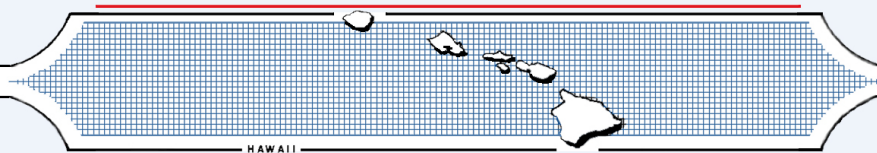


**A CULTURAL IMPACT ASSESSMENT
OF ALLERTON GARDEN,
LĀWA`I AHUPUA`A,
EAST KONA DISTRICT,
KAUA`I ISLAND, HAWAII
[TMK 2-6-002:1, 4-6]**

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INTRODUCTION

At the request of Chipper Wichman, Director and CEO of the National Tropical Botanical Garden (NTBG), Scientific Consultant Services, Inc. (SCS) conducted a Cultural Impact Assessment, on Allerton Garden, Lāwa`i Ahupua`a (TMK: 2-6-02:1, 4-6), East Kona District, Kaua`i Island (Figures 1 and 2). Exhibits supplied by the NTGB illustrate the parcels under consideration are owned by them and are zoned for Conservation.

In 1961 the State Land Use Law (Act 187), which has been codified as Hawaii Revised Statute (HRS), Chapter 205, established the State Land Use Commission (LUC), and granted the LUC the power to zone all lands in the State into three districts: Agriculture, Conservation, and Urban (the Rural District was added in 1963). Act 187 vested the DLNR with jurisdiction over the Conservation District, who was able to formulate subzones within the Conservation District, and to regulate land uses and activities therein.

The purpose of the Conservation District is to conserve, protect and preserve the State's important natural resources through appropriate management in order to promote the long-term sustainability of these natural resources, and to promote public health, safety and welfare (Hawai'i Revised Statutes, Sect. 183 C-3).

All land in the Conservation District has been assigned to one of five subzones that reflect a hierarchy of uses from the most restrictive to the most permissive. These subzones are the Protective Subzone (the most restrictive), Limited, Resource, General and Special. The project area is located in a Limited Subzone (Figure 3).

The Constitution of the State of Hawai`i clearly states the duty of the State and its agencies is to preserve, protect, and prevent interference with the traditional and customary rights of native Hawaiians. Article XII, Section 7 requires the State to “protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by *ahupua`a* tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778” (2000). In spite of the establishment of the foreign concept of private ownership and western-style government, Kamehameha III (Kauikeaouli) preserved the peoples traditional right to subsistence. As a result in 1850, the Hawaiian Government confirmed the traditional access rights to native Hawaiian *ahupua`a* tenants to gather specific natural resources for customary uses from undeveloped private property and waterways under the Hawaiian Revised Statutes (HRS) 7-1. In 1992, the State of Hawai`i Supreme Court,

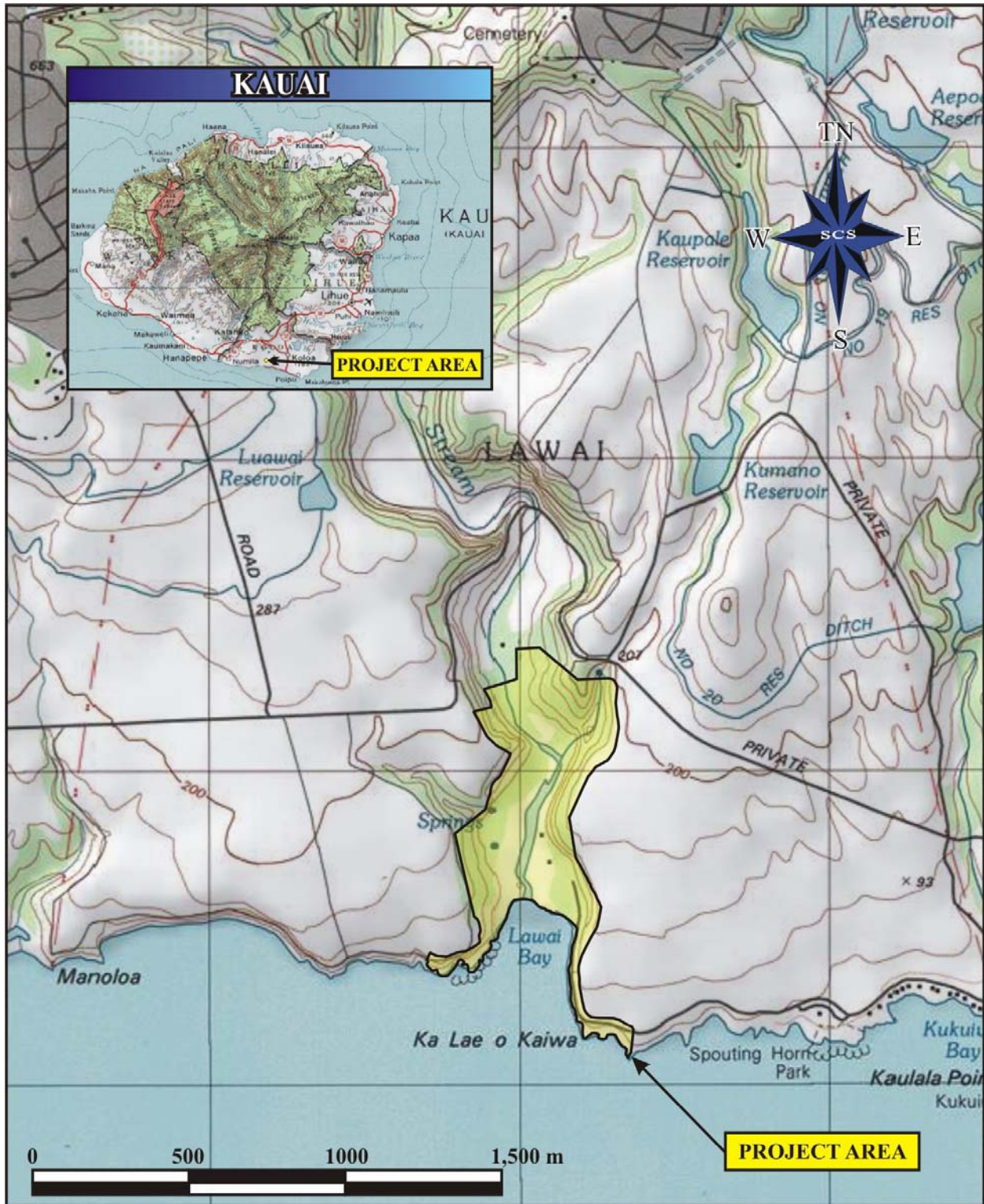


Figure 1: USGS Quadrangle Map Showing Project Area Location.

Allerton Garden, Lawai Kai, NTBG



Figure 2: Aerial View of Allerton Garden, Lāwa`i Valley.

