Ka ʻOhana o Kahikinui

Community Based Economic Development & Makai Management Plan Moku of Kahikinui
South - East Maui

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DEPARTMENT OF URBAN AND REGIONAL PLANNING
University of Hawai'i at Mānoa
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DEPARTMENT OF URBAN AND REGIONAL PLANNING
University of Hawai'i at Mānoa
Honolulu, Hawai'i

Planning Practicum Fall 1999

Practicum Members

Allan Resture
Celia Shen
Dawn Hegger
Hilarie Keehne
Kawika McKeague
Korinne Kinjo
Leanora Dizol
MaryAnne LeMaitre
Sagar Prasai
Xifang Xing

Resource Person

Ellyn Tong

Faculty Participant

Professor Luciano Minerbi

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Aric Arakaki
Program Planner
Department of Hawaiian Homelands

Craig Chapman
Director
Mālaekahana Farms

Patty Conte
Staff Archaeologist
Maui Office State Historic Preservation Division
Department of Land and Natural Resources

Ross Cordy
Branch Chief Archaeologist
State Historic Preservation Division
Department of Land and Natural Resources

Carolyn I. Darr
Land Agent
Department of Hawaiian Homelands

Harry Johnston
General Manager
Sandwich Isles Communications, Inc.

Kalei Kahaulelio
Grant Specialist
Office of Hawaiian Affairs

Patrick V. Kirch
Professor of Anthropology
University of California at Berkeley

Davianna McGregor
Associate Professor of Ethnic Studies
University of Hawaii at Mānoa

Randy Quinones
Economic Development Specialist
Office of Hawaiian Affairs

Rebecca Seib
Act. Director of Grant Making
First Nations Development Institute

Wayne Thom
Community Economic Development Manager
Department of Business, Economic Development and Tourism

Caroline Yap
Community Economic Development Specialist
Department of Business, Economic Development and Tourism

To create a framework of community governance to co-ordinate, manage and facilitate various economic, cultural and subsistence related activities within the community such that community resources are protected, conserved and re-generated.

To identify and develop community based economic activities such that community begins to generate funds for self-reliant and self-sustaining cultural and natural resource management programs and at the same time generates household income for participating households.

To promote and institutionalize subsistence production and exchange within the community.

To devise immediate and long-term strategies and identify appropriate programs to protect, preserve and promote material as well as non-material cultural heritage of the Moku.

To identify appropriate strategies for managing coastal and marine resources.

To develop a participatory resource map with inventories on wild life and fisheries based on oral histories and indigenous knowledge.

III. Methodology

The Practicum Team of the Department of Urban and Regional Planning, University of Hawaii together with the 'Ohana prepared this Plan through two stages of community interaction and study. The first stage involved site visits, problem identification, collaborative agenda setting, needs and skills assessment, program identification and individual interviews with community members, Kupuna, independent experts, government agencies and concerned Community Based Organizations.

The inputs of these interactions were then organized in the form of preliminary draft plan for discussion for the second stage. In the second stage all stakeholders were invited to discuss the plan, suggest changes and voice necessary inputs to the draft plan at a community meeting organized by the 'Ohana. Stakeholders in the planning process including Department of Hawaiian Homelands, Department of Business, Economic Development and Tourism, State Division of Historic Preservation (DLNR) and Sandwich Isle Telecom company attended the meeting. The proceeds of this stage of interaction were then assembled in the current document.

IV. Vision and Guiding Principles

The 'Ohana's vision of the resettlement and restoration community at the Moku of Kahikinui is as follows:

I. Introduction

This document forms the Community Based Economic Development and Makai Area Management Plan of Ka 'Ohana O Kahikinui. Supplemented by the existing Forest Management Plan, it will facilitate Ka 'Ohana O Kahikinui to craft sustainable livelihoods for its community and culturally as well as ecologically restore ancient Hawaiian land in the Moku of Kahikinui, Maui.

This document has been prepared in collaboration with the Practicum Team of Department of Urban and Regional Planning, University of Hawaii at Mānoa and with partial financial support from Department of Business, Economics Development and Tourism (CBEDT) and Office of Hawaiian Affairs (OHA).

This document has four sections. The first section introduces the plan, its contents, processes and the vision of the community. In this section, the 'Ohana's vision to blend tradition with contemporary knowledge to restore and revive the ancient land of Kahikinui and to pass to the posterity the opportunity, responsibility and spirituality of the 'āina is developed as the premise to this Plan. The second section outlines the 'Ohana's economic development plan that essentially provides the means to support local livelihood as well as the programs for ecological and cultural restoration of the Moku. The third section provides a cultural resources management plan. Resource management is a constantly evolving process and therefore the thrust of our plan is in developing the knowledge of traditional practices and initiating a process of reviving both the material and non-material cultural heritage of the Moku. The fourth section outlines the natural resource management plan. In this section the 'Ohana's strategies for sustainable resource use and coastal zone management is outlined.

While this document forms the basic structure of the 'Ohana's plan to manage the land and its resources, the ideas and programs presented here are limited to programmatic outlines. A follow-up exercise on details of the cost and feasibility of the natural and cultural resources management programs and business plans of the community based economic development programs are needed in the near future. For the most part, this report has detailed out the immediate concerns and follow-up activities required in each section of the plan. It has identified program activities and outlined the management strategies for each section of the report.

II. Planning Objectives

The general objective of this Plan is to facilitate the 'Ohana to take active control of their resources and to mobilize themselves towards attaining their vision of creating self-governing, self-determined and self-sufficient intentional community dedicated to the care and continuity of traditional Hawaiian land, ecology and livelihood. The Plan also has these specific objectives:

V. Cultural Perspectives: Locating Kahikinui's Mission

The strength of a society begins with the breath of air that gives life to its spirit. The structure of a community is only as stable as its members. One of the prevalent concerns for the contemporary Hawaiian in Kahikinui is trying to understand what it means to be Hawaiian and how that definition will perpetuate the Hawaiian culture in this generation and the next to come. The dilemma for the future development of a Hawaiian community in Kahikinui can be stated as such: before there can be an establishment of community and political linkages, there needs to be a reestablishment of sovereignty within the Native Hawaiian individual. Hawaiians call this internal sovereignty, ha'aha'a, and a sense of self-esteem and self-actualization as an active and contributing member to the community as a whole. Alexander Maslow discusses this social process as multi-tiered ladder that begins with addressing 1) primary survival and security needs of the individual; 2) a development of a sense of belonging to the community; and 3) the self-actualization of a community shaping the physical and social landscape as depicted by pre-established goals and visionary statements (Chadwick, 1993).

In Hawaiian thought, there is a word, ho'upu'upu that describes the influence of external thought upon an individual. The Hawaiian community, as a whole, has been brow-beaten with over 150 years of negative thought, often being stereotyped as lazy, incompetent, and socially inept in sustaining community and family responsibilities. In addition, the rapid social, political, and economic changes of these islands over the years have challenged Native Hawaiians to "preserve, perpetuate, and continue" those things that have been passed down by our kupuna (Takamine, 1995). Even with the continued resurgence of the Hawaiian Renaissance in language, hula, religion, and other cultural aspects, negative ho'upu'upu abounds. Over time, this negativity has an adverse affect upon the self-esteem; often the results are "self disparagement, feelings of inadequacy, alienation, hopelessness, and depression" (McCubbin, 1983, p. 204).

