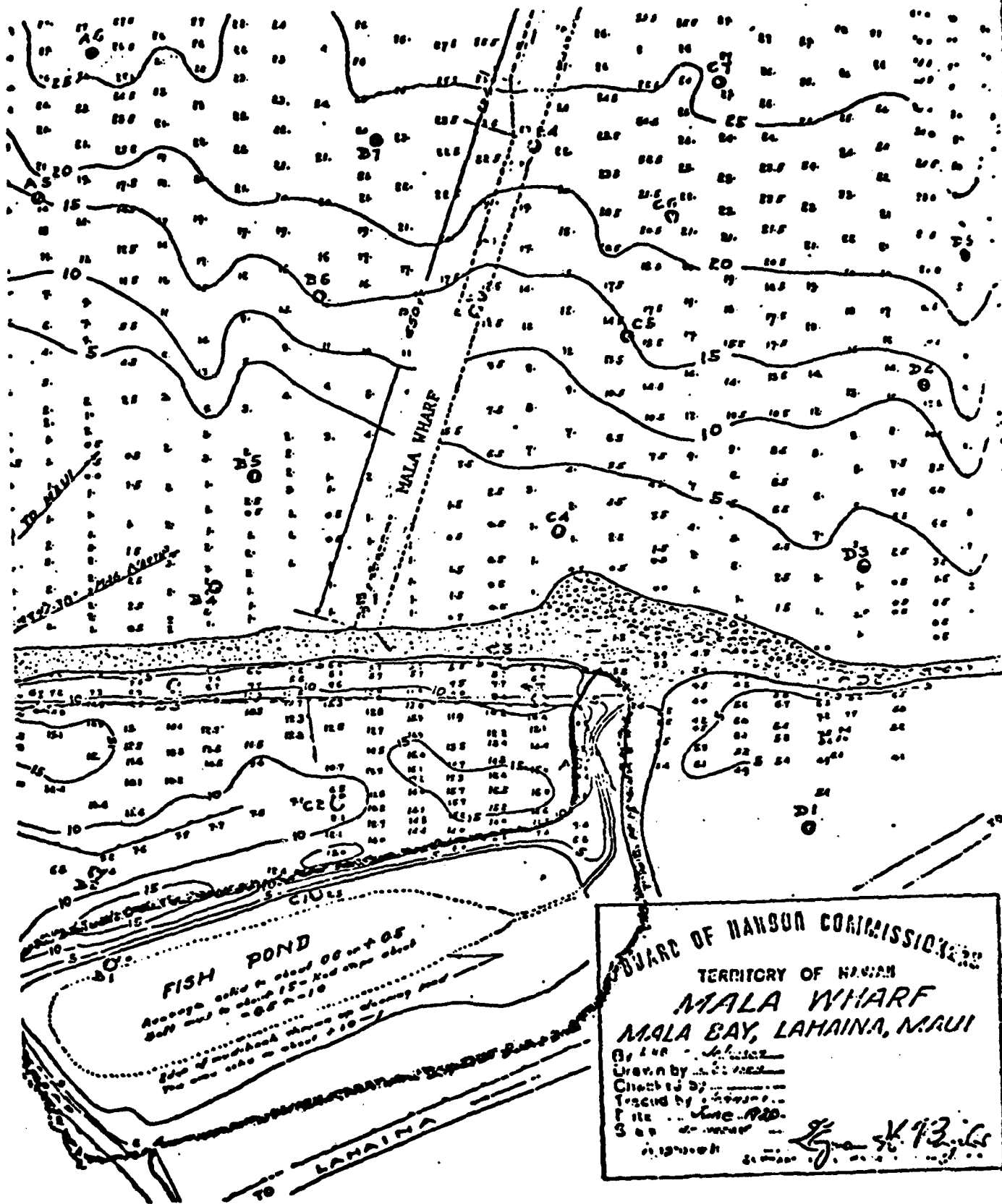
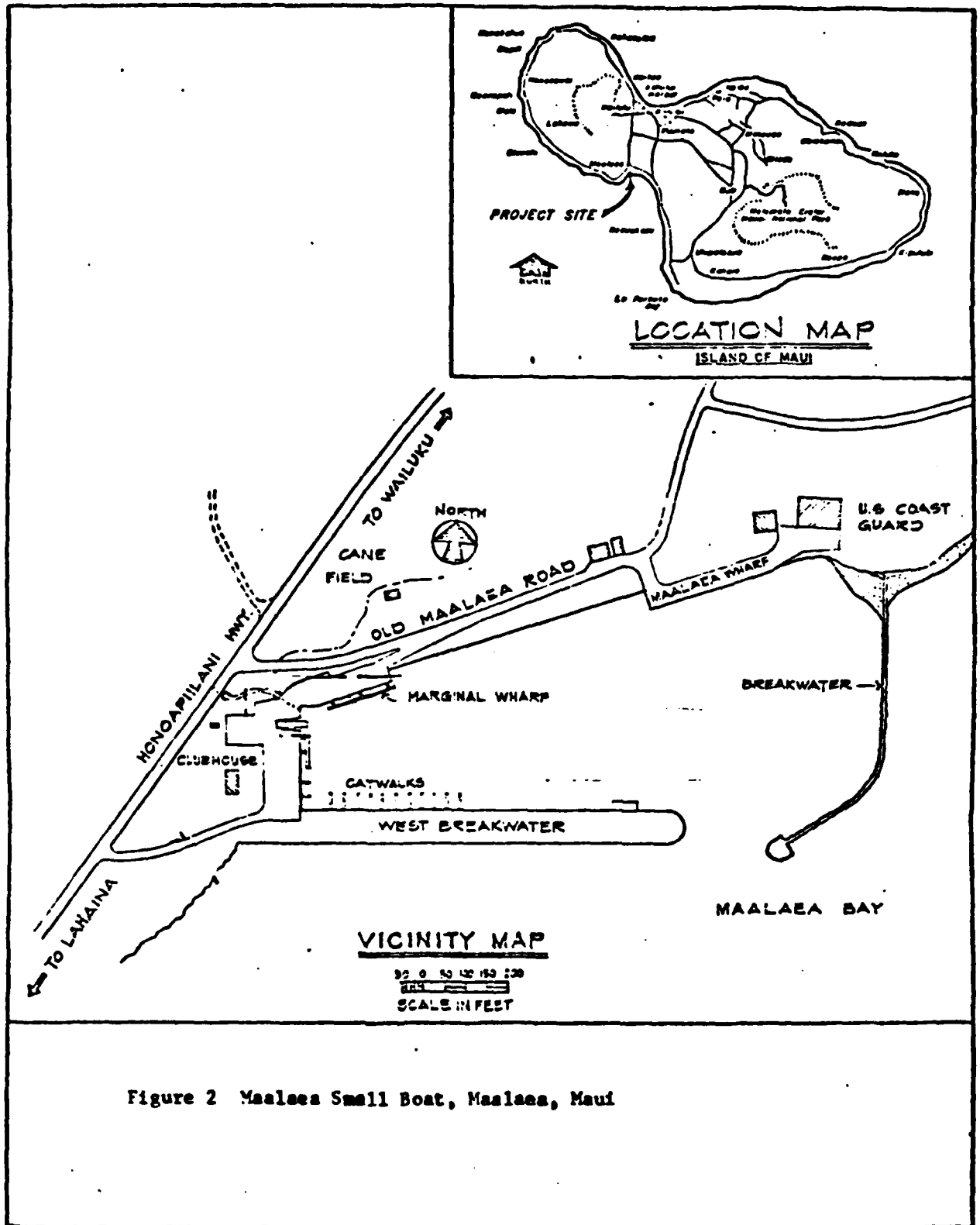
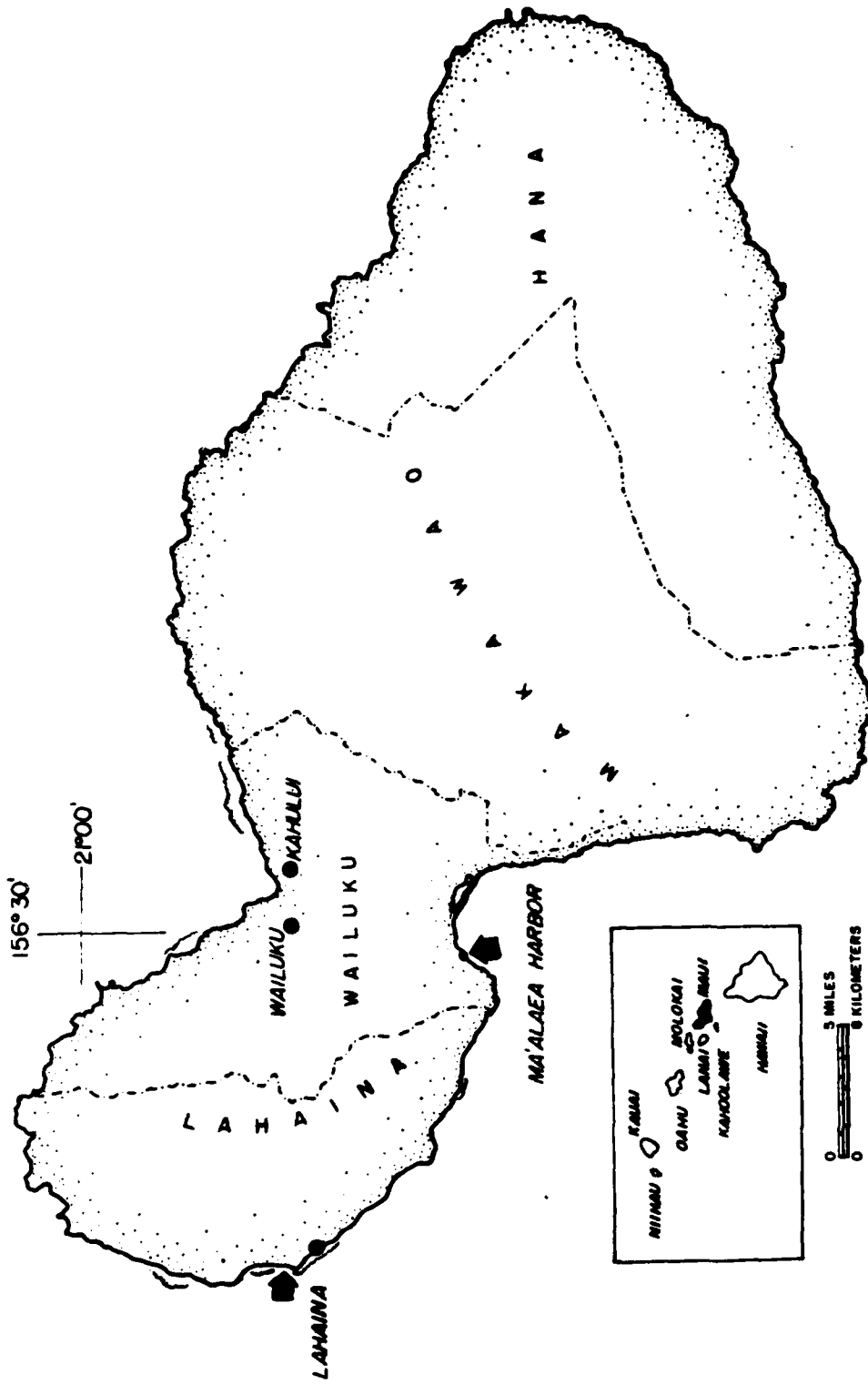