State Land Use District Map L a w a i K a i

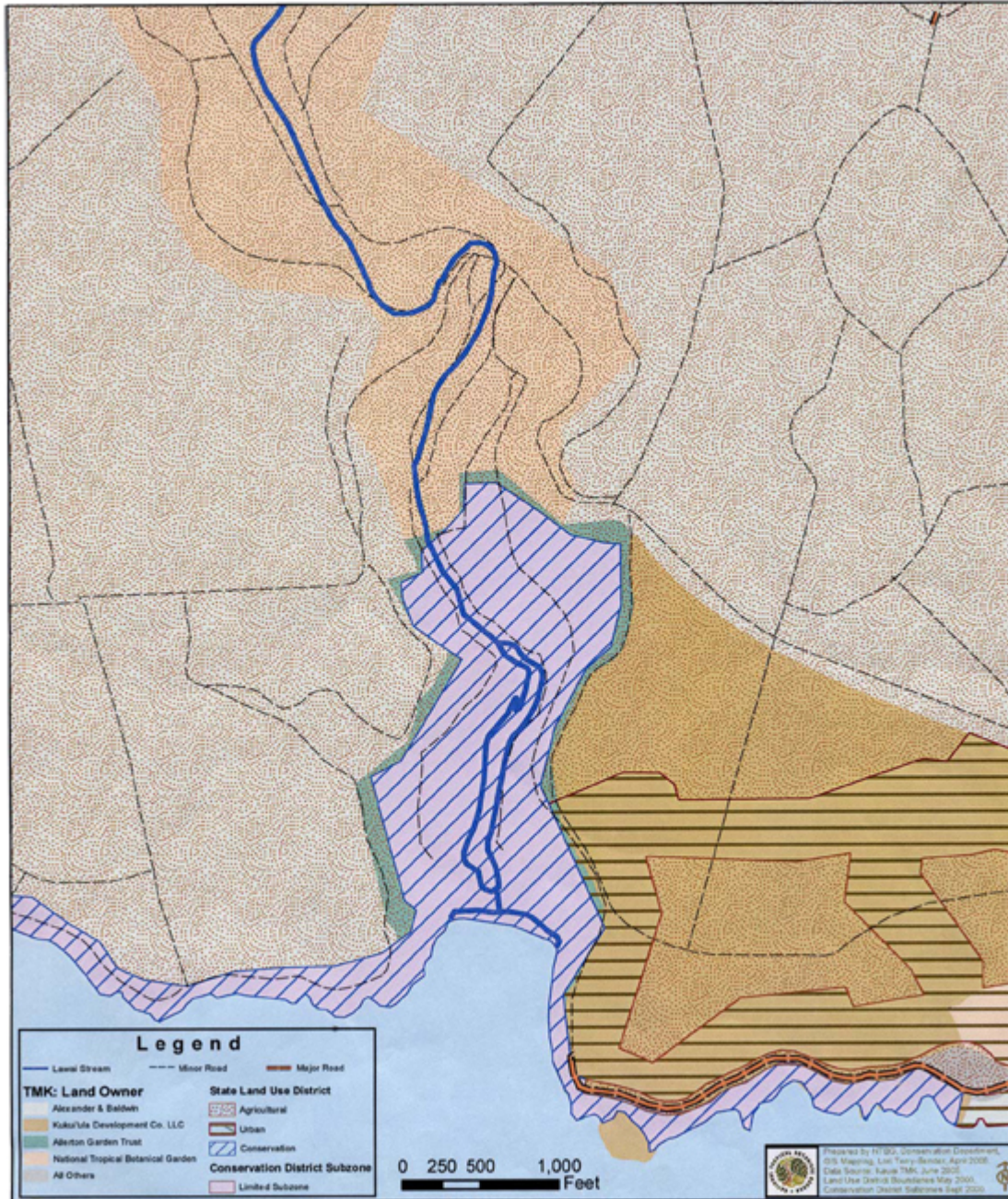


Figure 3: Conservation Land in Lawai Valley.

reaffirmed HRS 7-1 and expanded it to include, “native Hawaiian rights...may extend beyond the *ahupua`a* in which a native Hawaiian resides where such rights have been customarily and traditionally exercised in this manner” (Pele Defense Fund v. Paty, 73 Haw.578, 1992).

In Section 1 of Act 50, enacted by the Legislature of the State of Hawai`i (2000) with House Bill 2895, it is stated that:

...there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawaii’s culture, and traditional and customary rights...[H.B. NO. 2895].

Articles IX and XII of the state constitution, other state laws, and the courts of the State impose on government agencies a duty to promote and protect cultural beliefs and practices, and resources of native Hawaiians as well as other ethnic groups. Act 50 also requires state agencies and other developers to assess the effects of proposed land use or shore line developments on the “cultural practices of the community and State” as part of the HRS Chapter 343 environmental review process (2001).

It also re-defined the definition of “significant effect” to include “the sum of effects on the quality of the environment including actions impact a natural resource, limit the range of beneficial uses of the environment, that are contrary to the State’s environmental policies. . . or adversely affect the economic welfare, social welfare or cultural practices of the community and State” (H.B. 2895, Act 50, 2000). Cultural resources can include a broad range of often overlapping categories, including places, behaviors, values, beliefs, objects, records, stories, etc. (H.B. 2895, Act 40, 2000).

Thus, Act 50 requires that an assessment of cultural practices and the possible impacts of a proposed action be included in the Environmental Assessments and the Environmental Impact Statements, and to be taken into consideration during the planning process. The concept of geographical expansion is recognized by using, as an example, “the broad geographical area, e.g. district or *ahupua`a*” (OEQC 1997). It was decided that the process should identify ‘anthropological’ cultural practices, rather than ‘social’ cultural practices. For example, *limu* (edible seaweed) gathering would be considered an anthropological cultural practice, while a modern-day marathon would be considered a social cultural practice.

Therefore, the purpose of a Cultural Impact Assessment is to identify the possibility of cultural activities and resources within a project area, or its vicinity, and then assessing the

potential for impacts on these cultural resources. The CIA is not intended to be a document of in depth archival-historical land research or a record of oral family histories unless these records contain information about specific cultural resources that might be impacted by a proposed project.

According to the Guidelines for Assessing Cultural Impacts established by the Hawaii State Office of Environmental Quality Control (OEQC 1997):

The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religions and spiritual customs. The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both manmade and natural, which support such cultural beliefs.

The meaning of “traditional” was explained in *National Register Bulletin*:

Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations’, usually orally or through practice. The traditional cultural significance of a historic property, then is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices. . . . [Parker and King 1990:1]

METHODOLOGY

This Cultural Impact Assessment was prepared in accordance with the suggested methodology and content protocol in the Guidelines for Assessing Cultural Impacts (OEQC 1997). In outlining the “Cultural Impact Assessment Methodology”, the OEQC states that:

“...information may be obtained through scoping, community meetings, ethnographic interviews and oral histories...” (1997).

This report contains archival and documentary research, as well as communication with organizations having knowledge of the project area, its cultural resources, and its practices and beliefs. This Cultural Impact Assessment was prepared in accordance with the suggested methodology and content protocol provided in the Guidelines for Assessing Cultural Impacts

(OEQC 1997), when possible. The assessment concerning cultural impacts may address, but not be limited to, the following matters:

- (1) a discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained;
- (2) a description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken;
- (3) ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the information obtained;
- (4) biographical information concerning the individuals and organizations consulted, their particular expertise, and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or being interviewed, their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area;
- (5) a discussion concerning historical and cultural source materials consulted, the institutions and repositories searched, and the level of effort undertaken, as well as the particular perspective of the authors, if appropriate, any opposing views, and any other relevant constraints, limitations or biases;
- (6) a discussion concerning the cultural resources, practices and beliefs identified, and for the resources and practices, their location within the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site;
- (7) a discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area, affected directly or indirectly by the proposed project;
- (8) an explanation of confidential information that has been withheld from public disclosure in the assessment;
- (9) a discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs;
- (10) an analysis of the potential effect of any proposed physical alteration on cultural resources, practices, or beliefs; the potential of the proposed action to isolate cultural resources, practices, or beliefs from their setting; and the potential of the proposed

action to introduce elements which may alter the setting in which cultural practices take place, and;

- (11) the inclusion of bibliography of references, and attached records of interviews which were allowed to be disclosed.

Based on the inclusion of the above information, assessments of the potential effects on cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

ARCHIVAL RESEARCH

Archival research focused on a historical documentary study involving both published and unpublished sources. These included legendary accounts of native and early foreign writers; early historical journals and narratives; historic maps and land records such as Land Commission Awards, Royal Patent Grants, and Boundary Commission records; historic accounts; and previous archaeological project reports.