One social model that can be used to address this concern is the GDA theory, developed by Professor Richard Chadwick. Professor Chadwick's model suggests that in the process of decision-making, an individual or group needs to identify three states of existence: the goal state, the drift state, and the actual state. In between these three states lie three gaps of stress that correlate with one another. The idea, according to the GDA theory, is developing some scheme that will create a single point of correlation. In other words, with the optimal conditions, can the goal, actual, and drift state exist all in the same point? (see fig. 1)

- That the opportunity to create a new, *intentional community* at the Moku of Kahikinui, Maui based on the Ahupua'a Concept of land Planing and Land Management is feasible in that we have the cultural, social, technological and natural resources to live a contemporary Hawaiian, *off-grid lifestyle.*

- That the Kahikinui Mauka Forest will be respected, protected and cared for as Wao Akua, as our watershed, as our sanctuary for the restoration *of native flora, fauna and habitat* and as a source of wonder and Aloha 'Āina in perpetuity.

- That the foundation of our new, intentional community is based on the Hawaiian values of *Aloha, Laulima, Mālama 'Āina and Mālama Pono.*

- That entities such as *community development* corporation s are *vehicles* which can be created to protect and manage lands, to build our community, and to establish working partnership with government and private sector.

- That the new community will be built and managed with the *spiritual* well being, good health and the safety of its settlers to be primary importance.

- That the community along with the along with the Department of Hawaiian Home Lands value *aesthetics* and as such will promote the creation of visually pleasing patterns based on practical planning and sound building standards.

- That members of the new community intends to use resources of the Moku to *provide food* for the table, *materials* for the dwellings, and other *culturally appropriate subsistence* and *economic development* activities while at the same time assuring the *sustainability* of these resources.

- That the new community will strive for fiscal *self-reliance* with primary emphasis on generating its *own funds* for on and off site improvements financing for sources other that the Department of Hawaiian Home Lands, the State of Hawaiian and the County of Maui.

(Covenants, Ka 'Ohana Kahikinui Inc, emphasis added.)

This document draws its referral points from the vision statements above. The conceptual underpinnings of this document rely on the commitment and the vision put forth by the community. Accordingly, principals of self-governance, continuity and sustainability thematically bind the programs and activities proposed in this document.

In a deeper cultural and ecological sense, these guiding principles form a larger epistemological statement[1]. The following discussion will elaborate this point.

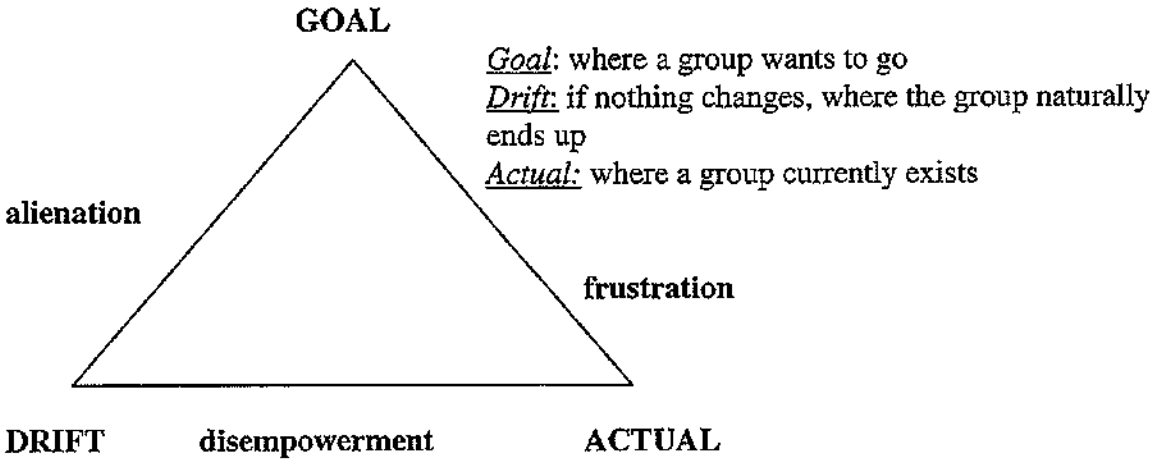
[1] See Meyer (1998) for discussion on Hawaiian epistemology.

contemporary Native Hawaiians, whose ideological base stems from a social structure that has been pillaged yet possesses an inert cultural identity that provides definition and meaning to survival (Minerbi, 1993, p. 55). In the attempt to create balance, there must be a realization that Native Hawaiian thought is paramount to all other realms because the social commentary being discussed is defined partially by specific cultural values inter-related to a defined land boundary, namely Ka Pae 'Āina o Hawai'i. In other words, what is being discussed are contemporary issues of modern Native Hawaiians in Hawai'i, who can not be exempt or disassociated from their ancestral lineage. Therefore, there has to be an understanding that what we are discussing is the effort of an indigenous race trying to purport it's cultural foundation that gives meaning and purpose to it's existence, against an imposition of the current status quo, whose ideological foundations are foreign in nature and origin.

In an article written by Luciano Minerbi, three processes of cultural stress are discussed if the "physical environment is severely modified because of the imposition of a new culture on an existing one." These processes are acculturation, assimilation, and marginalization (Minerbi 1993:52). These can be linked to Chadwick's stress gaps of frustration, alienation, and disempowerment. All three of Minerbi's processes modify the stress gaps of Chadwick in such a manner that the goal state and actual state are severely separated. The result of this constant dynamic phenomenon is a "self-perpetuating" cycle of "further culture loss, more depression, and increased social failure over time" (McCubbin 1983:204). In modern literature, often these processes are conveniently dismissed under the social guise of multiculturalism. One criticism of "multiculturalism" is the attempt to create a cultural metamorphosis with the dominant culture infecting the social norms and mores of the minority voice. The dominant culture is characterized by its ability to control and manipulate attitudes and beliefs through political, economic, and military power. On a community level, the result is the inevitable cultural suffocation of the minority class. On an individual level, this social chasm is filled with temporary solutions that are rooted in drugs, alcohol, and gang involvement. For Native Hawaiians, the legacy of multiculturalism is an inherent oppressive feeling that many individuals do not feel Hawaiian or perhaps have never had the opportunity to learn the inherent cultural values of their kupuna and are temporarily disconnected from the piko of their existence.

One of the primary factors necessary in building the self-esteem of the Native Hawaiian is to provide an understanding of their relationship to the land. The 'āina is characterized as an older sibling that is nurtured by the younger offspring, Na Kanaka Maoli (Lake: 1993: 9). Translated to times of modernity, this process involves addressing the prevalent land issues of Hawaiian losing the stewardship to the land; more specifically, their rights of access and gathering. Thus, the Native Hawaiian is temporarily out of touch with a family member. Therefore, in association with the ties to the 'āina, the ties to the 'ohana, the family unit become imperative in the development of the self-esteem (Minerbi, 1993, p. 55). The development of Kahikinui as a true Hawaiian community is dependent upon this understanding of knowing the inter-related dynamics involved with ones self, ones family, ones spiritual center which in turn brings forth a nurturing

Figure 1.



The structure of this model is in a constant state of change. In other words, the points and connections between each point can be altered, depending on the success or failure of addressing these stress gaps. Stress increases when an individual or group find themselves increasingly frustrated in attaining their goals, alienated from each other by divergent goals, and disempowered by actions taken by their rivals. Therefore, the key element to attaining one's goals is developing the ability to manage the stress gaps. Chadwick also contends that people do not make decisions on an individual basis but rather, they utilize what they are taught. More specifically, an individual begins developing habits and instincts from traditional and customary practices from a particular ethnic or social group (Chadwick, 1995). Kekuhi Kanahele expresses similar sentiment:

> It's important that our keiki are a part of our protocol, our workshops, our ceremonies. They may not understand the events that are occurring around them, but that's okay because they don't know. Sometimes you need to just make them do it. However, as they get older, that's all they will know (Kanahele, 1999).

