


October 17, 2016

MEMO TO: WR-27 File

F R O M: Gladys C. Baisa, Chair
Water Resources Committee



SUBJECT: **TRANSMITTAL OF LEGISLATIVE PROPOSAL RELATING TO
ACCESS THROUGH THE HANS MICHEL PROPERTY FOR
MAINTENANCE AND OPERATION OF KANAHA VALLEY STREAM**
(WR-27)

The attached legislative proposal pertains to Item 27 on the Committee's agenda.

wr:ltr:027amc01:kcw

Attachment

cc: Director of Water Supply

March 28, 1996

Mr. Hans Michael
1404 Olona Street
Lahaina, Hawaii 96761

Theresa K. Donham
130 Mahalani Street
Wailuku, Hawaii 96793

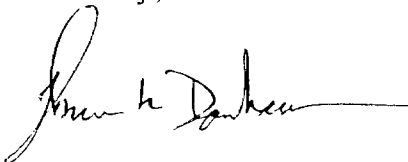
Dear Mr. Michael:

SUBJECT: Kanaha Intake Repair Project, County of Maui Water Board

Please find enclosed the May 1995 draft of the preservation/management plan that was prepared for this project. I sent a copy to Ellen last May and did not hear any thing back, so we are assuming that the Water Board is in agreement with the recommendations. See the section on erosion control, for a discussion of your Parcel 1 area.

I have completed the update letter; you should be receiving a copy within the week.

Sincerely,

A handwritten signature in cursive script, appearing to read "Theresa K. Donham", with a long horizontal flourish extending to the right.

Theresa K. Donham
DLNR Maui Island Archaeologist

Draft

PRESERVATION AND MANAGEMENT PLAN
KANAHA AGRICULTURAL COMPLEX
SIHP SITE 50-50-03-3512

PANAWEA, LAHAINA DISTRICT, ISLAND OF MAUI

Prepared for:
County of Maui Board of Water Supply
David Craddock, Director

by

Theresa K. Donham, Maui Section Coordinator
State Historic Preservation Division
and
Ellen Kraftsow, Acting Chief, Planning Division
County of Maui Board of Water Supply

October 1994
(Updated May 1995)

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1. INTRODUCTION

1.1 Purpose

The purpose of this preservation and management plan is to provide a framework for the stabilization and long-term protection and management of the archaeological resources in Kanaha Valley, Panaewa, Lahaina District, Maui. The plan was requested by the State Commission on Water Resources and the State Historic Preservation Division, in connection with a stream alteration permit issued to the County of Maui Board of Water Supply for repair work to the Kanaha Intake.

The specifics of the plan address the protection of the Kanaha Agricultural Complex (Site 50-50-03-3512), which is located along both sides of Kanaha Stream between c.750 and 1200 feet AMSL. The County of Maui Department of Water Supply, in cooperation with the State Historic Preservation Division, will implement the short-term recommendations of the plan in a timely manner. The long-term management goals and recommendations are not finalized at this time. These aspects of the plan will be modified as additional information on the site and its historic significance is collected, and as environmental conditions in the Valley are better understood. The plan is therefore expected to undergo periodic updates.

1.2 Project Background

The Kanaha Intake is located in the Kanaha Stream channel, at an elevation of approximately 1200 ft AMSL. A flood and landslide destroyed the intake in May 1992, at which time emergency repair work was conducted. During the flood and mudflow, portions of the existing access road were washed out, resulting in the grading of new access routes in portions of the Valley. The new route is accessible only by bulldozer; it is not a finished road.

An archaeological inspection of the intake site was conducted by Historic Preservation Division staff on January 5, 1994, as part of the historic preservation review of the intake repair project. During the inspection, it was determined that the access route had impacted a number of historic taro *lo'i* walls. The Historic Preservation Division identified the walls as components of an extensive valley agricultural complex focused on wet taro production (Letter to Ellen Kraftsow January 13, 1994, Appendix A). The previously unknown site was listed in the State Inventory of Historic Places (SIHP) as Site 50-50-03-3512.