INTERVIEW METHODOLOGY

Interviews are conducted in accordance with Federal and State laws, and guidelines, when knowledgeable individuals are able to identify cultural practices in, or in close proximity to the project area. If they have knowledge of traditional stories, practices and beliefs associated with a project area or if they know of historical properties within the project area, they are sought out for additional consultation and interviews. Individuals who have particular knowledge of traditions passed down from preceding generations and a personal familiarity with the project area are invited to share their relevant information concerning particular cultural resources. Often people are recommended for their expertise, and indeed, organizations, such as Hawaiian Civic Clubs, the Island Branch of Office of Hawaiian Affairs (OHA), historical societies, Island Trail clubs, and Planning Commissions are depended upon for their recommendations of suitable informants. These groups are invited to contribute their input, and suggest further avenues of inquiry, as well as specific individuals to interview. It should be stressed that this process does not include formal ethnographic interviews or oral histories as described in the OEQC's *Guidelines for Assessing Cultural Impacts* (1997). The assessments are intended to identify potential impacts to ongoing cultural practices or resources within a project area or in its close vicinity.

If knowledgeable individuals are identified, personal interviews are sometimes taped and then transcribed. These draft transcripts are returned to each of the participants for their review

and comments. After corrections are made, each individual signs a release form, making the information available for this study. When telephone interviews occur, a summary of the information is usually sent for correction and approval, or dictated by the informant and then incorporated into the document. If no cultural resource information is forthcoming and no knowledgeable informants are suggested for further inquiry, interviews are not conducted.

Letters were sent to organizations whose jurisdiction included knowledge of the area. Consultation was sought from Kai Markell, Office of Hawaiian Affairs, O`ahu Branch; Kanani Kagawa, Office of Hawaiian Affairs, Kaua`i Island; Sandra Quinsaas and John Kruse of the Kaua`i Burial Council, Chris Kawe and Rupert Rowe with Historical Preservation in Kōloa/Po`ipū, Lionel Kaohi with the Kaumuali`i Hawaiian Civic Club, and Warren Perry and Gilbert Kea with the Royal Order of Kamehameha. Chipper Wichman, CEO of the NTBG, recommended two other individuals to contact for interviews.

If cultural resources are identified based on the information received from these organizations and additional informants, an assessment of the potential effects on the identified cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

PROJECT AREA AND VICINITY

Lāwa`i Ahupua`a consists of a valley located on the south coast of Kaua`i between Kalāheo and Kōloa. The valley does not extend to Mt. Wai`ale`ale but ends on a peak below Kāhili. The shoreline consists of a large, crescent-shaped bay, defined by two rocky points. The NTBG, which is the project area, fills the lower portion of Lāwa`i Valley (Figure 4).

CULTURAL HISTORICAL CONTEXT

PAST POLITICAL BOUNDARIES

During the reign of Mā`ilikūhahi (between A. D. 1520 and 1540), the native population had expanded throughout the Hawaiian Islands to a point where large political districts were formed (Cordy 2001, Kamakau1991). Land was considered the property of the king or *ali`i`ai moku* (the *ali`i* who eats the island/district), which he held in trust for the gods. The title of *ali`i`ai moku* ensured rights and responsibilities pertaining to the land, but did not confer absolute ownership. The king kept the parcels he wanted, his higher chiefs received large parcels from him and, in turn, distributed smaller parcels to lesser chiefs. The *maka`āinana* (commoners) worked the individual plots of land.

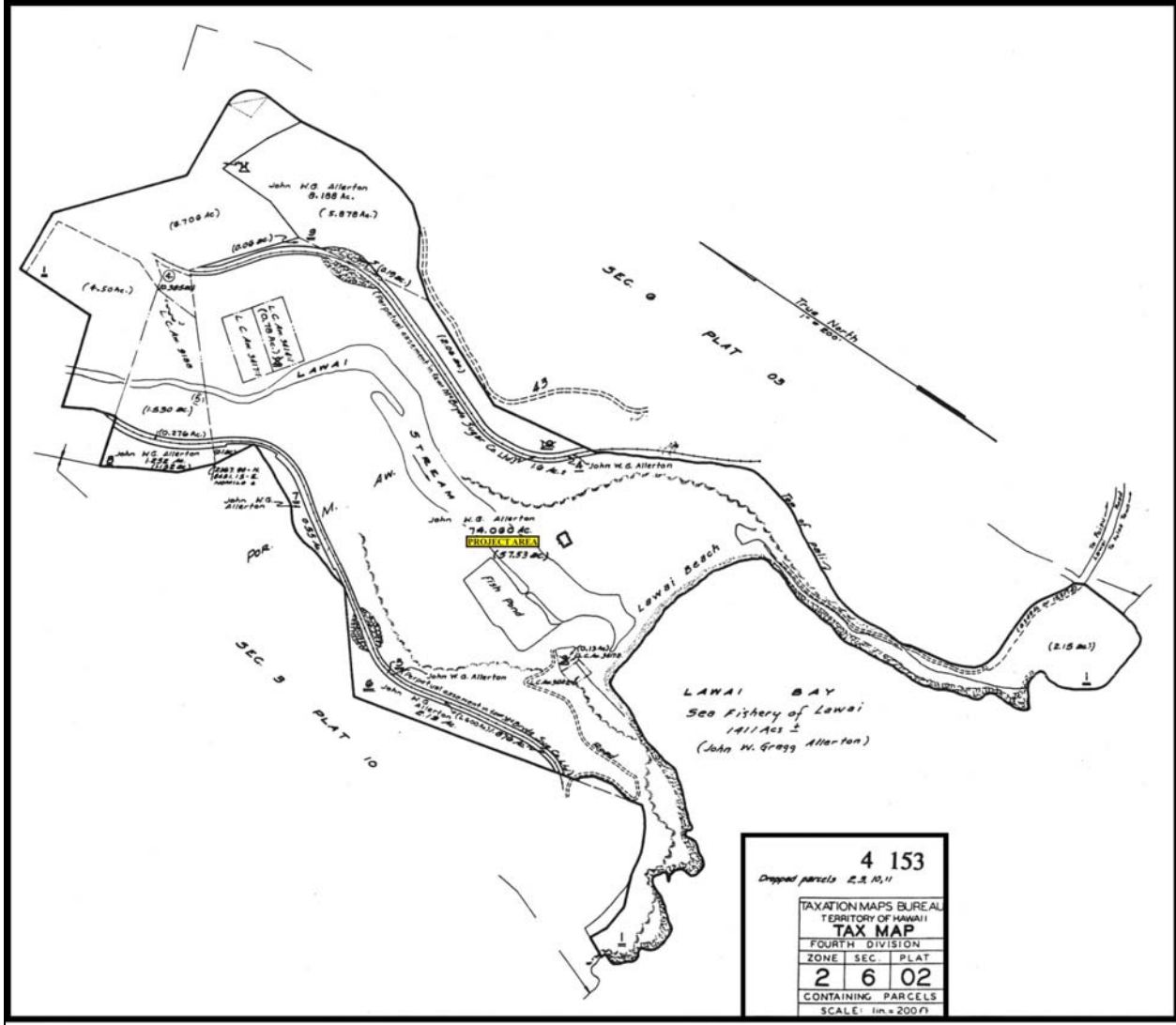


Figure 4: Tax Map Key [TMK] Showing Project Area.