Figure 1 Study Area for Kahoma Stream Flood Control Project, Lahaina Maui





Project Location Map - Maui, Hawaii

DISCUSSION OF THE SITES

MALA WHARF

Historical Overview. Adjacent to Kahoma Stream and bisected by the Mala Wharf approach road are the remains of an inland fishpond called 'Alamihi. Situated in the ahupua'a (ancient land division) of 'Alamihi, the pond may have been named 'Alamihi in historic times and may have had a different name in ancient times. Shortly before Western contact (1778) 'Alamihi was the site of a battle between two great chiefs, Kauhi'aimokuakama and Kamehameha-nui (known also, as Kamehameha I and Kamehameha the Great). Kauhi, the high chief of Maui, was fighting against the authority of Kamehameha-nui. During the rebellion Kauhi "seized all the food at 'Alamihi ahupua'a" (Kamakau, 1961:73). According to Kamakau, enough food was collected to support the needs of his army for a march across the island (Kamakau, 1961:73).

In the Great Mahale (land division) of 1848 Kamehameha III kept the ahupua'a of 'Alamihi, including the fishpond, as Crown Land (Indices, 1929:26; Nahaolelua, Report). Mauka (inland) of the pond and adjacent to it, David Malo (c. 1793-1853), a well-known Hawaiian historian, was awarded a parcel of land approximately eleven acres in area (Indices, 1929:208; LCA No. 3702). This was one of several parcels owned by Malo. Malo's parcel extended from the fishpond

mauka and across the Ka'anapali Road. It was reported by Kamakau (c. 1866) that there was a breadfruit tree "on which the first victim of the battle was laid." The tree was "near the house of David Malo" (Kamakau, 1961:73-74). Moreover Inez Ashdown stated that the lower part of Kahoma Stream was in fact called "Kapa'ulu," or enclosure of breadfruit, and it was from Kapa'ulu that fresh water was fed into 'Alamihi fishpond (Ashdown, Personal Communication).