In order to minimize the adverse effects of the intake repair project on the historic site, the Board of Water Supply agreed to implement interim site protection measures, as recommended by the Historic Preservation Division. These measures consisted of marking all historic features with metal fence posts, in order to identify their locations and signal their presence to the equipment operators. The purpose of the markers was to insure that additional wall sections along the access route were not disturbed.

The Historic Preservation Division also recommended that the Board of Water Supply notify the various landowners along the route of the changes, and of the

disturbance to historic sites on the various properties (see Appendix A). Requests for access by archaeologists to document the site was also to be completed. The interim site protection measures, and an assessment of their effectiveness, are discussed in greater detail below.

1.3 History of the Intake

A freshwater intake has existed in Kanaha Stream for at least 90 years. The territory of Hawaii and Pioneer Mill Company entered into an agreement in October 1904 dividing the use of water from Kanaha Stream between Lahainaluna School and Pioneer Mill. Evidence from legal files indicates that the flume extended to the 1040' elevation as early as 1908. Rights of entry were obtained from Pioneer Mill in 1912, and several repairs were made in the intervening period.

The first annual report of the Board of Water Supply, which was formed in 1949, indicates that water from Kanaha Stream was being used to meet municipal needs at this time. Historical survey records from the early 1950's indicate the existence of the intake at or near the same location, and in the same form as the modern pre-landslide intake.

Additional information regarding the intake and pipeline in Kanaha Valley is included in the background research section of the supporting document.

1.4 Plan Objectives

This plan has four primary objectives:

1. Identify the nature, extent and historic significance of the archaeological/cultural resources within the portion of Kanaha Valley affected by the Kanaha Intake repair project and future maintenance or repair activities conducted by the Board of Water Supply.
2. Establish a base of historic background and archaeological information that will provide the necessary guidance for the proper short and long-term protection and management of the archaeological/cultural resources.
3. Outline specific site protection and preservation measures to be implemented by the Board of Water Supply, in cooperation with the Historic Preservation Division and other interested agencies or individuals.
4. Consider and evaluate alternative long-term preservation strategies in the context of regional preservation concerns, educational benefits, and traditional Hawaiian cultural concerns.

1.5 Implementation

The preservation measures outlined in this plan have been recommended by the Historic Preservation Division, and are designed to be implemented by personnel from the Board of Water Supply, or their representative. The implementation will be monitored by Historic Preservation Division staff, or designated professional volunteer assistants.

Identification and documentation of the numerous features within the Kanaha Agricultural Complex was initiated shortly after the site was first identified. Descriptions and photographs of all terrace walls impacted by access road construction were collected by Historic Preservation Division staff archaeologist Theresa K. Donham, with the assistance of two professional volunteers. Additional inventory field work to be conducted includes additional photo documentation, detailed measuring, verbal descriptions, and mapping of the taro *lo'i*, *'auwai*, trails, and habitation features that are present within the area of the complex. Subsurface testing may be warranted in impacted areas of the sites in order to determine proper restoration measures, and to obtain samples for radiocarbon age determinations. This work will be conducted by the SHPD staff, or appointed volunteer assistants. If additional impacts to the sites are caused by the Board of Water Supply, archaeological data recovery will be conducted by professional archaeologists retained by the Board.

The Board of Water Supply has agreed to retain a private consultant to conduct the archival research on the Kanaha Land Commission Awards. This research must be conducted in Honolulu. Historical background for the water system and Pioneer Mill will be researched by BWS Planner Ellen Kraftsow. The traditional background information on Lahaina will be researched by SHPD staff archaeologist Theresa K. Donham, with the assistance of interested volunteers. Additional funding for research projects regarding the Kanaha area might be needed, depending upon the nature of information that is discovered during the initial research phase.

Access to the project area for archaeological field work is to be granted by the BWS at any time, so long as the BWS Lahaina Baseyard is notified 24 hours in advance.