In general, several terms, such as *moku*, *ahupua`a*, *`ili* or *`ili`āina* were used to delineate various land sections. A district (*moku*) contained smaller land divisions (*ahupua`a*) which customarily continued inland from the ocean and upland into the mountains. Extended household groups living within the *ahupua`a* were therefore, able to harvest from both the land and the sea. Ideally, this situation allowed each *ahupua`a* to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111). The *`ili`āina* or *`ili* were smaller land divisions next to importance to the *ahupua`a* and were administered by the chief who controlled the *ahupua`a* in which it was located (*ibid*:33; Lucas 1995:40). The *mo`o`āina* were narrow strips of land within an *`ili*. The land holding of a tenant or *hoa`āina* residing in a *ahupua`a* was called a *kuleana* (Lucas 1995:61). The project area is located in the *ahupua`a* of Lāwa`i. No translation was given for this name by Puku`i *et al.* (Puku *et al.* 1974:130).

TRADITIONAL SETTLEMENT PATTERNS

The Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various *ahupua`a*. During pre-Contact times, there were primarily two types of agriculture, wetland and dry land, both of which were dependent upon geography and physiography. River valleys provided ideal conditions for wetland *kalo* (*Colocasia esculenta*) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as *kō* (sugar cane, *Saccharum officinarum*) and *mai`a* (banana, *Musa* sp.), were also grown and, where appropriate, such crops as *`uala* (sweet potato, *Ipomoea batatas*) were produced. This was the typical agricultural pattern seen during traditional times on all the Hawaiian Islands (Kirch and Sahlins 1992, Vol. 1:5, 119; Kirch 1985). Between A.D. 600-1100, sometimes referred to as the Developmental Period, the major focus of permanent settlement continued to be the fertile and well-watered windward valleys (Kirch 1985).

The perennial Lāwa`i stream supplied much needed water for the production of taro along with the many springs seeping from the valley walls. Fresh water creatures were gathered from the stream and medicinal plants grew throughout the valley. *`Auwai* (canals) were built to carry water to the lower fields. Habitation, *heiau*, a two acre fishpond and dry land agricultural terraces were constructed in the valley. Pondfields or *lo`i* were still being cultivated with taro into the 1930s. Handy and Handy note, “There were *lo`i* on flats above the sea and along Lawai Stream for a mile or more inland, and beyond this were small *lo`i* in the narrow valley (1972:428).

Trees in the uplands made strong canoes that were launched from the shore of Lāwa`i Bay making ocean resources easily accessible and community *hukilau* provided fish for everyone. The forest also provided birds, medicinal plants, and other materials necessary for a traditional Hawaiian lifestyle

WAHI PANA

Many stories were passed down from generation to generation about Lāwa`i Valley and its history. One such *mo`olelo* related that Poki was the *kupua* (demigod) of Lāwa`i, who would manifest as a large black dog or a small white dog (Wichman 1998). Appearing often in the mountains was a cloud formation called Kū`īlioloa that was believed to be a *kino lau* (one of many body forms) of the major god Kū of rain and war. It was thought that Poki was a manifestation of the cloud, as Kū would often appear in the form of a dog (*ibid.*).

It was said that the shark god, Kūhaimoana, was known to live in the deep waters of the island of Ka`ula. He was so large that it was said his mouth was as big as a grass house and he could swallow two or three common sharks in one gulp. Carved on the cliffs to the east of Lāwa`i Bay and below a *ko`a* (fishing shrine) was a bowl resembling the mouth of a fish. When the *kahuna* (priest) prepared `awa and placed it in the bowl as an offering, Kūhaimoana would ride the breakers from Kū`ula and drink from the bowl. It was only after the `awa was consumed that the fishermen would venture into the deep-sea fishing grounds (*ibid.*).

Not only a shark, but a *mo`o* (water spirit usually in the form of a lizard) also frequented the shoreline of Lāwa`i. Always hungry and in bad sorts, Kaikapu would lie in wait behind a rocky point for anyone who was seen fishing along the shore. Quickly she would swim in with a mighty roar and devour the unsuspecting fisherman. Puhī (eel) was the name for the Spouting Horn, known throughout the land. As the waves build against a jutting lava reef, they surge through a hole with a roaring sound, pushing spume as high as thirty feet into the air. There is an old story of a boy, Liko, who went to the shore to catch *hīnālea* (wrasse) for his *tūtū*. He brought his traps and fishing paraphernalia and proceeded into the water. Kaikapu had been watching and she immediately rushed toward him. Liko quickly escaped through a small lava tube that extended from the sea to land. Kaikapu was big, but followed anyway and became stuck in the tube. Now, when the ocean flows through this lava tube, the angry roars of Kaikapu can be heard (*ibid.*).

Another story attributes the sound emanating from Puhī as one of grief. The explanation told of three siblings who traveled from Tahiti to Hawai`i. Having finally arrived on Ni`ihau, the

two girls were tired and decided to go ashore here to rest. Their brother carried on to Kaua`i where he stayed for many years. However, he became lonely for his sisters and returned to Ni`ihau only to find that they had been baked into stone by the sun. In his anguish and blinded by tears, he returned to Lāwa`i and stumbled into the lava tube where he became stuck. It is said that the moaning sound from the tube are those of the brother grieving for his sisters (*ibid.*).

Several traditional names have survived for special places of interest in Lāwa`i. The mouth of the river was named Kaiho`olale, which means “encouraging the sea” (*ibid.*). Here, a small island with twenty-foot cliffs was located and behind it was a fishpond that was destroyed in the great flood of 1846. Two *heiau* were recorded for the valley by Bennett (1931): Kalohiokapua located on the west side of the valley on a hill and Mamalu Heiau, situated against a cliff in the center of the mouth of the valley.

Lāwa`i was mentioned as one of the “favored places”, along with Wailua and Kaunalewa in Mānā, where coconut groves were located (Handy and Handy 1972: 172). An article in the Star Bulletin in 1925 reported: An old Hawaiian, well over 90, has lived his whole life in the vicinity, says that these four trees (coconuts) were very old when he was a child.” Possibly Niukapukapu Heiau located on the eastern bluff above the valley was named in association with the ancient coconut grove. An old path wound its way from a narrow side valley, sometimes referred to as Maiden Fern Valley, in Lāwa`i up onto the eastern bluff to the *heiau*.

Handy and Handy associated Nomilu fishpond, a natural saltwater pond in an extinct volcanic crater, with Lāwa`i (1972: 428). Legend has it that this was the first place that Pele, the volcano goddess, dug into the earth while seeking a place to live. Bennett reported, “. . . It is famous in Kauai history and every great chief who visited the island made a journey to it” (1931: 116).

POST EUROPEAN CONTACT

The coastal region of the East Kona District was well populated according to the accounts of early explorers and missionaries. These referred to the presence of widespread traditional subsistence systems, such as *lo`i*, or wet taro fields, and fishponds. It was from these shores in 1778 that the Hawaiians first paddled out in canoes to approach Cook’s ships. This first encounter with the West was followed by drastic political, economic, religious, and overall social change in Hawai`i.

Early descriptions by Cook (1778) and Vancouver (1792) noted the presence of pond field terraces along the coast. Cook reported:

What we saw of their agriculture furnished sufficient proofs that they are not novices in that art. The vale ground has already been mentioned as one continuous plantation of taro, and a few other things, which all have the appearance of being well attended to. (In Handy and Handy 1972: 406).

Vancouver's accounts described:

. . . the low country which stretches from the foot of the mountains toward the sea, occupied principally with the taro plant . . . interspersed with some sugar-canes of luxuriant growth and some sweet potatoes. (Vancouver 1984: 461).

The sugarcane described by Vancouver was one of several *Saccharrum* species brought to Hawai'i by its first Polynesian settlers. In fact, botanists believe that nearly fifty species of sugarcane thrived in pre-Contact Hawai'i (Abbott 1992:40). Sugarcane, or *kō*, had various traditional uses—medicinal, nutritional, in construction, and even as fish bait.