In the case of Ke Kaiaulu o Kahikinui, the process of re-establishing the sovereignty of the individual begins with reinstilling a sense of cultural pride and personal self-esteem. Before this internal process can begin, there must be an understanding of the social dynamics that have been an influence since the introduction of a western perspective to the indigenous. There exists a necessity to re-instill a sense of lōkahi among

The concept of Aloha has more of its roots based upon obligation to specific areas of social structure and protocol. In today's society, values of kindness, graciousness, generosity, hospitality, and humility are all inclusive into this notion of "living aloha." As a Native Hawaiian, there is a social responsibility to realize that sometimes "ua lawa", enough is enough (Riechel: 1999). The use of Hawaiian cultural values such as aloha, laulima, mālama 'āina, aloha 'āina without a proper understanding of one's self and the interpersonal relationship, physically and spiritually to the elements around them are, at best, a 2-dimensional recognition that not enough has been done in recognizing there is a problem and at worst, a mockery of an indigenous value system that becomes foreign in nature to the status quo, that in itself is framed in a western context.

The intent of this section was to infuse the ideas developed between two existing frameworks of social understanding with a critical analysis of the questionable precondition of social intelligence and knowledge, namely history and the perspective taken in understanding the current social condition of Native Hawaiians. As a people, Native Hawaiians are making small strides in affirming their rights and connections to the land. Part of that affirmation process begins with knowing history, genealogy and family lineage, language, and culture. If history is the stories agreed upon by a society, who decides what voice in society shall speak of these stories? Nānā i ke kupuna, observe the older ones. They are tremendous sources of knowledge, wisdom, and history.

VI. Governance and Internalization of Community Activities

Ka 'Ohana O Kahikinui is an intentional community. Its members have come from diverse walks of life; many are just beginning to learn each other's names. The community is learning to interact with each other; share joys and sorrows with each other and more importantly share vital resources--sources with livelihood--among each other. The community is bound together by their land and their commitment to a shared heritage they want to revive and internalize. At the same time, like any other community, there are differences of opinion; stake and interests differ and every day forms of conflict are also present in the community. The community is learning to resolve disputes, solve problems and act together.

Gradually as new settlers come to occupy the lots, the 'Ohana will grow in strength and new challenges of a forming organization will surface. At the same time, activities both at community level and household levels will begin to expand. At the community level, issues related to management of common property will emerge; norms of exchange, communication, community work and ways of building institutional capacity of the 'Ohana have to be worked out. At the household level, a new way of life has to set in; skills of self-provisioning, subsistence production and gathering have to be acquired. Transition from regular to "off-grid" lifestyle will test every member to his or her commitment to the chosen way of life at Kahikinui. Along side with these challenges of transition at individual as well as at community levels, many community activities outlined by this plan will have to be gradually inducted in the community. Because of

community that can hānai, feed itself and be able to mālama the surrounding environment.

In a historical context, the justification for the expropriation of indigenous land and culture is embedded in Eurocentric philosophy, theology, and law. The validity of this assumed "doctrine of discovery" became legitimized with accepted European preconceptions that the indigenous populace was heathenistic and barbaric. Assumed prerogatives of this sort allowed for the initiation of conquests and acquisitions to occur.

Contemporary Native Hawaiians face many obstacles and barriers that are modern forms of "forced conversion", of acculturation. One of the underlying problems in defining the Hawaiian community, is the fact that Hawaiians still have not defined who they are as Hawaiians in Hawai'i. What is key in this analysis is that often times the point that is not illustrated in that definition is that Native Hawaiians are colonized, they are a conquered people. Thus, in the assimilation process of both cultures involved, one result is the attempt of the dominant culture to incorporate parts of the subversive culture that are "convenient" or appease the self-identification of the dominant culture. It may be desirable to define what are the potential stress gaps that can hinder the overall goal of establishing the vision of Kahikinui. A major starting point is to identify what the major community goal is, the actors involved that have an effect on attaining the goal, and defining issues and alternatives that each actor possesses in regards to that goal.

A major theme that clearly propagates itself is that in order for the community in Kahikinui to begin addressing various influencing social, economic, and political issues, there needs to be a process of decolonizing of the acculturated mind. In a physical form, it may be the adaptation necessary to become acclimated to working and living with certain subsistence criteria in place. Spiritually, it may be the necessity to learn and understand the significance of the various cultural sites that exist within the moku and the inherent kuleana, responsibilities that are tied to those sites.

In addressing what the inherent kuleana might be, what needs to be taken into account is all of the history associated not just to the moku of Kahikinui but to all Kanaka Maoli. Part of that history is tied to legal rights and responsibilities to the land and to the family unit; rights that can be extinguished if not properly handled. Native Hawaiians who fail to recognize the importance of understanding their history, the effect that certain events have had upon their only ancestral line is a measurement of the depth of colonization. Therefore, it is imperative that Native Hawaiians need to develop a sense of cultural identity of what defines a Hawaiian from an indigenous perspective (Canaille, 1998).

Another concern is the attempt to incorporate Hawaiian cultural values into projects and/or organizations with no understanding of what those values are. The lack of understanding suggests a lack of substance in "utilizing" the particular cultural value. One of the most abused concepts is that of Aloha. Contrary to popular belief, the cultural value of aloha was not given as freely and as often as believed today. The tradition of welcoming strangers into your home, feeding them, sharing with them did have its limits.

Ka 'Ohana O Kahikinui Inc., will play the role of a facilitator to various community based activities organized in the Moku. As the umbrella organization it will focus on linkages and partnership with external agencies, governmental and non-governmental organizations and the private sector. It will mobilize the community to undertake various community-based activities, provide institutional support and regulate their function and linkages.

In the initial stages the 'Ohana will take direct leadership of the community based activities. As the community matures, gains full strength and begins to undertake diverse activities, the 'Ohana will draw from among its members to form a committee that serves a focal point of all community based activities. One of the major tasks of this committee is to devise a mechanism to redistribute profits generated from the community based economic development activities to fund community infrastructure projects and programs identified by the Cultural Resources Management Plan and Natural Resources Management Plan. The 'Ohana, in principal, agrees that the community based economic development projects will remit only for labor put in by the participating members and part of the profit generated will go into the expansion of the activity, if appropriate. Whereas, a part of the profit will form the Community Development Fund to be invested on services and conservation related work in the Moku of Kahikinui.

All community-based activities will be responsible for sustainable resource use and long-term management of the resources they use. For instance, members participating in the Agricultural Cooperative Program will ensure that the sources of water and land are properly conserved and the yield and the practice are sustainable. In addition, whenever land degradation or destruction of watershed requires intervention, the co-op members will, with the help from Community Development Fund, mobilize themselves to take up land improvement and watershed management tasks.

The committee will facilitate the mobilization of necessary resources to the community-based activities. It will organize skill development training, mediate grants and finances; it will create market linkages and provide other institutional support to the community based activities.

The committee will also be mandated with the responsibility to ensure that *subsistence rights* are not violated by any economic activity. Land for subsistence production and resources for hunting and gathering take precedence over all other proposed economic activity.

The flow of resources envisaged within this model, in effect, has three terminal points. It augments household income by providing employment in different community based economic development activities. It generates resources for community infrastructure and services and finally, it generates resources both human and financial to undertake natural and cultural resource management programs.

these reasons, the activities conceived by this Plan need to be placed in a framework of governance; their linkages with other day to day activities have to be identified. The individual and community domains of operation as well as the rights and responsibilities embedded within these activities have to be clear and consensual. The proposed model of governance elaborates these linkages and explains how resources are to be allocated and appropriated.