Specific site protection measures recommended by this plan are to be implemented by the Board of Water Supply. This includes providing the materials, labor, and supervision needed to carry out site marking, wall repair and reconstruction, access route alterations, erosion control measures, and any other future recommended actions.

Individuals responsible for the coordination and supervision of the protection measures include Bobby Vida, Field Operations Superintendent; Garrick Moto'oka, Construction Crew Supervisor; and Scotty Ricard, Lahiana Baseyard Supervisor.

If the Historic Preservation Division feels that the Board of Water Supply has not implemented the recommended actions within an appropriate (pre-established) time frame, the Field Operations Superintendent will be notified, with cc to the Board Director, David Craddick. Upon such notification, the Board of Water Supply has ten working days to initiate the action, or correct an erroneous

action. If, within ten days, the action has not been taken or corrected, the Historic Preservation Division will notify the Commission on Water Resources, who will decide the appropriate sanctions. The Board of Water Supply may issue fines, or revoke the issued permit, under Hawaii Revised Statutes Title 13, Chapter 169-3 or 169-54.

Enforcement of the recommendations stated in the plan by the CWRM will be in effect for the period of the permit (two years). The long-term measures discussed below will be active beyond the life of the permit. After that time, the Historic Preservation Division will monitor compliance, under Hawaii Revised Statutes Title 13, Chapter 6E.

2. SITE PROTECTION/MANAGEMENT CONSIDERATIONS

2.1 Intent

The intent of the site protection measures discussed in this plan is to insure that the actions of the Maui County Board of Water Supply in Kanaha Valley cause no additional adverse effects to the Kanaha Agricultural Complex. In order to achieve this goal, both short-term and long-term measures are needed.

2.2 Present Conditions

Kanaha Valley is a dynamic stream system which is subject to rapid and major changes, depending upon immediate rainfall and weather conditions. Under normal circumstances, the stream bed below the intake is generally dry or has a very low volume of flow. If the intake is damaged or malfunctioning, or the water volume exceeds the capacity of the intake, the volume of water continuing downstream increases. The flood of 1992 caused major changes in the width and location of the stream channel within the valley flood plain. Damage to taro *lo'i* along the sides of the stream occurred during the flood, however, the bulk of the damage to terrace walls was a result of new road work rather than the flood.

The overall excellent preservation of the terrace walls in the Kanaha Complex indicates that the *lo'i* have not been subjected to major or repeated flood damage. The preservation of this site is rather unique when compared to other West Maui valleys, where seasonal or occasional floods have caused disturbance and disruption of the agricultural sites.

The structural remains of the Kanaha Complex were impacted in the past by the original water intake and pipeline system which was installed by Pioneer Mill. The traces of the original pipeline are visible along most of its course through the valley. The pipeline tended to stay along the base or side of the steep valley wall, thereby avoiding most of the terraces. The early road which followed this route avoided most of the complex by staying above the site, on a narrow constructed terrace. Damage to this early roadbed (primarily erosion) necessitated the construction of a lower access route. Portions of the old road are accessible for foot traffic only, and provide the most direct route to the intake.

The construction date for the lower road is not known at this time. Portions of this road are still followed, however, sections have been abandoned and rerouted due to erosion and changes in the stream channel. Terrace walls were damaged during the original construction of the lower road. Additional damage occurred with each successive rerouting of this road.

Given the history of erosional damage and stream damage to the service routes in the valley, it is likely that the existing route will also undergo such damage and will again require rerouting. It is imperative that the BWS take measures to arrest erosion and maintain the existing route, rather than continue the process of selecting alternate routes. Any alternate routes in the area of the Kanaha Complex will cause adverse effects to this site.

2.3 Approach

For management purposes, the Kanaha Complex site area is divided into three management units or sections. These are referred to as the upper, middle, and lower sections (Figure ____). The upper section begins at the uppermost boundary of Parcel 1, a short distance downstream from the intake. This section includes Parcels 1 and 14, and contains approximately 20 terrace walls that were impacted by the recent access road construction. The road corridor stays on the south side of the stream in this section of the complex.