Based on accounts of travelers through the district, agricultural activities remained constant into the 1830s and included taro, yam, sugar cane, dry land sweet potato farming and pond fields (Jarves 1838: 68). Christian missionaries came to nearby Kōloa, to settle in 1834 (Donohugh 2001). Reverend Peter Gulick established a Protestant Mission, and opened the area around Kōloa for cattle grazing and sugarcane cultivation.

The beginning of the lucrative sugar industry on the rest of Kaua'i Island was quick to follow. In 1835, Peter Allan Brinsmade, William Ladd, and William Hooper—all New Englanders with missionary connections who had come to Honolulu in 1833 to establish a mercantile trading house—decided that the greatest commercial opportunities in the islands lay in agriculture. Specifically, sugar cane agriculture (Hussey 1962). Under the name of Ladd & Company, they leased 980 acres of land in Kōloa from King Kamehameha III at an annual rent of \$300. The lease included a mill site and a waterfall for power at Maulili pool, about a mile from the Kōloa Landing. Thus began Hawai'i's first true commercial sugar plantation which lasted 113 years of almost continuous use (Dorrance and Morgan 2000).

Kōloa Town became a hub of commercial activity exporting sweet potato, sugar and molasses to California, as well as supplying provisions (squashes, salt, salt beef, pigs and cattle)

for whalers (Judd 1935). The impact of this new market economy, plus the decrease in the local population due to introduced diseases, had its affects the throughout Hawai`i.

THE GREAT MĀHELE

In the 1840s, traditional land tenure shifted drastically with the introduction of private land ownership based on Western law. While it is a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kamehameha III was forced to establish laws changing the traditional Hawaiian economy to that of a market economy (Kame`eleihiwa 1992:169–70, 176; Kelly 1983:45, 1998:4; Daws 1962:111; Kuykendall 1938 Vol. I:145). The Great Māhele of 1848 divided Hawaiian lands between the king, the chiefs, the government, and began the process of private ownership of lands. The subsequently awarded parcels were called Land Commission Awards (LCAs). Once lands were thus made available and private ownership was instituted, the *maka`āinana* (commoners)—if they had been made aware of the procedures—were able to claim the plots on which they had been cultivating and living. These claims did not include any previously cultivated but presently fallow land, *`okipū* (on O`ahu), stream fisheries, or many other resources necessary for traditional survival (Kelly 1983; Kame`eleihiwa 1992:295; Kirch and Sahlins 1992). If occupation could be established through the testimony of two witnesses, the petitioners were awarded the claimed LCA and were issued a Royal Patent after which they could take possession of the property (Chinen 1961:16). Thirteen LCAs were claimed in Lāwa`i valley. Land use included *lo`i*, *kula* (dry) land, house lots, and *kuakua* (cultivated embankment between *lo`i*).

The *ahupua`a* of Lāwa`i was given by John Young, an advisor to Kamehameha I, to his son, James Young Kanehoa. During the Māhele, this was confirmed by Kamehameha III and became Royal Patent 4512. Hikoni, the wife of J.Y. Kanehoa, inherited the land, but before her death she gave Lāwa`i to her husband's niece, Emma Kalanikaumakaamao Nae`a Rooke (Queen Emma) for: “love and affection for the sum of one dollar” (Kanahele 1999: 245).

HISTORIC LAND USE

According to the Honolulu Star Bulletin (9/1/25), Queen Emma visited Hikoni at Lāwa`i, when Hikona was living in a large house on the eastern bluff and had a grass house on the beach. It is reported that Hikoni and her second husband, Kapule, are buried in a cave in the Valley (Salisbury 1935; Forbes 1970). The *kuleana* owners were not displaced when Queen Emma, along with an entourage of about 100 people, arrived for a four month stay (December 1871 to April 1872) (Forbes 1970). She stayed in what had been Hikoni's house and frequently visited the valley to work in its gardens. The Queen made various improvements to her property, including the introduction of some exotic plants and the construction of a two mile ditch to

transport water from the upper reaches of Lāwa`i to the house on the eastern bluff, now called “Maunakilohana” (Kanahele 1999). A carpenter was hired to do repairs on the house after the Queen’s departure in April, a survey was completed of her Lāwa`i property boundaries, her house on the bluff, and the nearby Niukapukapu Heiau (*ibid.*).

By 1876, Queen Emma had leased the entire *ahupua`a*, except for Maunakilohana and several *lo`i* to Duncan McBryde. Upon Emma’s death in 1885, his wife, Elizabeth McBryde, was able to purchase the land that, combined with other parcels, eventually became the McBryde Estate, Ltd.

Sugar had already become the economic future of Hawai`i. With the passing of the treaty of reciprocity in 1876 allowing sugar into the United States duty free, the profits became enormous and large areas of land were planted in cane throughout the islands. Not to be left behind, the McBryde Sugar Company was formed in 1899 from `Ele`ele Plantation, Koloa Agricultural Comapany, and the McBryde Estate lands (McBryde Sugar Co., Ltd.1949). Not all of Lāwa`i was utilized for cane. Alexander Moxley McBryde was granted Lāwa`i beach and all the fishing rights of the bay (Forbes 1970). A.M. McBryde built his home there, and worked hard in the valley, maintaining the fishpond, constructing a greenhouse for ferns and anthuriums, and tending a dove cote where he raised turtle doves. He planted bougainvillea, tamarind trees, palms, gingers and plumerias and had a pipeline installed to bring fresh water from a spring north of his house. Roads connected his residence with Spouting Horn, the jungle garden, the lawn fronting the beach, and the mouth of Lāwa`i Stream (Allerton 1978).

Between 1899 and 1903, McBryde Sugar decided to plant cane on the eastern bluff where the house of Queen Emma still stood. Alexander cut her cottage in half and lowered it over the eastern cliff, down into the valley. Subsequently, A.M. McBryde allowed the people of Lāwa`i to use the land where the cottage had been situated for a cemetery. The cemetery was described as being up on the eastern bluff where the plantation had widened the road, with a large mango tree and a rock wall enclosure (Hideo & Shige, interview, T12). Eventually, this land, too was needed for cane and so, one by one, the burials were moved to what became known as Lāwa`i Cemetery, a rock wall enclosure on the west side of the beach (Teshima 1997). The cottage, having been moved down into the valley, was placed on the eastern bank of the stream and with an added porch, became Alexander’s residence until 1925 when he built a new home in the valley where he lived until his death in 1935.

One source reported receiving the land (LCA 3417:2) used for Lāwa`i Cemetery during the Mahele in 1848 and names at least five family members buried there (Snowden n.d.:3). This cemetery was used for the Christian members of the family and caves in the cliffs for those many who had traditional internment.

In 1899, McBryde Sugar Company constructed seven miles of railroad track. Originating in Hanapēpē, the railroad climbed along the coast to about 60 meters above mean sea level and then descended into Lāwa`i, looped around the back of the valley where it crossed two smaller valleys on trestles 30 m high and a smaller trestle above the stream, and continued up onto the eastern bluff, eventually arriving in Kōloa (McBryde Annual Report 1903).

At the same time, four wells were bored down in the valley and a (steam) pumping station (Pump 6) was set up on the eastern bank of the stream. Powered with coal, the pump was used to send water back into the valley, the western *ahupua`a* into Wahiawa, and with the help of ditches and flumes, up to the cane growing on the eastern bluff (McBryde Annual Report 1903; McBryde Sugar Co. 1949). On the western side of Lāwa`i, a ditch, originally dug by the Chinese, was part of the irrigation system that included wooden flumes which brought water to the sugar cane. At that time, the river came up to the cliff and water was pumped directly from the river to the cane beyond the rapids to avoid salt water (Allerton 1978). When McBryde Sugar began digging the tunnel and railway line, rock from the excavation fell into the ditch. The sugar company employed a rock wall builder who built steps to the tunnel and railroad tracks (Teshima 1997).