Two issues remain crucial to the functioning of the 'Ohana such that its stipulated goals are met. First, how to acquire self-reliant self-governing community dynamics when, metaphorically speaking, even the first patch of agricultural land has not been dug yet. Second, how to realize the stated objective of cultural and ecological restoration of the ancient Moku of Kahikinui--which, to a significant degree, requires financial and human mobilization--without falling into the trap of perpetual dependency on outside support.

Much depends on the extent of "social capital" the 'Ohana generates. That is, the ability of the community to cooperate and coordinate through an agreed upon and voluntarily practiced norm, within which mutual assistance and collective actions are possible, will be crucial to the realization its vision. Social capital within an intentional community is a created asset. Many sources of pre-existing social ties like kinship, inter-family exchanges, subsistence network and long-standing acquaintance would be missing when an intentional community first forms. These assets can be generated by intensifying interactions within a community through "entry point" issues like shared resources and interests. The 'Ohana understands this, and has created a common ground for all members to find a participatory link in the process of organization building. However, the real challenge (to generate social capital from common claims) will follow only after these "entry point" issues mature into a process where individual fulfillment actually becomes possible through community efforts. That is, until the community members feel that the deeper benefit of being in the community can be best realized through common rather than individual pursuit of interest, the goals of self-governance will remain contested.

Secondly, it is all the more important that the rules and boundaries of community managed programs be established in a manner that every activity under taken by the community contributes to the stated objectives and the vision of the 'Ohana. While this element has been addressed in the Covenants of the 'Ohana, the model proposed here will serve to articulate the linkages between the different activities.

The activity governance model is intended to contain the flow of resources within the community and provide a self-reliant self-governing resource structure where surplus production will be re-channeled towards resource conservation and improvement of community infrastructure and services.

The model shown in Figure 2 proposes the following resource-related and institutional linkages between various community-based activities organized in Kahikinui.

Figure 3. 'Ohana's vision of community activity cycle and inter-linkages.

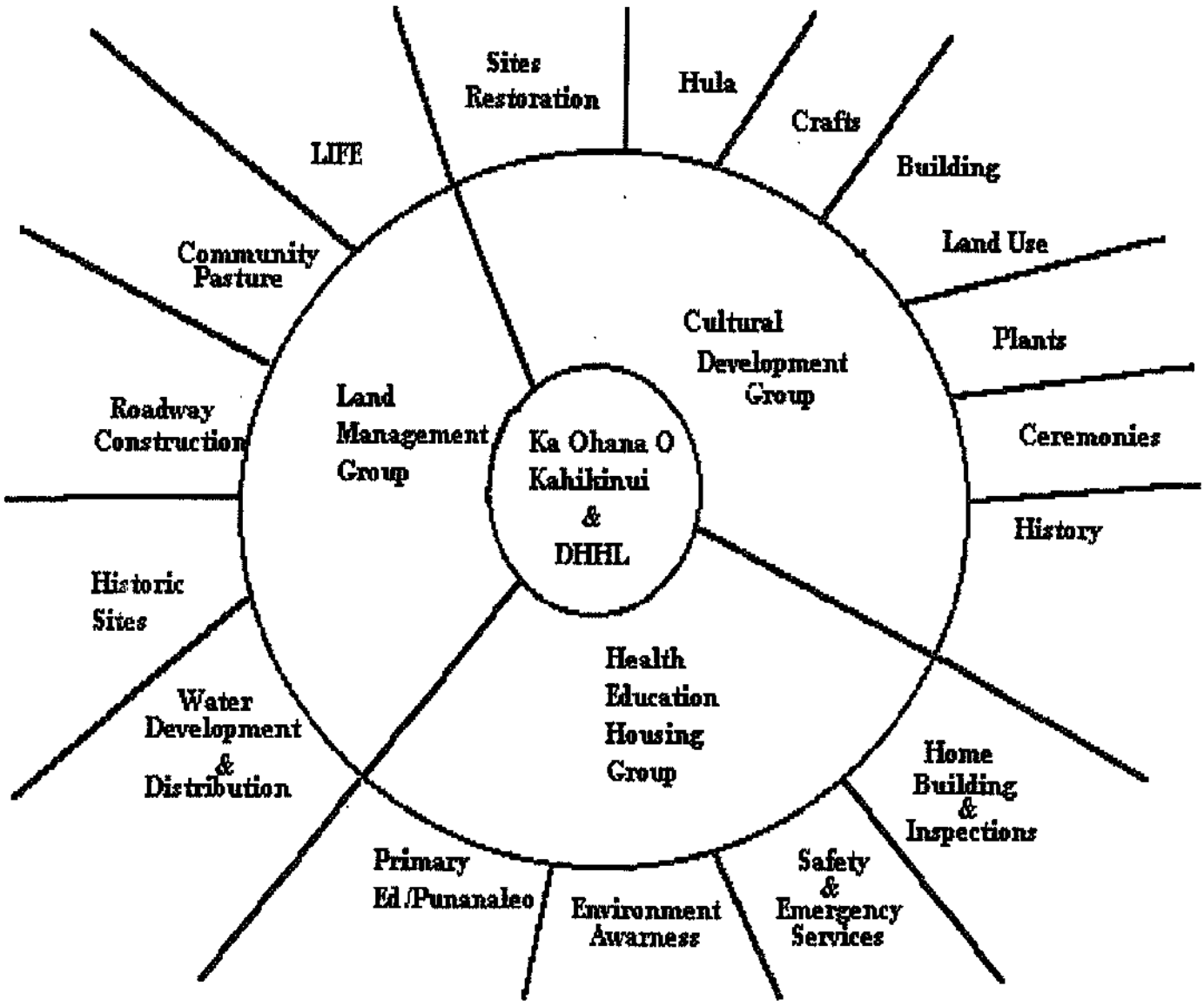
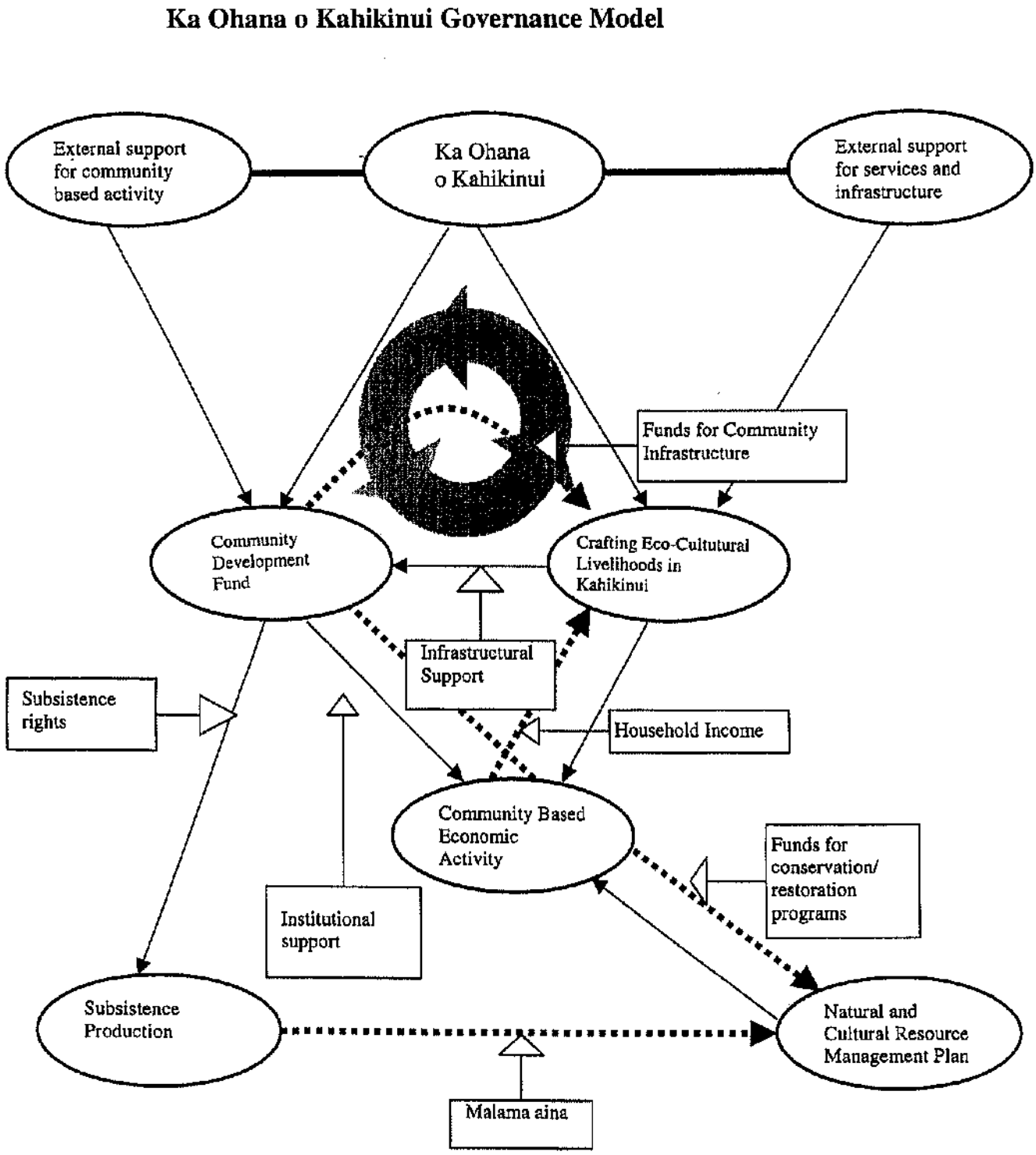