Thus, 'Alamihi fishpond was part of an important battle in the latter part of the 18th Century between two great chiefs (ali'i nui) and at least one of the breadfruit trees of the area was still standing in the 1860s.

Kamehameha III and Malo were the only two recorded land owners in 'Alamihi aupua'a for some time.

The fishpond itself was mentioned in government records from time to time. P. Nahaolelua, governor of Maui, reported to the King in 1853 on a survey of the area and referred to the pond and a few coconut trees (Nahaolelua, 1853). Again he reported that he had received six dollars for the fishpond apparently as rent or a fee (Nahaolelua, 1855).

By 1889 Pioneer Mill Company had entered into a 15-year lease for much of the 'Alamihi land. The area was given as nine acres (Iaukea, 1894:79). Until the revolution of 1893 which abrogated the monarchy and replaced the Kingdom of Hawaii with a provisional government, 'Alamihi Fishpond was part of the Crown Lands, the personal property of Kamehameha III and his heir, Kamehameha IV. After 1865 the Crown Lands were administered by a Board of Commissioners of Crown Lands

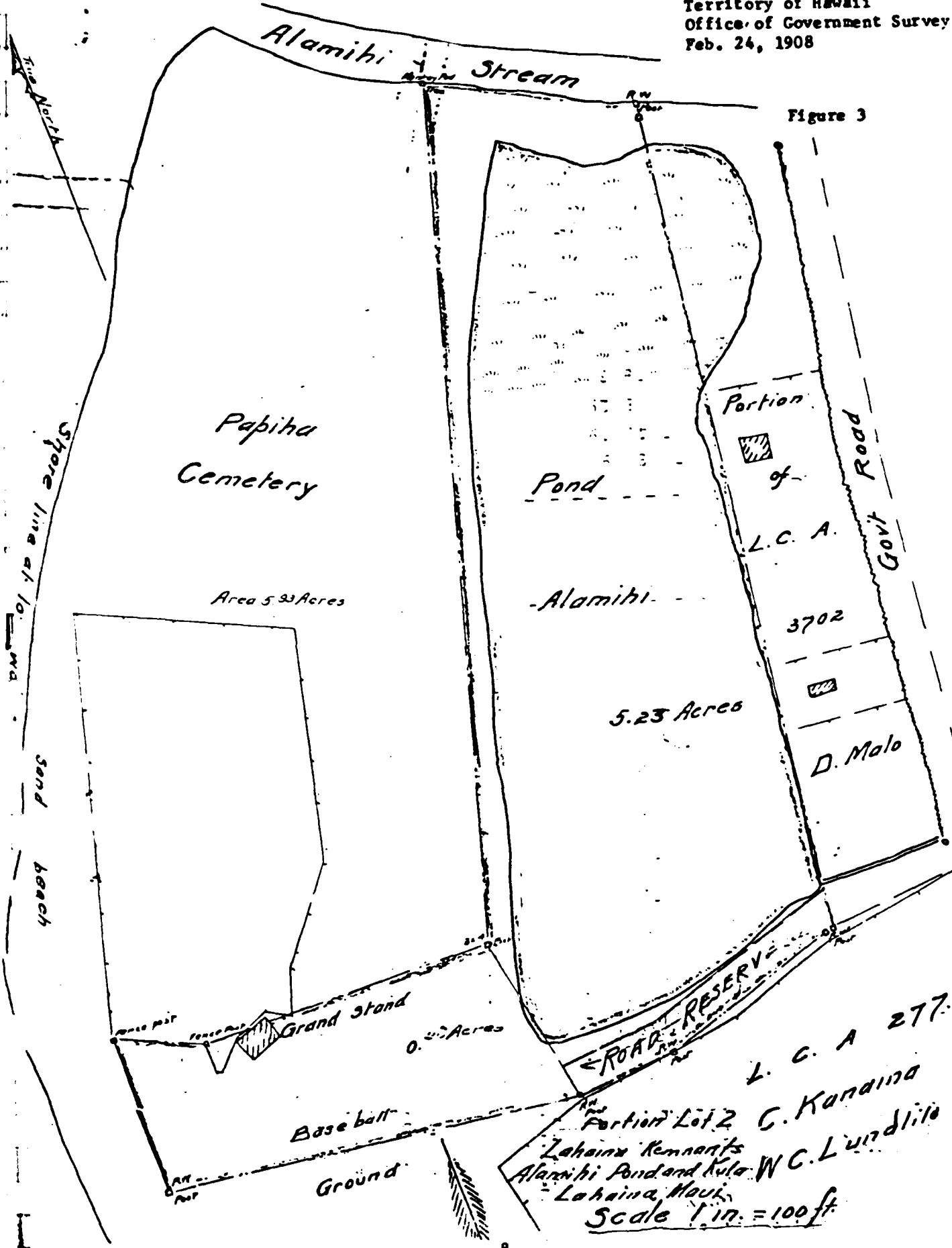
and the income from these lands given to whomever was monarch. 'Alamihi Fishpond, then, remained the property of the Hawaiian monarchy and was administered by a government agency.

When the Provisional Government became the Republic of Hawaii in 1894 the Crown Lands became public lands. Then, as indicated in a "Statement of Leases of Public Lands under control of Commissioners of Public Lands as of the date of 31 August 1898," the government of the Republic included the Crown Lands and 'Alamihi fishpond with that of government or public lands (Public Lands Commission, 1898:14). After the Islands were annexed by the United States in 1898, the Commissioner of Public Lands of the Territory of Hawaii reported to the Governor that about 60 acres of land and fishponds, consisting of many "small patches and remnants in and about the town of Lahaina" were all that remained of the Lahaina Crown Lands. He placed the value of the acreage at about \$6,000.

Interest in the fishpond was evinced early in the 20th Century by the Survey Department of the Territory of Hawaii. In 1908 and 1917 two surveys were made (Figures 3 and 4). The pond was described as being 5.23 acres in the earlier survey. Some changes were made to the pond on the end toward Lahaina town to accommodate a government road. By 1917 the pond had been reduced in size to 4.07 acres.