With the local population decreasing through diseases and the influx of foreign laborers, lands previously growing taro were abandoned and quickly converted to rice cultivation by those who had completed their plantation contracts. Chinese workers were leasing land and exporting thousands of pounds of rice to California in the late 1870s. By 1892, there were 70 acres of rice under cultivation in Lāwa`i Valley (*ibid.*). According to the records, the Chinese established a thriving community in upper Lāwa`i, including stores, Chinese Societies, and a cemetery with at least 50 graves (Yuk and Char 1979). Some of the Chinese families settled down in the valley. The family of Ahni lived in a house to the west of the stream near the fish pond and another family lived on the west side of the valley, tending an orchard containing orange trees (Allerton 1978; Matsunaga and Takahashi 1972). Another rice farmer was named Ching Dung Sen and a man named Tai Moong Dang was proprietor of a grocery store out of the two-story house in Lāwa`i (Teshima 1997; Yuk and Char 1979). An existing fish pond was divided into different ponds with mullet and alio, watercress, lotus, and ongchoi and eventually reached a depth of four

feet and an area of $\frac{1}{4}$ of an acre (Hideo & Shige, interview, T11 00:19). The Chinese tended the irrigation ditches and water flumes on the west side of the valley and maintained the fish pond during their residency in Lāwa`i (Teshima 1997; Hideo & Shige, interview, T11).

The Japanese were quick to follow the Chinese, leasing available valley land. It was reported that in the late 1800s, a Japanese farm in Lāwa`i Kai was growing lotus, taro, and watercress (Yamanaka and Fuji 2001). Oral interviews have also indicated that the Japanese moved into some of the valley's houses and by the early 1900s, most of the residents in the valley were Japanese who were farming rice, using the Chinese irrigation ditches to bring water from Stillwater Dam, as well as operating three rice mills (Joesting 1984; Teshima 1997; Matsunaga & Takahashi 1972). The Goda family operated one of the rice mills and lived in a house located near two small springs off the upper path by the base of the cliff. By the 1920s, the rice industry began to slow down and by 1938, there was only the Teshima family left living in the valley (Teshima 1997). The Chinese ditches brought water for the Oshiro and Nishi families who lived just below the cliff on the western side of the valley and who cultivated watercress and lotus in the valley. For a short time in the 1920s watercress, lotus, taro, and ongchoi were grown on the west bank of the fish pond, replacing the rice (Hideo & Shige, interview, T11 00:2, T13 00:06). It was noted that residents of the district were growing a variety of vegetables, including Japanese radishes, Irish potatoes, sweet potatoes, corn, tomatoes, sugar cane and pineapple on their leased lands (Coulter 1935). The fishing rights for the *ahupua`a* of Lāwa`i was appropriated to the various tenants from A.M. McBryde to a Kimura, then to Nishi who lived just below the cliff, and finally to Nishi's son, Shige (Hideo & Shige, interview, T11 00:02).

In 1937, 125 acres of Lāwa`i Ahupua`a was purchased by Robert Allerton and John Gregg from the McBryde Estate. The executor of the Estate, Philip Rice agreed to clear the title to the *kuleana* in the valley, which he accomplished, eventually including the property owned by Rachel Moke (Allerton 1978).

The Allerton's built a house in the valley while temporarily living in the old McBryde bungalow. The site was located southeast of the McBryde's house and eventually it included a library and an additional bedroom and bath. Nearby stood Queen Emma's cottage and smaller ancillary structures were scattered around the main Allerton house (Allerton 1978). At the time of hurricane `Iwa, the cottage was blown off its foundations and it was damaged further during hurricane Iniki.

The Teshimas were the last family living in the valley and were still there when the Allertons arrived. They relocated to the pump manager's house adjacent to Pump 6 where they stayed until at least 1969. Hideo Teshima was born in the old Goda house in 1927 where they lived until 1933. Their second home was located on a hill against the cliff where an Allerton water feature would eventually reside (Diana Fountain). It was a single storied structure on a raised foundation three to four feet high surrounded by old Hawaiian terraces. Hideo began working for the Allertons as a gardener at the age of 12, growing vegetables (broccoli, tomatoes, papayas, etc) in the meadow and remained working in the valley until he retired (Teshima 1997). In addition to some pigs and cattle, Hideo's father planted watercress and taro on the repaired traditional Hawaiian terraces, grew some rice, and raised carp for medicinal purposes in a pond that is still growing water lilies. He also built the road on top of the old horse trail that came down to the valley on the west side. In the early 1940s, the entire meadow was planted with sweet potato as part of the war effort (Allerton 1978).

After the main house was completed, the Allertons built a guest house using materials from the old McBryde house, including doorknobs, hardware, sawed pine floors, doors, windows and two cedar closets (*ibid.*). This simple rectangular building was modified with a wing containing an office and a storage section. Landscaping with terraces was completed on either side of the guest house. According to Allerton, there was a rock in the river just beyond the guest house with a Hawaiian name, but he does not record what it is. He did identify a large boulder that was uncovered when the stream was low calling it the "Hina" stone (*ibid.*).

The Allerton's altered the valley to a certain extent by garden landscaping, building fountains, importing statuary, and building paths from one place to another. Efforts were made to preserve the valley's existing physical elements. A bulldozer was used to remove debris from under the old railway line and the unoccupied houses were burned to the ground. Bamboo was planted where Mr. Teshima had grown rice and a 25 m long cement pool was constructed with mermaid fountains at each end (Allerton 1978). Steps were constructed above the waterfall to the top of the valley, as well as a path to the old railway tracks and a stairway extending above the trees (Teshima 1997). The first water feature (Diana Fountain) involved modifying some traditional terraces and excavating a long rectangular pond. A water feature called the Three Pools was created from two Hawaiian terraces and incorporated a waterfall spilling from the cliff about midway along its 30 m length (*ibid.*). Various other gardens (Thanksgiving Garden, Palm Garden) and structures (Phoenix House) were located here and there, around the property (Allerton 1978).

The opening to Maiden Fern Valley, renamed Harry's Valley in Allerton's day, was blocked by a railroad trestle from 1932. However, this valley was a source of water for Lāwa`i and the water passed through a tunnel under the trestle and down hill (Teshima 1997). The Allerton's built a path down into the valley with stairways and a bench. The Allertons widened an old trail on the west side that followed the rocky coast line and was used as access by fishermen (Allerton 1978).

Structures reported to have been on the beach, such as a boat house, net sheds, canoe sheds, rock wall enclosures, the Pua`oi family cemetery and a stone pier A. M. McBryde built on the east bank of the river were heavily impacted by the 1946 tsunami and subsequent two hurricanes bombarding this coastal region. These natural disasters also destroyed the viability of the fish pond situated so close to the beach.

CIA INTERVIEWS

Three interviews were held with Betty Snowden in August and November of 2007. The following is a summary of the interviews, including some information from a document Betty filed with the Kaua`i Historical Society and is presented in Appendix A. The Appendix contains further information and elaborations concerning Lāwa`i Valley and the Puaoi family. Appendix B is a facsimile of her release form for the presented information.

According to Betty, her family has lived in the valley since about A. D. 900. She said, Lāwa`i was the first landing place for canoes from Tahiti and was associated with the great voyager and chief, Mo`ikeha. The valley was considered sacred throughout Polynesia and the highest ranking *kahuna* made the journey to Lāwa`i and the Temple of `Io, revered throughout Polynesia. In its early history, it was considered a hub of learning and activity having many *heiau* dedicated to various disciplines, including navigation, canoe building, medicine, hula, and genealogical information. This was where *kahuna* were trained, then taking the knowledge back to their home. Betty confirmed that many of the chants and `oli were passed down and still known by family members. A special place for the concealing of the baby's *piko* on the eastern side of the stream was used by the family since their first arrival at Lāwa`i.