There is presently no bottomland on the north side of the stream in this section, and it is not likely that additional terraces are present on the north side of the stream.

The middle section of the complex includes Parcels 2, 4, and 5. Approximately 10 impacted terraces are within this section, which includes areas on both sides of the stream. The middle section of the complex contains perhaps the most significant area of the site in terms of terrace density, construction, and preservation. Much of the site area in this section is located between the access road and the stream, in Parcel 4. There is little to no bottomland beyond Parcels 2, 4 or 5 in this section of the valley. Most, if not all of the features in this area are within these three parcels.

The lower section includes Parcels 6, 9 and 10. Approximately 12 terrace walls in this section were impacted by the road work. These are located primarily in Parcels 9 and 10. In Parcel 6, the present road follows the old roadbed and remains above the terraces, which are numerous in this parcel. Many of the terraces in Parcel 10 were impacted during grading of the first lower road that was routed into the valley, rather than during the 1992 re-routing. In this parcel, the present road follows a pre-existing route. Additional features are present in Parcels 8 and 11 within the lower section of the complex. These two parcels are not transected by the road corridor, however they are considered to be within the site complex and will be included in the field inventory. The number and condition of the features in these two parcels is presently unknown.

The three management sections will serve as working units during the fieldwork portions of the preservation program, and as references in providing general locational information on specific parcels. The TMK parcel and Land Commission Award boundaries will be located as accurately as possible in the field, and will

be used for a second level of feature identification for the complex. The use of parcels and management units is necessary due to the extensive area of the complex. Mapping will be most effective at the parcel or LCA level. Overall site management recommendations will be most effective at the management unit level. To the degree that these units reflect elevation changes in the stream bed and variation in the gradient and width of the valley floor, they will be applicable to comparisons of features (size, wall height, habitation areas, etc.) within the complex. The ownership of the various parcels is given in Appendix B.

3. SHORT-TERM PROTECTION MEASURES

3.1 Feature Markers

The feature marking program was devised as a means of providing visible signals to equipment operators as to the location of walls and sensitive areas along the road corridor. The marking procedure began by flagging all locations of breached terrace walls and walls that were dangerously close to the road corridor. The flagging (45 locations) was first conducted by SHPD staff and volunteer assistants March 9, 1994.

The BWS construction crew began efforts to set metal fence posts at all flagged locations in August of 1994. At that time, most of the original flags had been disturbed by foraging animals and/or machinery. The flags were reset by SHPD staff and the supervisor of the BWS construction crew (Garrett Moto'oka) on August 17. The BWS crew began setting the posts the same day. During the second trip of feature marking, six additional locations were flagged, for a total of 51 stakes. The green stakes were spray painted bright orange for visibility. A minimum space of 12 feet was provided between matched stakes. According to Mr. Moto'oka, this was sufficient room for any equipment that the BWS would be driving up to the intake.

A follow-up field check of the markers was conducted on March 31, 1995. At that time, 47 stakes were counted. The orange paint has faded on the stakes and several of them are concealed by vegetation. At the time of the March 1995 field check, the intake repair work had not yet commenced.

Recommendations - It is recommended that the site markers be maintained throughout the duration of the intake repair project. The present condition of the markers severely limits their usefulness; they must be visible or they will in all likelihood be run over by the bulldozer. Vegetation should be kept cleared away from the stakes, and a new coat of orange paint should be applied to all stakes. If any fallen stakes are present, these should be reset. A stake maintenance trip needs to be scheduled by the BWS prior to commencement of the intake repair work.

3.2 Monitoring

The purpose of project monitoring is to insure that all BWS activities within the

area of the Kanaha Complex are confined to previously impacted areas. Project monitoring will occur on two levels. SHPD staff will conduct spot-checks of the access road when scheduling permits, and will be monitoring the area in connection with the data recovery work that is planned. In addition, monitoring will occur at such times that the SHPD is notified of activities by the BWS in the valley.