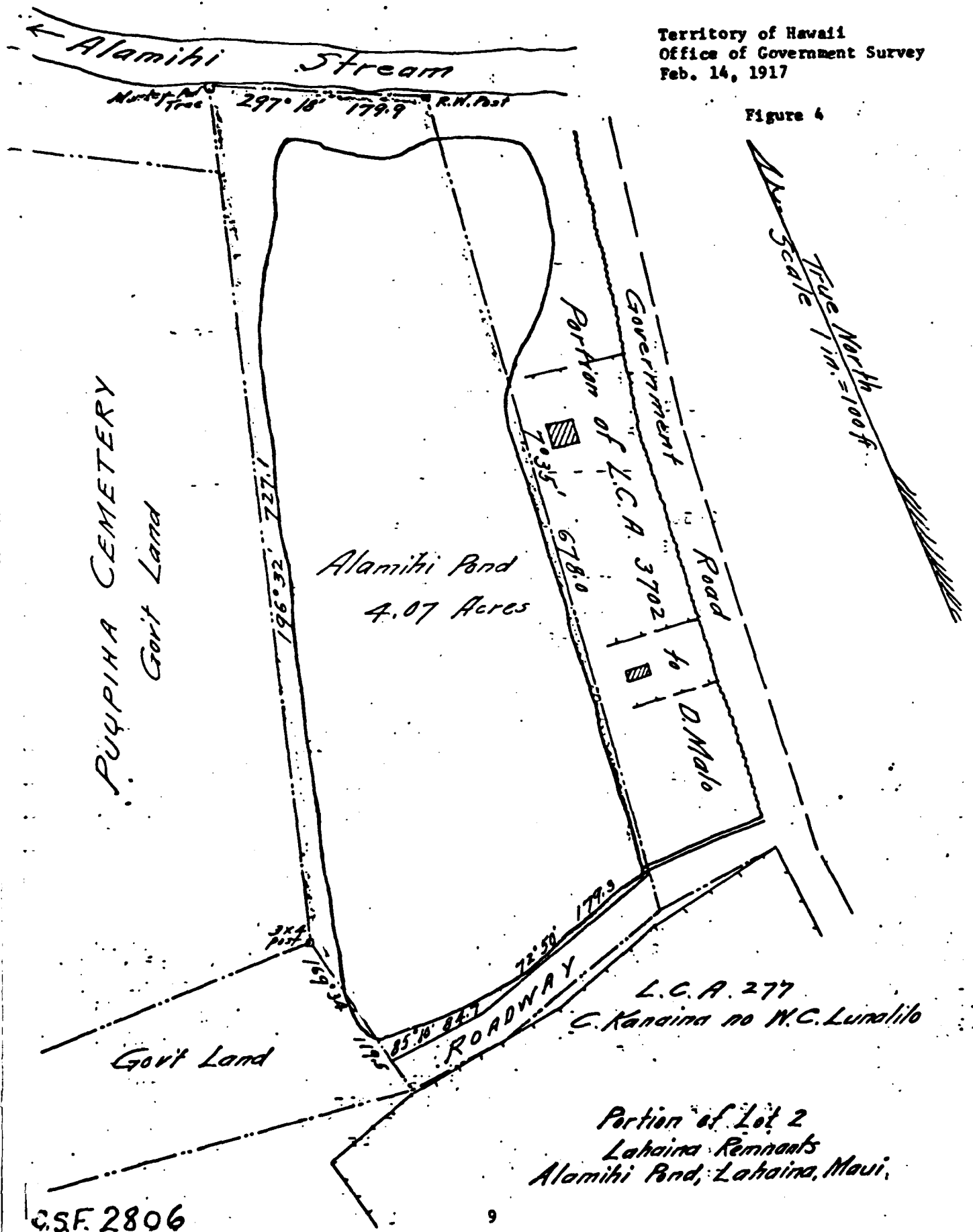
A more dramatic change occurred in the 1920s with the building of Mala Wharf. That structure was completed in 1922 and the approach road to the wharf cut diagonally across the pond dividing the pond into

Figure 3



Territory of Hawaii
Office of Government Survey
Feb. 14, 1917

Figure 4



two roughly equal portions (Figure 5) (Board of Harbor Commissioners, 1922:13-14).

Passenger ships in the inter-island service used Mala for some years. These ships could not moor at the wharf. Instead they anchored in the Bay and transferred passengers in small ship boats to a landing built onto the wharf (Board of Harbor Commissioners, 1923:13). As part of the improvements to the harbor and the surrounding land, the Territory of Hawaii planned to add 13,400 cubic yards of "sanitary fill" to 'Alamihi fishpond. By 1930 the project was completed (Superintendent of Public Works, 1929:20; 1930:23). Mala Wharf was damaged and repaired periodically until 1941 when the Superintendent of Public Works of the Territory of Hawaii reported that no funds were available for work on the wharf. Today Mala Wharf is in a seriously deteriorated state and has been condemned as unsafe.

'Alamihi pond, however, kept the integrity of its name as late as 1953. The year before the Territory of Hawaii had issued a revocable permit to Shizuko Suehiro to use the pond. The next year the pond was described as being 2.417 acres in size (Department of Taxation, n.d.).

Hawaiian fishponds have been described in terms of their construction and location and of their cultural significance as possessions of Hawaiian chiefs. Their function as a source of food supply has also been discussed. 'Alamihi Fishpond should first be evaluated in terms of these three aspects: type of pond, food supply, and ownership.