Many other ritual sites are still present in the valley. Betty mentioned a *heiau* used for circumcision, a portion of which still stands high on the western cliff above the stream, a platform representing a *heiau mele*, as well as *ahu*, *ko`a*, and *hālau* spread throughout the valley. A *heiau*, located on the eastern bluff above the valley was a *luakini*, or human sacrificial ritual

site. Although it is known today as “Niukapukapu”, Betty believes this is incorrect and a more appropriate name would be “Po`oniukapukapu”, the *po`o* referring to the skulls on the *luakini*.

Betty was told that huge trees were hauled down from the *mauka* region and turned into canoes for ocean voyages. She remembered playing on one canoe that had been beached when she was a child. The name of it was “Kaulupeelani.”

The original meaning of many Hawaiian place names has been lost through the years, causing a literal translation with none of the intended *kauna* understood. Wichman has translated many of the Lāwa`i place names (Wichman n.d.) and, in addition, Betty stated that many of the valley’s place names were descriptive, often reflecting navigational aids, tools, directions, destinations, or events. Some were cosmological, for instance the sun setting behind a particular rock or mountain peak might be used at a certain time of year for a particular direction.

Betty indicated that her family was related to Queen Emma and that she had been told that her mother was born in what became known as the “Queen’s House” on Sept. 12, 1910 after it had been relocated down in the valley, near Spouting horn. According to Betty, the house was moved to the valley after the death of the Queen when McBryde took over the land. The section on the hill where the house was located had not originally been included in McBryde’s purchase, but it became a part of his lands.

Before the missionaries arrived, the family members were secreted in caves along the valley walls upon their death, Betty said. There were three graveyards used after some family members became Christians. One burial place on the eastern side of the stream, had been an area marked with four large boulders, one at each corner forming a square. This parcel was terraced with rock and enclosed with a wall. Inadvertently, one of the boulders was moved by those working for the Allertons’. According to Betty, at least three family members were buried here. This place is mentioned in *A Queen’s Story*, by Queen Emma and its exact location is given in reference to the house. This was also the area for hiding the *piko* of the newborn.

Betty stated that there was another cemetery located across the stream on the west side and marked by a rock wall. The wall was greatly damaged and all but destroyed by Hurricane Iniki and the rocks set to mark the graves were moved by the storm. The wall had been there for 150 years and it was known that it had originally been built by the Kanahale family of Ni`ihau. When it came time to rebuild the wall, Betty said they were able to contact the descendents of

the Kanahale family who were still living on Kaua`i and working for NTBG. Betty had a photograph of the wall from the 1930s allowing an accurate duplication of the wall. Under the leadership of Richard Kanahale, the reconstructed the wall, connecting it to the six or eight feet left still standing, connecting the work of their ancestors to the present generation.

According to Betty, there were 30 Land grants awarded in Lāwa`i Ahupua`a during the Māhele (LCA records differ from this number). Many of them were claimed by her family members and were used for agriculture and aquaculture before WW II. In the fishponds associated with these land grants, they farmed `ama`ama, `o`opu, hīhīwai, and `ōpae. Taro was cultivated throughout the valley. The tsunami and hurricanes brought in silt that covered many of these areas and changed the configuration of the stream, rendering it small and shallow.

Betty's family lived in the valley when it reflected traditional Hawaiian values and ways of living. As a child, Betty traveled to Hā`ena for *hula hālau* graduation ceremonies. As in times ancient times, a man climbed to the top of the cliffs and threw bundled firebrands out into space, where they were carried up and out by the winds. Pieces of oily stems turned to blue stars and slowly wafted down to earth, a sight Betty said she will never forget. Things changed in the valley with the arrival of WWII. The Marines came and brought new rules, including blackouts and keeping residents of the valley away from the coast. Betty left the valley around this time and by the end of the war, the old way of life was gone.

The Puaoi `ohana, Betty's family, are cognizant of the sensitivity of certain traditions and history associated with the valley, and continue time-honored practices there. They are conducted without publicity to protect the sanctity of the sources of learning that are present in the valley and that include many cultural sites. The family still practices many of the traditional rites and rituals passed down through different `ohana members which are kept private. The family members protect the carriers of this information, the keepers of knowledge, as each might have a specialty. The traditions, chants, and `oli are carefully protected and passed on to the next generation.

DISCUSSION

The "level of effort undertaken" to identify potential effect by a project to cultural resources, places or beliefs (OEQC 1997) has not been officially defined and is left up to the investigator. A good faith effort can mean contacting agencies by letter, interviewing people who may be affected by the project or who know its history, research identifying sensitive areas

and previous land use, holding meetings in which the public is invited to testify, notifying the community through the media, and other appropriate strategies based on the type of project being proposed and its impact potential. Sending inquiring letters to organizations concerning development of a piece of property that has already been totally impacted by previous activity and is located in an already developed industrial area may be a “good faith effort”. However, when many factors need to be considered, such as in coastal or mountain development, a good faith effort might mean an entirely different level of research activity.

In the case of the present parcel, letters of inquiry were sent to organizations whose expertise would include knowledge of individuals familiar with traditional practices and beliefs associated with a project area or knowing of historical properties within the project area. Consultation was sought from Kai Markell, Office of Hawaiian Affairs, O`ahu Branch; Kanani Kagawa, Office of Hawaiian Affairs, Kaua`i Island; Sandra Quinsaot and John Kruse of the Kaua`i Burial Council, Chris Kawe and Rupert Rowe with Historical Preservation in Kōloa/Po`ipū, Lionel Kaohi with the Kaumuali`i Hawaiian Civic Club, and Warren Perry and Gilbert Kea with the Royal Order of Kamehameha. On the recommendation of Chipper Wichman, CEO of NTBG, two additional individuals were contacted because of their familiarity with Lāwa`i Valley. Three interviews were held with Betty Snowden of the Puaoi family who grew up in Lāwa`i Ahupua`a. These interviews were conducted between August and November of 2007 and contact with another recommended informant was attempted with no response. A letter was received from the Office of Hawaiian Affairs acknowledging our letter of inquiry. None of the other individuals or organizations responded with additional information or contacts.

Historical and cultural source materials were extensively used and can be found listed in the References Cited portion of the report. Such scholars as I`i, Kamakau, Beckwith, Chinen, Kame`eleihiwa, Fornander, Kuykendall, Kelly, Handy and Handy, Puku`i and Elbert, Thrum, Sterling, and Cordy have contributed, and continue to contribute to our knowledge and understanding of Hawai`i, past and present. The works of these and other authors were consulted and incorporated in the report where appropriate. Mahele records and land use documents were perused and information was supplied by the Waihona `Aina 2007 Data base. Records of previously taped interviews containing information from informants who lived in the *ahupua`a* were reviewed and cited in the report.

Analysis of the potential effect of the project on cultural resources, practices or beliefs, the project’s potential to isolate cultural resources, practices or beliefs from their setting, and the potential of the project to introduce elements which may alter the setting in which cultural

practices take place is a requirement of the OEQC (No. 10, 1997). The project area is located on Conservation land under the Limited Subzone criteria and is presently operating as a botanical garden, with the “mission to enrich life through discovery, scientific research, conservation, and education by perpetuating the survival of plants, ecosystems, and cultural knowledge of tropical regions” (NTGB website).

Statements made by Betty Snowden, a member of the Puaoi family who’s lineage goes back to the 10th century in Lāwa`i, illustrates its continuing importance to the family. As previously stated, the Guidelines for Assessing Cultural Impacts established by the Hawaii State Office of Environmental Quality Control include:

. . . cultural practices and beliefs [relating to] subsistence, commercial, residential, agricultural, access-related, recreational, and religions and spiritual customs. The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both manmade and natural, which support such cultural beliefs.