Recommendations - It is recommended that if new damages occur to the intake which require emergency access by machines prior to the initiation of the permanent intake repair work, the BWS notify the SHPD office on Maui, so that the Division is alert to activity in the valley. It is also recommended that the BWS notify SHPD when maintenance of the site markers occurs, and when the construction work on the intake commences.

3.3 Alternate Access Routes

As more information is collected during field trips to the Kanaha Complex, it is likely that mitigation measures will involve moving the existing road away from the affected terraces. One road alteration solution has been achieved to date. The 1992 re-routed road crossed the stream in the east end of Parcel 2 (middle section), and impacted a number of terraces. This section of the road has been abandoned and the stream crossing has been moved east, away from cultural features. The proposed alternate route was inspected by SHPD staff prior to realignment. The features in Parcel 2 are now no longer in danger and can be reconstructed.

Additional alternative routes for the road will be sought as part of the ongoing preservation work. The BWS personnel can be most helpful in the endeavor, particularly those individuals who are familiar with the valley.

Recommendations - The BWS and SHPD staff are encouraged to seek alternate routes for the access road. Once these routes are identified by BWS staff, they should notify SHPD and await findings of a field inspection prior to beginning construction of the alternate route. No machinery work or traffic is otherwise permitted beyond the limits of the existing access road corridor.

3.4 Erosion Control

Erosion control will be a necessary element of the preservation program, particularly in areas where the floodplain is extremely narrow and/or the stream channel was moved during the 1992 flood. Erosion control might involve moving stream-born stones and gravel in order to clear a channel for water flow, creating berms or embankments along a side of the stream channel in order to protect endangered features, or filling areas of lost soil in order to provide a corridor for access that does not further impact the historic features. Specific areas for erosion control will be identified and added to the preservation plan as they are observed during monitoring or data recovery trips by SHPD staff or volunteers, or during work trips by BWS staff.

One area which may require immediate remedial action is located in the upper section of the complex, within Parcel 1. During the April 31 field check by SHPD

staff, it was observed that there is an extremely narrow strip of soil (12' 6") between the stream channel and the undisturbed stone terrace walls. The wall in immediate danger of collapse has been undercut, in an attempt to widen the passible corridor. In a short time, this area will no longer be passible without considerable damage to the wall.

Recommendations - Immediate measures should be taken to halt the erosion along the stream channel in Parcel 1, which is being accelerated due to machinery traffic. The channel recently created by the 1992 flood could be partially filled with waterworn stones and gravel from the stream bed. If this material is banked against the existing soil cut, an access route could continue to be used which avoids the historic terraces. If this action is not taken soon, adverse effects to the site will occur. The terraces in this area are significant contributing features to the overall complex. Furthermore, if the BWS impacts these features without the landowner's permission, the agency will be in violation of HRS Title 13, Chapter 6E.

3.5 Personnel Training

The BWS planning staff has made the following commitment toward educating the construction crews that work in the valley:

Construction crews will again be advised of the sensitive nature of the area, and informed that they must stay on the road and between site markers. Construction crew supervisor will be expected to explain these provisions to all new crew members.
(BWS memo to SHPD 8/15/94)

It is anticipated that the construction crew members will gain additional information in the field from the archaeologists that are monitoring the activities and conducting data recovery work.

Recommendations - In order to insure that the construction crew supervisor is aware of the conditions of this plan and of his responsibilities, it is recommended that all updated copies of the plan are provided to him.

3.6 Data Recovery

Data recovery work conducted to date has focused on documenting the location of damaged terraces and the nature of the disturbance to the walls. This work is completed, pending the completion of the intake repair work. Additional data collection for short term preservation has focused on identifying areas of extreme erosion or continuing degradation as a result of traffic in the valley. The data recovery work of recording the complex for registration is discussed in the section on long-term preservation.

Recommendations - It is recommended that data collection on the condition of the endangered features continue throughout the duration of the intake repair project. The data collection should include photographs, written notes, feature identification by parcel and management unit, and detailed accounts of changes or new impacts to the features.