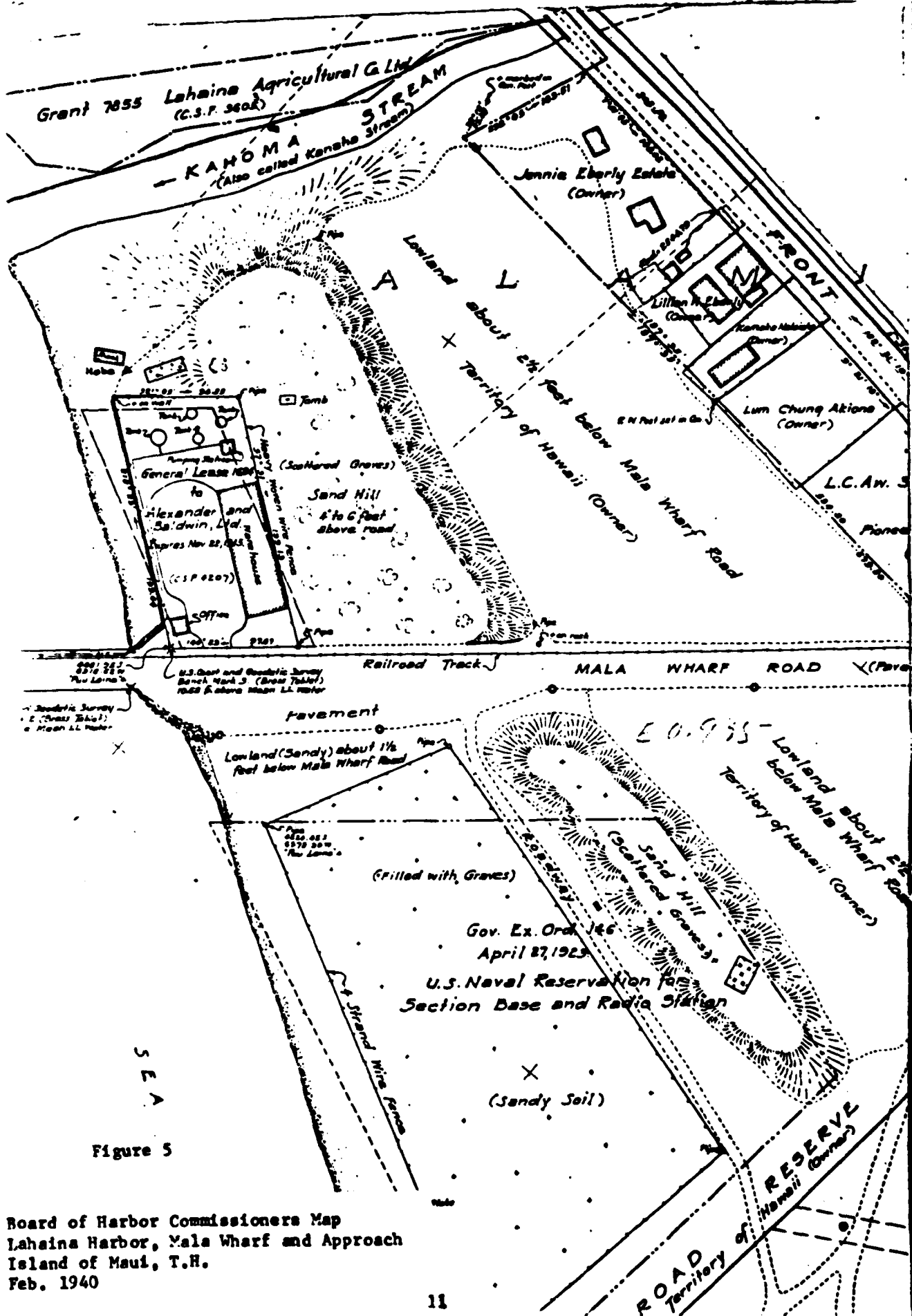


Figure 5

Board of Harbor Commissioners Map
 Lahaina Harbor, Mala Wharf and Approach
 Island of Maui, T.H.
 Feb. 1940

In terms of food supply 'Alamihi does not appear to have been particularly productive. In the 19th Century, records of the Crown Lands did not indicate that the monarchs derived a significant income from the pond. A brief review of documents did not indicate that the Hawaiian monarchs depended on 'Alamihi for supply of pond raised fish. It may, however, have been used instead to supply the monarch's retainers with fish. As of 1900 no fishponds on Maui were listed as being used commercially (Cobb, 1902:430-431). Survey maps in 1908 and 1917 show no evidence of an 'auwai and government reports suggest that the pond had become a stagnant or marshy remnant by 1929.

From 1848 to 1893 ownership of the pond and most of the land surrounding it remained with the Hawaiian monarchs. After 1893, the same parcels have belonged to the government of Hawaii. Mala and 'Alamihi have not been districts of high density development. The use of the wharf lasted less than 20 years. Otherwise the area remains a quiet place between Lahaina and Ka'anapali.

Archaeological Overview. The specific area of study discussed here is the 'Alamihi Fishpond (Tinker, n.d.) and the immediately adjacent bank of Kahoma Stream just north of Lahaina, Maui (see Figure 1). The fish pond itself has been heavily silted and is now filled with dark organic mud. The remains of a constructed stone 'auwai are visible at the north end of the fishpond entering Kahoma Stream. At least three burials and an imu, all apparently historic, are located within this northern end of the pond. Mala Road apparently crosses the other end of the fishpond, connecting to the Mala Wharf. On the

immediate seaward side of the pond, just behind the beach where the wharf is located, is a large sand berm, on which is situated a historic cemetery. The inland side of the fishpond is in close proximity to the highway to Lahaina.

Previous Research and its Implications. In the last few years the specific area of Kahoma Stream and the Mala Wharf, Lahaina, has been the subject of several archaeological field investigations (Connolly 1974, Sinoto 1975, Davis 1977, Hammatt 1978). In the course of a project primarily involved with the removal of historic burials from the large beach sand berm, the fishpond area adjacent to Kahoma Stream was test excavated to reveal at 80 centimeters' depth a black, highly organic, silty muck deposit with abundant land snails included, and more than 50 centimeters thick. The 'auwai of the fishpond adjacent to Kahoma Stream was also examined and test trenched, exposing its base at least 90 centimeters below the present surface. The presence of a typical fishpond sediment combined with the 'auwai structure confirmed the identification of the area as a former active fishpond (Hammatt 1978:16).

In addition to their relevance to the reconstruction of the ancient environment (in this case especially through the analysis of land snails), fishponds may also preserve other valuable archaeological remains. Excavations have recently revealed preserved wood artifacts included within fishpond sediments at Kualoa Regional Park, Oahu (Clark and Connolly, Personal Communication). Similar materials could be present in part of the sediments filling the Kahoma Stream fishpond, in particular if a habitation site was located nearby.

The possibility of sub-surface cultural deposits being present immediately adjacent to the fishpond appears to be good. Sinoto (1975:2) notes:

On the basis of the site type and its proximity to a fishpond, freshwater stream, and coastal area (similarities to known significant Hawaiian sites such as 018-Bellows Beach, A1-3-Halawa Valley on Molokai, Mokapu Burial Ground), there are sufficient grounds to suspect the subsurface presence of potentially significant archaeological remains.

During the removal of historic burials from the large sand berm, three test trenches were excavated revealing a buried surface showing soil development. This buried soil was from ten to 30 centimeters thick and at a depth of 60 to 120 centimeters from the surface. In two of the test trenches this layer contained prehistoric cultural material including charcoal fragments shell midden, and basalt flakes (Hammatt, 1978:14).

In both cases, the layers are thin and relatively indistinct. However, there is adequate reason to suspect that buried cultural layers may be located in other portions of the Mala locality, particularly in the low-lying areas.

(Hammatt, 1978:15)

A total of 90 human burials have been removed from the sand berm area. Three of these have been identified as prehistoric flexed burials and the remainder as historic. The three flexed burials were located near the Mala Wharf Road outside of the project limits. An estimated 135 undisturbed burials still remain in the sand berm area (Hammatt, 1978:6). Within the fishpond itself there are apparently at least three burials and one possible imu (Sinoto, 1975). The burial removal operation demonstrated that there are a large number of burials in this area

without any surface indications of their presence. The burials near the stream all appeared to be historic while the prehistoric remains were found further south.

In addition to the above, there is also the possibility of buried habitation deposits being located in the banks of Kahoma Stream adjacent to the coast line. A substantial prehistoric occupation deposit, covered by stream alluvium and thus undetectable from the surface, was excavated in Mohinahina Gulch, along the west main coastline north of the project area (Griffin and Lovelace, 1977). The presence of a similar site may be possible in the sediments adjacent to Kahoma Stream in this area in the vicinity of the beach.