Figure 2. Governance Model showing activity linkages and resource flows



VII. Communication and Building Convivial Community

An opportunity exists at Kahikinui for present and future residents to collectively build a community based upon shared values and fundamentally similar goals. A core group of active and dedicated 'Ohana members are acting upon this opportunity and are in the process of building such a community. This community will enable residents to re-establish ties with the land, the environment, and their Hawaiian heritage. This community will give them the opportunity to be Hawaiian in a spiritual, intellectual, and physical sense (Agreement on Covenants, 29).

A small, but dedicated group of 'Ohana members are actively building such a foundation for present and future residents of Kahikinui. Their commitment to the community's development is reflected in the various activities that they do on a consistent basis, including:

- Participating in the construction, repair, and maintenance of Kahikinui's road system.
- Working cooperatively with other organizations that have an interest in Kahikinui's resources, such as DHHL, KGLMO, and LIFE.
- Maintaining communication with lessees about the community's progress through monthly meetings held at Kahikinui, community newsletters, and open house meetings conducted outside of Kahikinui.
- Actively participating in networking activities with external agencies and resource providers; as well as connecting with technical experts, educational organizations, and other outside support groups.
- Disseminating information to and sharing information with outside sources, such as the media.
- Actively educating themselves about issues of importance to Kahikinui—such as carbon sequestering, forest restoration techniques, grant-writing, legislative processes, road maintenance, internet communications, cultural and environmental education opportunities, and community development activities of other Hawaiian communities.

This group continues, and should continue, to promote and participate in such activities in order for Kahikinui's development to progress. Doing so not only helps the community to grow internally, but it also helps to gain the necessary support and resources that external sources can provide. It helps to establish and maintain the lines of communication within the community, with outside community members who have not yet settled on the land, and with other support groups who could assist the 'Ohana in future activities.

While this core group may differ in opinion upon a few issues, they all share the same core values that enable them to work together and move ahead to reach collective and "mutually advantageous goals" for the community (Kinsley, ix). They understand that

they must work together in order to achieve results—results that address not only their own needs, but the needs of the group as a whole. They openly share information at community meetings and give community members the opportunity to participate and voice their opinions. They solicit present and future community residents to attend monthly meetings and offer their input about issues of importance to the community as a whole. In effect the core group attempts to establish, reiterate, and reinforce common interests through continued dialogue. Although meeting participation is currently low and only a handful of families consistently participate, the 'Ohana should continue to encourage participation and keep residents informed about the various activities that are taking place. It is important for communication to occur between all parties in order to identify and address the various needs of community members. As Michael Kinsley states in the Rocky Mountain Institute's Economic Renewal Guide, "The most effective path [to building community support] is to ask others what they need and want, determine how your needs fit with theirs, and invite them to join you....They'll join you when you join them," (ix, 1997). Open lines of communication are necessary for building and maintaining trust, building consensus, and increasing the community's ability to work collectively towards a common direction. Community meetings are one of the important components of communication that facilitates such results. Community meetings provide interested parties with a chance to participate. If all those who are involved feel as if they have an opportunity to express themselves and have their suggestions acknowledged and taken into consideration by community leaders, they will have a sense of ownership of plans and of the community. Allowing for such opportunities will help to mitigate future difficulties.

While a core group of 'Ohana members may be able to communicate with one another work together because they share fundamentally similar values and have a common vision, there are a few who have a different vision for Kahikinui. Conflict arises when the parties involved do not believe that all of their goals can be achieved concurrently, (Lewicki, Litterer, Minton, and Saunders, 1984, 5). One of the results of such conflict is that communication between the parties deteriorates, thus worsening the situation. Feelings of resentment are fostered by the lack of communication, the relationship continues to erode, and feelings of mistrust continue to build, worsening the situation and making it more difficult to solve problems in the future. If conflicts are identified prior to meetings and strategies to defuse and deal with these conflicts are developed; chances are these conflicts will be addressed before they escalate. However, when the different sides become "more entrenched in [their] own view, less tolerant and accepting of the other, more defensive and less communicative, and more emotional...the net result is that parties on each side attempt to win by increasing their commitment to their position," (Lewicki, Litterer, Minton, & Saunders, 1994, 7). When the conflict reaches a point where the parities involved are not willing to work together, conflict resolution is necessary.

The 'Ohana has acknowledged a need for the use of conflict resolution to resolve disputes within the community. Methods such as ho'oponopono are being explored by the 'Ohana. This traditional Hawaiian technique of healing interpersonal relationships

through communication, discussion, and airing of grievances, when applied, can help the 'Ohana to work out their differences. A kupuna council can help to facilitate such sessions and provide the necessary guidance to resolving the conflict. Other forms of alternative dispute resolution techniques, such as negotiation and mediation, can also be effective. Conflict resolution is necessary for the community to move forward. If the community continues to be in conflict, the work that needs to be done cannot be accomplished. Problems that are a result of the conflict will continuously impede progress in decision-making and planning. Therefore, it is necessary for the full capacity of the community to work collectively to achieve the same goals. Nurturing and maintaining open lines of communication is necessary for this to occur. After all, successful communities are built upon active people who make accomplishments that benefit the common good. Communication is the key to facilitating such developments.

VIII. Challenges, Strengths and Opportunities

At this stage in community establishment, there are still many challenges to overcome in order to move toward the goal of sustainability and self-governance. The community that lives in Kahikinui is still small. Thus the process of settlement by the majority of the 'Ohana is slow. Because of the scarcity of human resource, construction of infrastructure will also be slow. The lack of roadways is a determent to 'Ohana who have yet to settle in the Moku. It will take between 3-5 years for the roadway to the homestead lots to be completed, unless new support is forthcoming. Funding sources for infrastructure, conservation and CBED efforts are also limited at the moment. Yet, it can be ascertained that such challenges are prevalent in the establishment of any community. The 'Ohana leaders are strongly dedicated to maintaining and preserving the resources and sites, properly utilizing resources for subsistence, and supporting the needs of the community as it grows. Through the continued commitment of the 'Ohana and supporting agencies like DBEDT, OHA, and DHHL, these challenges can be met.