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

AQUACULTURE DEVELOPMENT
PROGRAM
AQUATIC RESOURCES
CONSERVATION AND
ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

April 3, 1996

Ms. Ellen Kraftsow
County of Maui Board of Water Supply
Planning Division
P.O. Box 1109
Wailuku, Hawaii 96793

LOG NO: 16862 ✓

DOC NO: 9603KD30

Dear Ms. Kraftsow:

**SUBJECT: Historic Preservation Review of the Kanaha Intake Repair Project
Panaewa, Lahaina District, Island of Maui
TMK: 4-6-17: 1,2,4-10, 14 and 4-6-18: 20**

This letter follows our recent conversation regarding the proposed construction work that is scheduled to occur soon at the Kanaha intake. In compliance with Condition 4 of the CDUA permit for this project, a draft preservation and management plan was sent to your office for your review on May 11, 1995. We received no correspondence from your office regarding the recommendations that were made in the plan, and are assuming at this time that you concur with these recommendations. Five of the recommendations are relevant to the upcoming repair project. They are as follows (summarized from the preservation plan):

- 1) The fenceposts defining the access route should be maintained throughout the duration of the project. Vegetation should be kept cleared away from the fenceposts, and a new coat of orange paint should be applied to all posts. If any fallen posts are present, these should be reset. A maintenance trip needs to be scheduled prior to the commencement of the intake repair work.
- 2) The Board of Water Supply shall notify the State Historic Preservation Division (SHPD) office on Maui when the construction work commences, and in the event that any emergency work is required prior to the commencement of the actual project.
- 3) No machinery work or traffic is permitted beyond the marked limits of the existing access road corridor. This includes uses for machinery or material storage, or for staging areas.
- 4) Immediate measures should be taken to halt the erosion along the stream channel and access route in Parcel 1, which is being accelerated due to machinery traffic. If this action is not taken soon, the project will cause adverse effects to the taro terrace walls of Site 50-03-3512 that are adjacent to the access route.
- 5) The contractor and crews shall be advised of the sensitive nature of the area, and are to be informed that they must stay on the road between the site markers (fenceposts).

Ms. Ellen Kraftsow

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A field inspection of the project area was conducted by SHPD staff archaeologist Theresa K. Donham on March 15, 1996, in order to assess the current conditions of the site markers and access road. During the inspection, the posts were cleared of vegetation and painted with a fresh coat of orange paint, in partial fulfillment of Recommendation 1. It was noted that a site marker along the access route through Parcel 1 has been knocked out of the ground. The machinery are travelling too close to the historic *lo'i* walls in this area, due to the extremely narrow width of the access route.

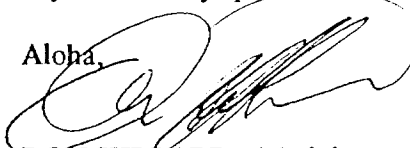
We request that Recommendation 4 as stated above, and as detailed in the plan under Section 3.4 (Erosion Control) be implemented immediately, or as part of the repair work, before the machinery causes additional damage to Site 3512.

During the March 15 inspection, a backhoe bucket attachment was observed beyond the staked limits of the access route, within inches of an intact terrace wall. As stated in Recommendations 3 and 5, there is to be no machinery beyond the limits as defined by the metal fenceposts. There are numerous unmarked areas along the road where machinery may be stored. Please inform the appropriate persons that no equipment storage or other uses are allowed in areas where the fenceposts are marking sites. If this condition cannot be followed, we will request that a continuous fence be installed between the posts.

In order to insure that Recommendation 5 is followed, we request that you notify the SHPD Maui office prior to initiation of the work, so that a meeting can be held with the contractors, any County workers that will be involved in the project, and yourself.

If you have any questions at this time, please contact Ms. Theresa K. Donham at 243-5169.

Aloha,



DON HIBBARD, Administrator
State Historic Preservation Division

KD:jen

c: Hans Michael (1404 Oiona Street, Lahaina, Hawaii 96761)