MA'ALAEA SMALL BOAT HARBOR

Ma'alaea Bay has had an important place in Hawaiian history as a stopover or transit place for travelers. One recorded event told by Kamakau was the procession which took the remains of the chief Kekaulike by canoe to Ma'alaea and then by land to Wailuku and Iao Valley (Kamakau, 1961:69). Other references in the writings of travelers were made to their arrival by canoe or small boat at Ma'alaea. At the end of the 19th Century a pier extended out from the shore into the sea (Figure 6).

By 1902 this pier was in a "condition of extreme dilapidation" (Superintendent of Public Works, 1902:78-79). For reasons which were not stated, the Superintendent of Public Works of the Territory of Hawaii did not believe that Ma'alaea was suitable for the construction of

a wharf. Instead he made plans for the Territory to build one near McGregor's Point (Superintendent of Public Works 1902:78-79, 1904:11, 1905:5-6; Maui News, 1903). The project was finally abandoned in 1906 (Maui News, 1906).

During World War II Ma'alaea Bay was used by the 4th and 5th Marine Divisions in joint ship-to-shore rehearsals before the 1945 battle of Iwo Jima (Allen, 1950:190). Ma'alaea was also used for amphibious landing practice (Allen 1950:190).

By the 1950s modern construction of a small boat harbor was begun (Board of Harbor Commissioners, 1951:9, 1952:8, 1953:8). By March of 1953 a breakwater and dredging were completed. By 1958 a second breakwater was constructed. On maps and drawings these are designated as the west breakwater and the east breakwater (Hill, 1979:1).

In 1975 Pacific Sea Transportation, Ltd., began its interisland ferry service with the use of hydrofoils. The first boat, the Kamehameha, arrived at Ma'alaea and docked at a SeaFlite terminal which the company had constructed near the west breakwater (Department of Transportation, 1975:18, 20). SeaFlite continued to operate its ferry until the end of 1977.

The small boat harbor has been used as a mooring place for commercial fishing boats, charter boats and pleasure craft. The Coast Guard cutter Cape Newagen, a search and rescue vessel, is based at the harbor. There is a waiting list for mooring space at the harbor. In 1974 50 boats were on the list. By 1975 the number had increased to 131 (Department of Transportation, 1974:27, 1975:23).

Captain Percy A. Lilly, Jr. (Personal Communication), noted that Ma'alaea dry dock was used extensively. The small boat harbor would continue to be used, he felt, for small operations of commercial fishermen, charter boats and private vessels.

An interesting cultural attribute has become associated with Ma'alaea Small Boat Harbor and its breakwaters. Two areas in front of the jetty at Ma'alaea harbor and at Ma'alaea reef on the Kihei side of the harbor have been described as surfing areas (Facilities Manual, 1975:151-152).

While both areas are used today, it is off the west and east breakwaters where the experienced and expert surfers ride the waves. It is, however, off the east breakwater where "the best, fastest, and most beautiful tubes in the world" exist, according to John Severson, editor of Surfer magazine (Hill, 1979:8). Thus, changes in the entrance to the harbor could alter this surfing site.

It appears that the best surfing site at Ma'alaea is a modern one and possibly a site created by the construction of the breakwaters of the harbor.

A quick review of the works on surfing in the Hawaiian Collection at Hamilton Library did not identify Ma'alaea as an important surfing site in the first half of the 20th Century. Similarly, a review of the articles on surfing in Paradise of the Pacific brought about the same result. Maps showing ancient and modern surfing sites did not include Ma'alaea (Finney, 1959:48 passim). Residents of Maui, when questioned, stated that they remembered surfing at Ma'alaea every weekend

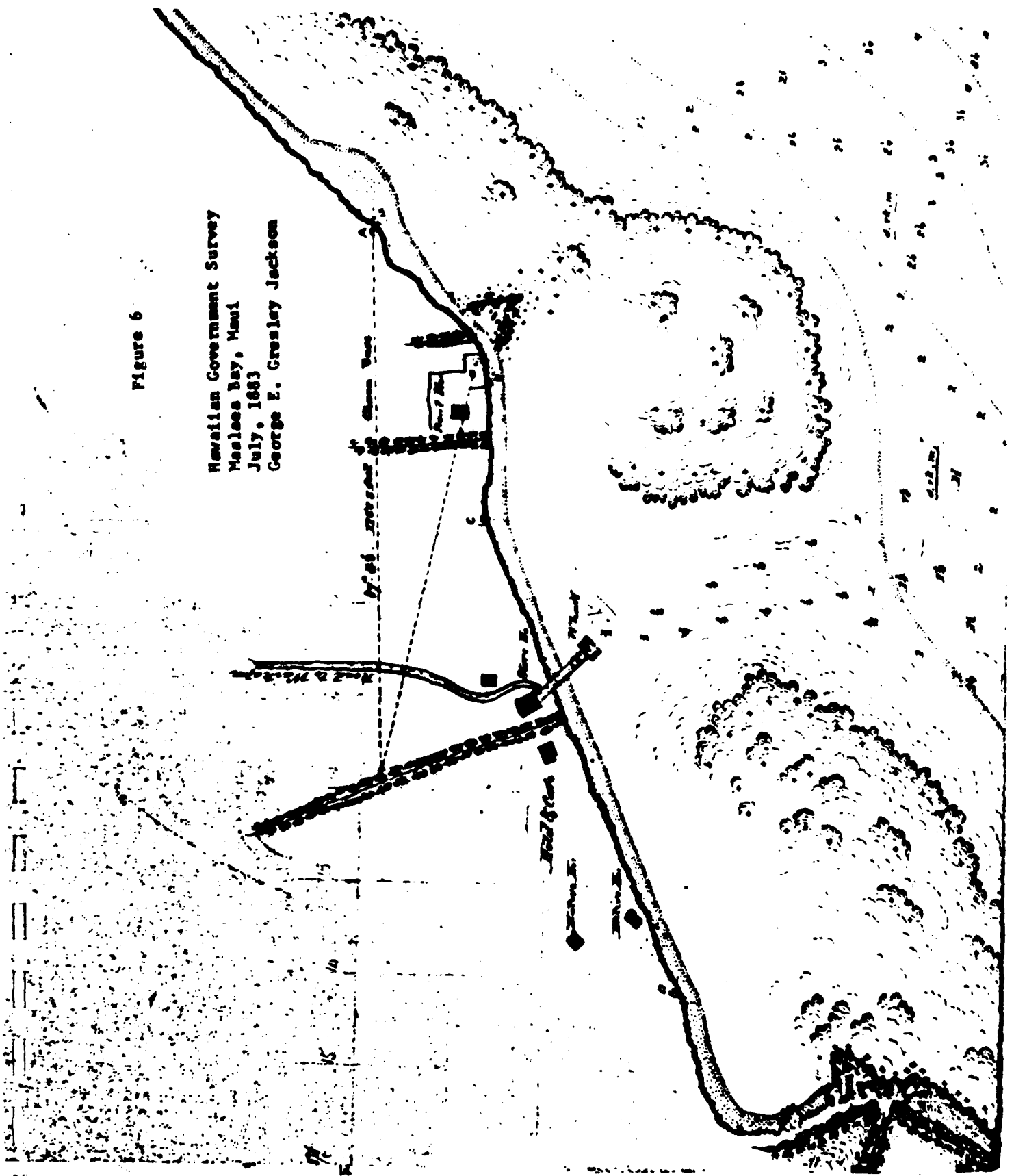
and all summer about 30 years ago. With further questioning it became apparent that the most commonly used surfing area was at the reef on the Kihei side of the harbor.