The moku of Kahikinui is rich in natural, cultural and archaeological resources. History and ancient practices are evident in the land features from the forest to the shoreline 'Ohana members have diverse skills which are being utilized to support community-based economic and conservation activities and the construction of roadways and buildings. The strength of the 'Ohana comes from their commitment to preserving the 'āina and want for a lifestyle more connected with the 'āina. Initially all progress will be slow. As the 'Ohana at Kahikinui begin to have more dialogue with members in the larger community, motivation for support (labor and money) will be available. It is helpful to recognize that the 'Ohana, although not yet connected, is a large group. Communication efforts will encourage more participation in construction, CBED and conservation efforts. These members may not yet understand the great opportunity of being part of a *new* model for *traditional* Hawaiian-living. Therefore, the commitment of the core-'Ohana is essential for promoting this awareness to the rest of their members.

IX. Resources

The name of "Kahikinui" has several plausible translations. According to Handy (1972), Kahikinui means "the great rising," referring to the imagery of piercing rays of sunlight rising out of the deep ocean, ascending the massive slopes of Haleakalā Crater over the east end of the crater. According to Pukui, the name translates to "the Great Tahiti," making reference to the physical similarities between the island of Maui and Tahiti (Pukui, 1974, p. 64). The name "Kahikinui" also is referenced in The Hawaiian Dictionary, as a "name for a navigation star, said to be named for one of the eight steersmen of Hawai'iloa" (Pukui, 1986, p. 112).

The moku of Kahikinui is an extensive land area that consists of both seaward and interior plains. Located on the southwest slope of Haleakalā crater on the island of Maui, the physical features of Kahikinui are distinguished by its arid upland region and scattered sea cliffs along its coastal shores. Kahikinui has been documented as the site of the last flow that emerged from the volcanic crater of Haleakalā, which occurred in 1750 (Handy, 1972, p. 337). In oral tradition, Pele travels from the northwest corner of Ka Pae 'Āina o Hawai'i, residing and dwelling in different areas then proceeding to move down the island chain to her final resting spot at Halema'uma'u on the island of Hawai'i. One account speaks of Pele, upon her arrival at Kīlauea, arriving from "Kahiki", which often times is referenced as from her point of origin at Polapola (Borabora). However, one scholar suggests that the "Kahiki" in reference, is actually Kahikinui on the southern end of Haleakalā.

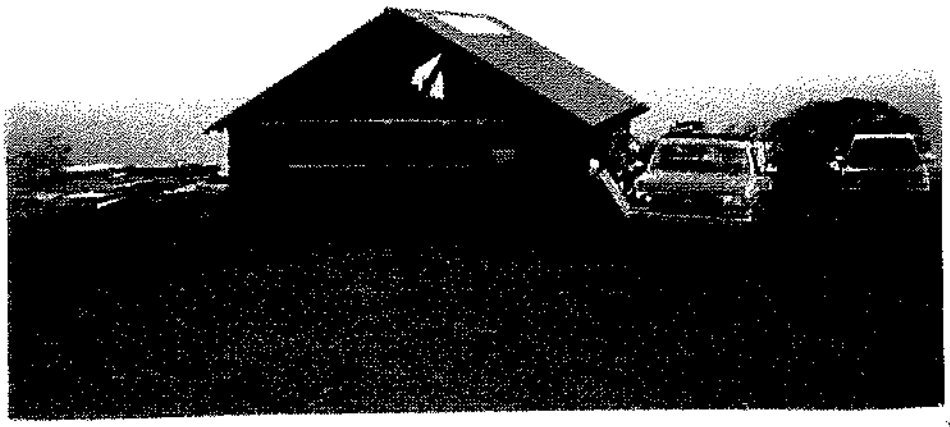
Most of the land parcels below the west and south slopes of Haleakalā, namely in the districts of Kula, Honua'ula, Kahikinui, and Kaupō, were developed for purposes of dry-land farming. In traditional times, the inhabitants of the area depended upon dry-land taro cultivation as well as harvesting 'uala, sweet potato. The 'uala patches were constructed in rocky areas called makaili (Handy, 1972, p. 129). Small pockets of disintegrated lava were utilized in the makaili for purposes of supplying adequate drainage. The crop yields tended to be smaller than normal size and often lacked taste as compared to its wetland counterparts. In addition to taro and 'uala cultivation, mai'a, banana plants were planted usually in the month of December, the beginning of the short rainy season.

Kahikinui's natural resources consist of a variety of both native and non–native flora and marine life. In the makai management area can be seen fields of pili and other grasses, and a variety of scrub brushes including lantana and haole koa. Wiliwili trees, the wood of which was utilized for a variety of marine activities, are also quite prevalent. Native species such as 'Uhaloa, a native plant used for medicinal purposes have been seen by 'Ohana in scattered locations within the makai area. In particular, areas below Luala'ilua Hills and St. Inez Church are areas native plants have been gathered.

Kahikinui's shores offer an abundance of marine resources. The fresh water that flows into the ocean via underground springs mixes with the salt water to create an environment that supports a wide array of marine life. The waters support an abundant variety of fish such as moi, weke, mullet, ulua, manini, and uhu. Varieties of shellfish and crustaceans are also prevalent along the rocky shoreline. In addition to marine species, ocean spray create an abundance of salt deposits along the rocky coastline.

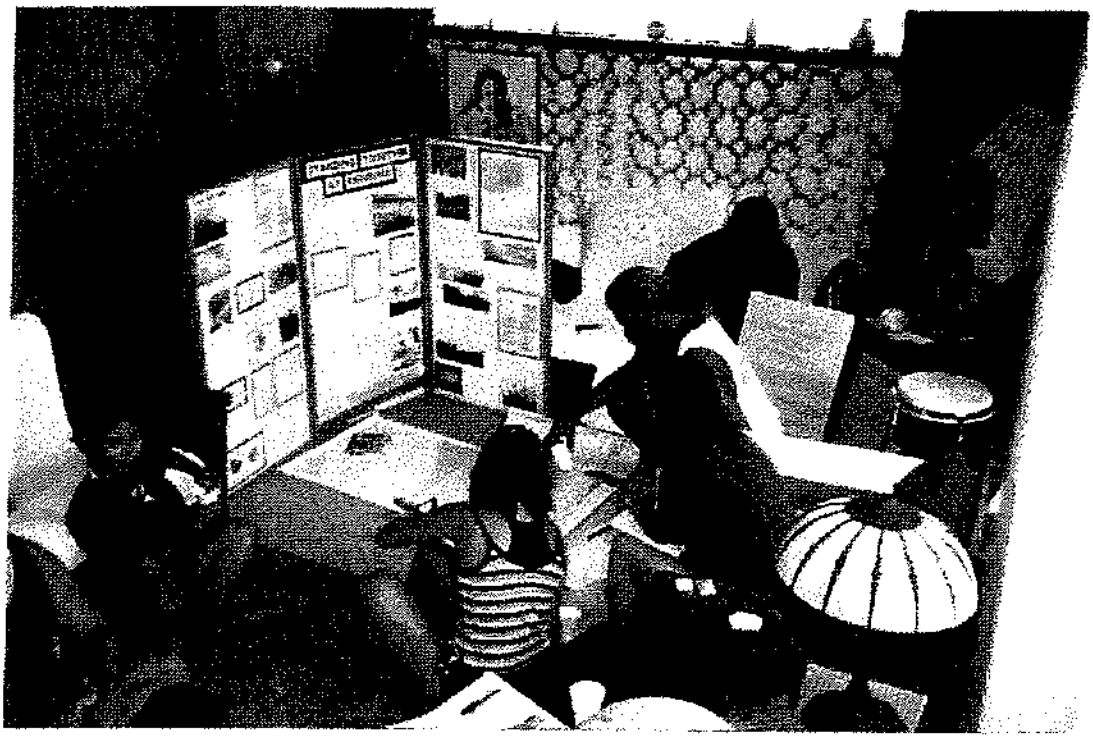
Aside from its abundance of marine and natural resources, Kahikinui is endowed with a wealth of cultural assets, gifts left by the ancestors. Because Kahikinui has experienced relatively little physical impact from the post–contact period such as urban development and large-scale agricultural use, it contains an abundance of intact sites, which include villages, heiau, agricultural structures and shrines. Sites are scattered across the moku in relative abundance with particularly high concentrations along the coastline and in the upland areas. Kahikinui may well be the only area in the State where this kind of concentration and variety of sites exist and as such it is an excellent living laboratory to study past Hawaiian life and land usage.