Hawai`i’s Constitution has incorporated a number of unique laws to protect and preserve traditional and customary rights of the Native Hawaiian population. It states, “the State and its agencies are obligated to protect the reasonable exercise of customarily and traditionally exercised rights of Hawaiians to the extent feasible” (*Ka Pa`akai O Ka `Āina v. Land Use Comm`n*, 94 HAW. 31, 35 (2001)). Article XII, Section 7 requires the State to “protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua`a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778” (Haw. Const. art. XII, § 7 (2000)).

Betty is such a “tenant” and during interviews she noted some sites and associated long standing practices that have continued since traditional times, including Piko graveyard, Puaoi Cemetery, family burial caves, stream resources, religious sites known to the family, and traditional rites still observed by family members. Other significant places were not specifically identified as to location because they are considered private by the family. Continued access to Lāwa`i Valley must be assured to her and other members of the Puaoi `ohana.

CULTURAL ASSESSMEMNT

It is reasonable to conclude that, pursuant to Act 50, the exercise of native Hawaiian rights, or any ethnic group, related to gathering, access or other customary activities will be affected. Many cultural sites have been identified within the project area and will be preserved by the NTBG. State law assures that those of native Hawaiian descent will continue to have access to the valley. It is suggested that before any garden expansion or construction takes place, consultation be conducted with Betty Snowden, or other family members, to avoid impacting unidentified cultural places.

REFERENCES CITED

- Abbott, I. A.
1992 *La`au Hawai`i: Traditional Hawaiian Uses of Plants*. Bishop Museum: Honolulu.
- Allerton, John Gregg
1978 Interview by Dr. William L. Theobald, 23 June and 16 Aug. 1978. National Tropical Botanical Garden, Lāwa`i.
- Bennett, Wendell Clark
1931 *Archaeology of Kauai*. Bishop Museum Special Publication 80. Bishop Museum Press: Honolulu.
- Chinen, Jon
1961 Original Land Titles in Hawaii. Copyright 1961 Jon Jitsuzo Chinen. Library of Congress Catalogue Card No. 61-17314.
- Cordy, Ross
2001 *The Rise and Fall of the O`ahu Kingdom*. Mutual Publishing. Honolulu, Hawai`i.
- Coulter, John Wesley
1953 "Small Farming on Kauai: Hawaiian Islands." *Economic Geography* 12(4):402-409.
- Daws, Gavin
1968 *Shoal of Time*. University of Hawaii Press. Honolulu.
- Donohugh, D.
2001 *The Story of Kōloa: A Kaua`i Plantation Town*. Mutual Publishing: Honolulu.
- Dorrance, W.H., and F.S. Morgan
2000 *Sugar Islands: The 165-Year Story of Sugar in Hawai`i*. Mutual Publishing, Inc., Honolulu, HI.
- Handy, E.S. Craighill and E.G. Handy
1972 Native Planters in Old Hawai`i. *Bishop Museum Bulletin* 233. Honolulu.
- Hussey, J. A.
1962 *National Survey of Historic Sites and Buildings*. Bureau of Conveyances: Washington, D.C.
- Forbes, David
1970 *Queen Emma and Lawai*. Kauai Historical Society. Kauai.

- Heidel, Melody, W. H. Folk, H. H. Hammatt
 1997 *Archaeological Inventory Survey and Subsurface Testing of House Lots on a 6-Acre Parcel at Kekaha, Island of Kaua`i*. Historical overview by G. Ida. (TMK 1-3-03: 15, 19, 23)
- Hideo & Shige
 Teshima, Hideo & Nishi, Shige interview by Richard Hanna and Lisa Sonne, videorecordings 11-13, **date, National Tropical Botanical Garden, Lāwa`i.
- Jarves, J.J.
 1838 Sketches of Kauai. *The Hawaiian Spectator*, Vol. 2, no. 1. Honolulu.
- Judd, Bernice
 1935 Koloa: A Sketch of its Development. *Hawaii Historical Society Papers*, Vol. II. Honolulu.
- Kamakau, Samuel
 1991 *Nā Mo`olelo a Ka Po`e Kahiko*. Bishop Museum Press. Honolulu.
- Kame`eleihiwa, Lilikalā
 1992 *Native Land and Foreign Desires: Pehea Lā E Pono Ai?* Bishop Museum Press. Honolulu.
- Kanahele, George S.
 1999 *Emma: Hawaii's Remarkable Queen*. The Queen Emma Foundation. University of Hawaii Press. Honolulu.
- Kelly, Marion
 1971 *Kekaha: aina malo`o; a survey of the background and history of Kaloko and Kukio, North Kona, Hawai`i*. Bernice P. Bishop Museum, Honolulu.
- 1983 *Nā Māla o Kona: Gardens of Kona*. Dept. of Anthropology Report Series 83-2. Bishop Museum. Honolulu.
- 1998 A Gunboat Diplomacy, Sandalwood Lust and National Debt. In *Ka Wai Ola oOHA*, Vol. 15, No. 4, April 1998.
- Kirch, Patrick
 1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory*. University of Hawaii Press, Honolulu.
- Kirch, Patrick V. And Marshall Sahlins
 1992 *Anahulu*. Vol. 1 and 2. University of Chicago Press. Chicago.

- Kuykendall, R.S.
1938 *The Hawaiian Kingdom, 1778-1854*. The University of Hawaii Press. Honolulu.
- Lucas, Paul F. Nahoia
1995 *A Dictionary of Hawaiian Legal Land-terms*. Native Hawaiian Legal Corporation. University of Hawai'i Committee for the Preservation and Study of Hawaiian Language, Art and Culture.. University of Hawai'i Press.
- Lyons, C.J.
1875 "Land Matters in Hawaii". *The Islander*, Vol. 1. Honolulu.
- Matsunaga, Toshioichi and Francis Takahashi
1972 "Lawai Valley in the Early 1900's". *The Bulletin of the Pacific Tropical Botanical Garden*, vol. II, no. 1.
- McBryde Sugar Co., Ltd.
1949 *The Story of McBryde*. The McBryde Sugar Co., Ltd. Hawaii.
- OEQC (Hawaii State Office of Environmental Quality Control)
1997 "Guidelines for Assessing Cultural Impacts." Adopted by the Environmental Council, November 1997.
- Parker, Patricia and Thomas King
1990 Guidelines for Evaluating and Documenting Traditional Cultural Properties. *National Register Bulletin*. No. 38. U.S, Department of the Interior, National Park Service.
- Pukui, Mary Kawena, Samuel Elbert, Esther Mookini
1974 *Place Names of Hawaii*. University of Hawai'i Press: Honolulu.
- Salisbury, Mary
1935 "Lawai Once a Favorite Resort of Queen Emma." *Honolulu Star Bulletin*, 7 January, 1935.
- Teshima, Hideo
1997 Interview by Richard Hanna, Pat Griffin and Peter Tausend, 13 Feb. and 18 Feb. 1997. National Tropical Botanical Garden, Lāwa'i.
- Wichman, Frederick
1998 *Kaua'i Ancient Place-Names and Their Stories*. University of Hawai'i Press: Honolulu.
- n.d. The Place Names of Lawa'i, An Ahupua`a of the Kona District of the Island of Kaua'i. Compiled and Annotated by Frederick B. Wichman, P.O. Box 1051, Hanalei, Hawai'i. On file: Kauai Historical Society.

Vancouver, George

1984 *A Voyage of Discovery to the North Pacific Ocean and Round the World 1791-1795*. The Hakluyt Society. London.

Yamanaka, William and Takeo Fuji

2001 "A History of the McBryde Plantation 1899-1996".
<http://members.aol.com/_ht_/kauaihistory/bk1.htm> (17 July 2007).

Yuk, Tin and Wai Jane Char

1979 *Chinese Historic Sites and Pioneer Families of Kauai*. Hawaii Chinese History Center. Honolulu.