Surfing and Hawaii have an ancient partnership. Surfboard riding was common and a popular sport in prehistoric Hawaii. It diffused throughout Oceania, was developed in Eastern Polynesia and most highly refined in the Hawaiian Islands, reaching the level of development of a "cultural peak" (Finney, 1959:21-23).

For various reasons, the sport declined in importance in Hawaii in the 19th Century. Early in the 20th Century, it was revived again and the center of surfing activity was at Waikiki Beach. Between 1911 and 1959 the sport grew, developed and changed (Finney, 1959:74-76). It also spread out from Hawaii to California, Australia, Peru, New Zealand, South Africa, Israel, France and Tahiti. Innovations in board construction and surfing techniques have developed in some of these new surfing centers and were soon adopted in others.

Figure 6

Hawaiian Government Survey
Maalaea Bay, Maui
July, 1883
George E. Cressley Jackson



EVALUATIONS OF ELIGIBILITY AND RECOMMENDATIONS

MA'ALAEA SMALL BOAT HARBOR SURFING SITE

It does not appear from our investigations that Ma'alaea Small Boat Harbor is eligible for inclusion on the National Register of Historic Places. The currently used surfing site immediately adjacent to the harbor has probably become popular within the last 15 years and as such it is not now, nor has it been in the past, a site important in Hawaii's history in terms of the criteria detailed in 36 C.F.R. 63. Further Ma'alaea Small Boat Harbor as a whole has not been a significant part of Hawaii's maritime activities.

'ALAMIHI FISHPOND

On the basis of the fishpond association with important historic events (the battle between Kamehameha and Kauhi), prominent historic individuals (David Malo and Kamehameha), and its likelihood to yield information important to prehistory, it is our opinion that 'Alamihi Fishpond is eligible for inclusion on the National Register of Historic Places.

Enough physical evidence exists to establish that significant sub-surface prehistoric cultural remains are probably present within and immediately surrounding the 'Alamihi Fishpond at Kahoma Stream (see Mala Wharf discussion).

The prehistoric political and economic importance of fishponds and aquaculture has been increasingly emphasized in recent reasearch (Summers, 1964, Kikuchi, 1973, Apple and Kukuchi 1975). Because of the political and economic importance traditionally associated with the Lahaina area, both historically and prehistorically, this fishpond is significant in terms of its probable association with those cultural developments.

Though the exact boundary of the fishpond is unknown, it is possible that the flood control project could disturb and/or destroy significant archaeological remains of several kinds including:

1. The fishpond itself and its sediment fill possibly containing valuable preserved materials including land snails, and the associated structural remains adjacent to Kahoma Stream.
2. Subsurface prehistoric occupation deposits located around the perimeter of the fishpond and bank of Kahoma Stream, and possibly associated with its operation.
3. Human burials both historic and prehistoric located in and around the large sand berm, including some within the fishpond.

RECOMMENDATIONS

A systematic subsurface testing program is recommended to examine the specific area to be disturbed by construction activities in order to identify the nature, extent, and concentration of the archaeological remains present. For the fishpond in particular Hammatt states:

The existence of the fishpond mauka of the graveyard is confirmed and this area should be more fully evaluated archaeologically before it is disturbed. This evaluation would include subsurface mapping of the extent of the fishpond bottom sediments as well as coring of bottom sediments for the purpose of documenting micro-flora and fauna assemblages for reconstructing the age and environmental history of the fishpond (1978:19).

Until the information produced by such a testing procedure is available for analysis, it is not possible to make specific determinations regarding the preservation and/or salvage actions appropriate to prevent damage to cultural resources present in the area.

Further historic studies should also be conducted prior to beginning archaeological work. Other fishponds exist in the Lahaina area, and though examination of them and research into their history could provide valuable information relevant to further study of 'Alamihi Fishpond, such investigations were not within the scope of this study. Detailed inspection of Land Court awards for the area, and further study of place names would also be valuable.

REFERENCES

The material gathered for this project was accumulated by standard historical research methods. Important depositories on Oahu and Maui were visited and two and one-half days were spent on Maui where both project areas were inspected, informants were interviewed and a bibliography was collected.

The depositories used were the Archives of Hawaii; the Hawaiian Collection, Hamilton Library, University of Hawaii; Bernice P. Bishop Museum Library; State of Hawaii Survey Office, Maui Historical Society; Kahului Public Library; Makawao Public Library, Wailuku Public Library and Lahaina Restoration Foundation. While not all depositories yielded pertinent information, at least one unexpected source was found at Makawao Public Library where Mrs. Gail Bartholomew had prepared an index of the Maui News from 1900 through 1930.

Two governmental officials were interviewed: Mr. Jeffrey Chang, Planner, Planning Department, County of Maui; and Captain Percy A. Lilly, Jr., District Manager, Maui, Water Transportation Facilities Division, Department of Transportation, State of Hawaii.

Informants were interviewed. They were, Mrs. Inez Ashdown who formerly served as a Maui County historic preservation advisor and

Mrs. Pika Walker. The latter was asked to inquire of residents of the Mala Wharf and 'Alamihī area in regard to their knowledge of the fish-pond.

About one-quarter of the bibliography compiled proved useful as citations. The bibliography included printed works, manuscript and unprinted material, newspapers and periodicals, maps and photographs.

Printed works included, in the main, standard works on a subject. For example, on fishponds, Hawaii Fishponds (Summers, 1964) was used for background information. The annual reports of the Superintendent of Public Works and the Board of Harbor Commissioners of the Territory of Hawaii and the Department of Transportation of the State of Hawaii were used to follow the sequence of construction at Mala and Ma'alaea. Hawaii's War Years, 1941-1945 (Allen, 1950), was the major reference for World War II material.