Fresh water is now a scarce resource in Kahikinui, although at one time, it must have been more abundant given the population base the moku supported. The receding forest has contributed to the alteration of the ecosystem and watersheds. According to Matsuoka, etal. "In the last 100 years the forest in the lower elevations (to the 5,000 feet level) has been largely destroyed" (p. 133). Additionally, litter and siltation obstruct water sources such as springs, and poor water and land management practices by the ranching interests over the years have exacerbated the scarcity of fresh water in Kahikinui. There are indications though that water is present and can be captured and managed for use by the 'Ohana.



Old water tank re-used.

St. Inez Church at Kahikinui



The 'Ohana can facilitate education and learning opportunities on matters like subsistence life-style and Ahupua'a planning to visitors and community organizations.

1 Community Based Economic Development Plan

1.1 Objectives

Community Based Economic Development forms the basic engine of production at Kahikinui. Contrary to the popular connotations carried by the word "economic development" the focus of this plan is clearly not the "economic man" but reciprocal communities where self-reliance and self-sufficiency carry paramount values. The purpose of this plan is two folds—and somewhat paradoxical. At one level it tries to open up all possible sectors of production from agriculture to tourism and from housing to place marketing. At another level, it funnels resources not towards growth but towards conservation and eco-cultural continuity.

The guiding principals of Community Based Economic Development program can thus be outlined as follows:

- Catalyze economic use of broad sector of resources through small scale, low impact programs.
- Mobilize large section of the community through multiple programs.
- Selectively avoid high resource use activities in every sector.
- Redistribute the profits into community based natural and cultural resource management programs.
- Optimize allocations on high-profit low-impact (ecological, environmental and cultural) programs.

The objective of the proposed program is to:

- Build local capacities for both subsistence and surplus production. Adjust and enhance local skills to engage in productive activities in the resettlement area.
- Generate and augment household income by creating local employment opportunities.
- Create self-reliant community infrastructure and services through redistribution of benefits.
- Promote, protect, revive and restore the cultural and natural assets of the Moku of Kahikinui by channeling part of the profits into Cultural and Natural Resource Management Programs.

- Build social capital and institutional capacity of the community by mobilizing the community into various community-based activities, inter-linking them and deliberately promoting reciprocity oriented relationships.

1.2 Community Based Activities and Common Pool Resources

One of the challenges of community mobilization in an intentional community is to bring every member of the community to a common platform of shared social goals. In this initial endeavor leadership plays an important role. But there is also a need to *socialize* internal leadership to so that all community members recognize their roles and responsibility in the process.

Some useful insights from Elinor Ostrom's work titled Governing *the Commons* is discussed here. Ostrom identified eight characteristics in "long-enduring" common property institutions. They are as follows:

Clearly defined boundaries. Individuals of household who have the right to withdraw resources from the common property have to be clearly defined. In the 'Ohana's case this boundary has already been created as lessees are both fixed in number and defined by legal parameters. However, within a particular community based activity, for instance among the households that run the Community Kitchen, this element has to be clearly articulated.

Congruence between appropriation and provision rules. In other words, there are to be some acceptable correlation between what individual members get from and give to the regime of common property. This element will come up as an important issue when the 'Ohana has to decide what portion of the profit from CBED activity should go into the Community Development Fund. Similarly, when the CBED groups have to decide on the parameters that fix wage rates as the members are only to be remitted for labor and do not have a claim in the profit (although wage rates do not have to follow market rationality)

Collective choice arrangements. There should be a mechanism whereby most individuals affected by the operational rules can participate in modifying the operational rules. The 'Ohana has recognized this need, it has to continue to rely on consensus rather than formal mechanisms like voting.

Monitoring. There should be a mechanism to audit the conditions of the common property resources and appropriator behavior. Within the 'Ohana, informal or formal mechanism should be established to audit resources and resource use pattern but the auditors have to be accountable to the 'Ohana and any outside entity.

Graduated sanctions. Members who violate operational rules are likely to be assessed graduated sanction (depending on the seriousness and the context of offense) by other members. The 'Ohana should mediate such actions too.

Conflict resolution. There should be a conflict resolution mechanism within the community. This aspect is dealt with in the communication and convivial section of this report as well.

Minimal recognition of rights to organize. This element becomes important for any community based on common property regime. The state-civil society conflicts are especially tricky in the common property regimes as such regimes are conceived outside the mainstream state philosophy. The state must continually recognize this element in common property institutions.

Nested enterprise. This concept is more relevant to larger systems of common property regimes where there are multiple layers of organizations within the system. Nonetheless, an effort by the 'Ohana to connect to other Hawaiian communities organized on similar themes would be a step towards nesting their enterprises.

While these concepts are, in general, helpful they are not essentially rooted in the Hawaiian tradition, which has its own history of evolution and stories of success. The issues brought forward in our discussion on cultural perspectives section should provide insight rooted in the Hawaiian epistemology.

1.3 Project Description

The following projects are formulated for implementation in the course of next three years. These projects have been selected on the basis that they will help the 'Ohana 1) to build cohesive communities responsive to economic opportunities of Kahikinui and responsible to ecological and cultural vision of the 'Ohana. 2) to initiate low input-low risk programs in response to the challenges of an "intentional community" gradually taking root in Kahikinui and 3) to build institutional capacity and community resources for future projects.

1.3.1 Ke 'Alo O Kahikinui (Image of Kahikinui)

The 'Ohana will initiate a program to disseminate its vision, plans and its spiritual commitments to 'āina among academicians, media, government agencies, NGOs, visitors and the general public to make Kahikinui known for its uniqueness. The purpose of this program is to make Kahikinui and its unique heritage known to others. In addition, for future CBED project such a program is likely to provide better dividends than product marketing.

The program will produce post cards, posters and other photographic items of the land, heritage sites, reconstructed sketches of ancient settlements in Kahikinui and distribute

for sale. It will also sell or circulate various reports, books and research papers on Kahikinui.

This program will also involve periodic seminars by key community leaders in different forums. Making documentary films on the archaeological sites and documenting the archeological findings of the area for photographic display at the community center. 'Ano 'Ano Aloha project, for example, with the support of OHA has launched a successful income generating program by making flash cards and posters for sale. The 'Ohana can establish working relation with projects of this nature from other locations and collectively market their products.

1.3.1.1 Justification

This program cannot be expected to generate large revenue, but the venture is expected to be self-sustaining. Over time it will help Kahikinui get recognition for its unique cultural and natural assets and create an informed visitor market. It is intended to transmit the cultural and historical significance of the Moku and make Kahikinui known as well as interesting to a large number of people. The operation is small scale and can be begun immediately. It is not capital intensive. Specialized skills are not required and the 'Ohana members can start the project with limited support.