Newspapers and periodicals were used where indexes exist. Thus, the Honolulu Star Bulletin and Honolulu Advertiser were checked for the period 1929 through 1978; Paradise of the Pacific and Hawaiian Annual and Almanac and Maui News from 1900 through 1923. Single or individual articles were used when found in files or scrapbooks. For example, an article in Hawaii Coastal Zone News was an important source.

Among the manuscript and unprinted material used were land records in the State Department of Taxation, the Survey Division of the State Department of Accounting and General Services, and the Bureau of Conveyances and Land Management of the State Department of Land

and Natural Resources. Archives of Hawaii documents were used extensively. The Master of Arts thesis of Ben R. Finney, "Hawaiian Surfing, A Study of Cultural Change," was an important source in regard to ancient and modern surfing.

The maps that illustrate this report were found at the Archives of Hawaii and the Survey Division of the Department of Accounting and General Services, State of Hawaii.

Photographs were looked for at the Archives of Hawaii, the Maui Historical Society, the Kahului and Makawao Public Libraries, and in various issues of Paradise of the Pacific. No photographs were found which would illustrate the subject matter of this report.

- Allen, Gwenfread
1950 Hawaii's War Years, 1941-1945. Honolulu. University of Hawaii Press.
- Apple, Russell A., and William K. Kikuchi
1975 Ancient Hawaii Shore Zone Fishponds; An Evaluation of Survivors for Historic Preservation.
- Ashdown, Inez
1979 Personal Communication, August 22, 1979, Kahului, Maui.
- Board of Harbor Commissioners
1922-1953 Annual Report. Territory of Hawaii.
- Chang, Jeffrey
1979 Personal Communication, August 24, 1979, Wailuku, Maui.
- Cobb, John N.
1902 "Commercial Fisheries of the Hawaiian Islands." in United States Fish Commission Report for 1901. Washington, D.C.
- Commissioner of Public Lands
1904 Report to the Governor. Territory of Hawaii.
- Connolly, Robert D., III
1974 Phase I Archaeological Survey of Kahoma Stream Flood Control Project Area, Lahaina, Maui. Manuscript Report 100774. Department of Anthropology. B.P. Bishop Museum.
- Davis, Bertell D.
1977a Preliminary Report, Mala Wharf Burials, Phase I, Mala, Lahaina, Maui. Archaeological Research Center Hawaii, Inc., Project No. 14-105 (I).
- 1977b Archaeological Survey of the Honokowai Water Transmission Line, Kaanapali, Maui. Archaeological Research Center Hawaii, Inc., Project No. 14-106.
- Department of Taxation
n.d. Tax Key Map Record Book 4-5-05-1.
- Department of Transportation
1964-1976 Annual Report. State of Hawaii.

- "Facilities Manual . . ."
1975 "Facilities Manual on the Islands of Maui, Molokai and Lanai: A Reference Guide." Typescript, Kahului, Maui, Library.
- Finney, Ben R.
1959 Hawaiian Surfing, A Study of Cultural Change. Unpublished Master of Arts Thesis, Department of Anthropology, University of Hawaii.
- Griffin, P. Bion, and George W. Lovelace (Eds.)
1977 Survey and Salvage, Honoapiilani Highway, the Archaeology of Kaanapali, from Honokowai to Alaeloa ahupuaa. Project No. 14-73. Archaeological Research Center Hawaii, Inc. Occasional Papers. Lawai.
- Hammatt, Hallett H.
1978 Archaeological Investigation and Monitoring, Mala Wharf Boat Launch Ramp Area, Lahaina, Maui. Archaeological Research Center Hawaii, Inc., Project No. 14-105 (II).
- Hill, Robert
1979 "Ma'alaea Surge Woes Stir Conflict." Hawai'i Coastal Zone News. April, 1979.
- Iaukea, C.P., comp.
1894 Biennial Report of the Commissioners of Crown Lands. Republic of Hawaii.
- Indices . . .
1929 Indices of Awards by the Board of Commissioners to Quiet Land Titles. Territory of Hawaii.
- Kamakau, Samuel M.
1961 Ruling Chiefs of Hawaii. Honolulu, Kamehameha Schools Press.
- Kaschko, Michael W.
1974 Archaeological Walk-through Survey of Specified Areas in the Wailuku Flood Prevention Project and the Honolua Watershed, Maui. Manuscript Report 091674, Department of Anthropology. B.P. Bishop Museum.
- Kirch, Patrick Vinton
1973a Archaeological Survey of the Honolua Development Area, Maui. Manuscript Report 060673, Department of Anthropology. B.P. Bishop Museum.

- 1973b Archaeological Excavations at Site D12-1, Hawea Point, Maui. Manuscript Report 091173, Department of Anthropology. B.P. Bishop Museum.
- Land Commission Award (LCA)
No. 3702. Kingdom of Hawaii.
- Lilly, Captain Percy A., Jr.
1979 Personal Communication, August 24, 1979, Kahului, Maui.
- Maui News
1903 "Abandoning Maalaea Wharf in Favor of McGregor's Landing." April 25, 1903. 3:2.
- 1906 "McGregor Landing Abandoned." October 27, 1906. 2:3.
- Moore, Kenneth R.
1974 Archaeological Survey of Honolua Valley, Maui. Manuscript Report 042274, Department of Anthropology. B.P. Bishop Museum.
- Nahaolelua, P.
Ms To Kamehameha III. December 15, 1853. Interior Department. Kingdom of Hawaii.
- Ms To William Webster. March 10, 1855. Interior Department, Kingdom of Hawaii.
- Ms Report. n.d. Interior Department. Kingdom of Hawaii.
- Public Lands Commission
1898 "Statement of Leases of Public Lands under Control of Commissioners of Public Lands as of the Date of 31 August 1898." Republic of Hawaii.
- Sinoto, Aki
1975a Field Examination of Six Sites in the Honolua Watershed, Maui. Manuscript Report 072275, Department of Anthropology. B.P. Bishop Museum.
- 1975b An Archaeological Reconnaissance of the Mala Wharf Boat Launch Ramp Area, Lahaina, Maui. Manuscript Report 082075, Department of Anthropology. B.P. Bishop Museum.

- Summers, Catherine C.
1964 Hawaiian Archaeology: Fishponds. B.P. Bishop
Museum Special Publication 53. Honolulu.
- Superintendent of Public Works
1902-1941 Annual Report. Territory of Hawaii.
- Tinker, Spencer W.
n.d. Fishponds of the Hawaiian Islands. Manuscript in
the U.S. Army Corps of Engineers Files.
- Walker, Winslow M.
1931 Archaeology of Maui. Manuscript in Department of
Anthropology. B.P. Bishop Museum.

END

DATE
FILMED

6 - 83

DTIC