1.3.1.2 Project activities

Prepare a presentation portfolio with slides and other visual aid about the archeological history of the Moku, current restoration and resettlement plan and proposed community based activities. Stock books, research papers on history and archeology, and various reports produced by the 'Ohana for sale and circulation.

Produce a video documentary of the same theme to be circulated for broadcast in the public television circuits and other interested channels.

Print Post Cards, Posters and replica of reconstructed impressions of the ancient settlements for sale. A team consisting of a trained archeologist and an artist is required to achieve authenticity to reconstructed impression.

Work out a statewide marketing strategy, and in site display of the produced items. Artifacts found in the archeological sites can also form part of the exhibit. This can be displayed in the community center.

1.3.1.3 Immediate objectives

To disseminate the unique heritage Kahikinui and the worthy effort put in by the 'Ohana to resettle and restore ancient Hawaiian homeland of Kahikinui to the largest possible audience.

Through sale of post cards, posters, books, reports and replicas generate revenue to make the project self sustaining and be able to remit for the labor put in my participating members of the 'Ohana thus generating 2-3 jobs within the community.

1.3.1.4 Long-term objectives

In the long run, this program is expected to grow in scale and evolve into a small museum on history of Kahikinui to be put up in the community center for visitors, school excursions and scholars.

1.3.1.5 External Support

The external support required for this program would have two components. One would be a one-time financial grant towards the initial cost of printing and producing audiovisual material.

The other necessary support would be to cover "software" cost of market assessment, networking with other organizations in similar business and a fix-term overhead cost to support the community in its initial stages.

Both the support can be conditional to internal revenue generating capacity. The more ambitious video documentary for instance can be phased in at a later stage when revenue situation becomes more convincing.

1.3.1.6 Risks

The marketing aspect of this venture could be a source of risk. The purpose of the project being increasing interest among the visitor community and among those who would want to support the worthy cause of reviving Hawaiian tradition and life-style, the venture itself has inherent benefits other than those that can be realized as revenue of the sales. Therefore, the perceived risk remains within the justifiable benefits of the venture. Ke 'Alo O Kahikinui (Image of Kahikinui) will be the complementary program to help achieve optimal number of visitors.

1.3.2 Eco-Cultural Tours Program

The 'Ohana will initiate an Eco-Tours Program to promote Ke 'Alo O Kahikinui. Because eco-cultural tours require a minimum funding and human resource-input, it can be commenced immediately. This project is described in detail in this section for this purpose. Other projects will require more funding, human resource-input, and infrastructure. As money is generated through the eco-cultural tour program and funding sources, other CBED programs can be initiated.

The eco-cultural tour program does not need to be an expansive CBED project. Nor does it need to be extensively marketed. This program could be conducted in the same way in which practicum students were hosted in September. Only a few 'Ohana members were available to meet with students. However, students still gained a wealth of knowledge about the history, culture and natural resources of Kahikinui. The students were humbled by the experience, and gained renewed respect for the 'āina and the community who is committed to its continued preservation. Students were also moved by the extent of aloha that the 'Ohana showed, providing food, hosting walking tours of the makai area, and "talking story" with the group. The 'Ohana could invite other local organizations that are interested in learning more about Hawaiian history, culture, and the proper utilization of resources, to participate in a similar cultural-learning experience for a reasonable fee.

The 'Ohana has already identified activity areas and sites that will be used in the eco-cultural tours program. Because the moku is rich in biodiversity and Hawaiian heritage, the 'Ohana will conduct tours based on these themes.

Bio-diversity Tours *Nānā I Ka 'Āina (Look to the Land)*

Two-hour walking tours lead by the 'Ohana focusing on the diverse ecological features of the moku.

- Guided visit of plants along mauka-makai trail as well as plants or agricultural products being grown in the proposed Native Plant Recovery Area[2]. Explanation of native flora and fauna about their uses and significance to Native Hawaiians and today's Hawaii. (Medicine, etc.)
- Guided visit to ocean resources along the coastline.
- Showing/explaining the process of gathering pa'akai (sea salt), fish, and other native resources.
- Teach Hawaiian crafts making, songs, and dances.
- Story-telling / Education of native ecosystem by kupuna and knowledgeable ''Ohana.
- Guided visit to bird conservation areas.

[2] Native Plant Recovery Area is a Mauka-Makai stretch of multiple, micro-climatic habitat areas designated by the Makai Area Management Plan for recovery of native plants.

Hawaiian Heritage Tour *Nānā I Ke Kumu (Look to the Source)*

Offering the following:

- Guided visit to ancient sites, i.e., hale wa'a, canoe launching/landing ports, heiau, natural 'a'ā, salt-beds, etc.
- Coastline, methods of resource usage and management.
- Story telling about the history of the area and its significance.
- Sharing of personal experiences and ho'oponopono sessions.
- Showing/explaining the process of gathering pa'akai (sea salt), fish, and other native resources.
- Teach Hawaiian crafts, songs, and dances.

Weekend camping trips could also be commenced and would consist of both types of tours.

1.3.2.1 Justification

What harm would come if a cultural practice should vanish or a historical site is destroyed? Who would suffer or grieve if the stories of our native people were lost? It seems an innate need within us to preserve the wisdom of the past for future generations. In the words of Native American archaeologist, John Sax, "... Our daily lives are enriched immensely when we have the ability to attain first-hand knowledge of past [human] behavior, [and] through the preservation of the past, this can be achieved most vividly."[3] Learning about technology tools and social structures of the past and how they work in harmony with the environment and resources in the area are of interest to the local community as well as to visitors. Tours help to celebrate and share the history and ethnic plurality of native people.

Unfortunately to many people, tourism is viewed as being counter to efforts of cultural and environmental protection. Tourist mecca, such as Waikīkī, Lāhainā's commercial district, and Po'ipū Beach are some of the areas in Hawaii that have left a bitter image of tourism in the minds of Hawaiians and locals. The over-commercialization, destruction and exploitation of deeply valued cultural sites and practices have turned many native communities away from considering any economic activity that capitalizes on tourism. There are alternative approaches to tourism, however, which do not to aim to exploit places and cultures for dollar, but protect and perpetuate them. Eco-cultural tourism gives communities the opportunity to manage their environment and decide how money will be allocated for continued cultural, environmental and economic sustainability.

[3] Sax, Joseph L. 1976. "America's National Parks: Their Principles, Purposes and Prospects." Natural History (Special Supplement, October. P. 27.

Niniali'i Bay and camping ground

Ohana o Kahikinui: Guided cultural tours of ancient Hawaiian sites at Kahikinui

Distinguishing eco-cultural tourism from conventional tourism:

1. Focus on natural and cultural experiences in combination with specialized marketing;
2. Consists of small-scale facilities and infrastructure that strive to respect the heritage of the area.
3. Fosters small-group, one-to-one positive host-guest interactions and mutual understanding.
4. Emphasizes local control and equitable dispersion of benefits.
5. Enhances environmental quality, community cohesion, and cultural revitalization.[4]

Alternative tourism maintains a bottom-up method of diplomacy, instead of one regulated by an outside agency or by government. The 'Ohana has the opportunity to devise a CBED plan for eco-cultural tours that fit the objectives of their organization. The 'Ohana will also be able to decide how money from tours will be allocated to support other projects and interests. The extent of tour operations will be within the discretion of the 'Ohana and does not have to follow the conventional marketing trends of the tourism economy.

The most encouraging part of the change in trend toward alternative types of tourism is that each tour destination is distinguished by it's own educational value. Therefore, these destinations are not in direct competition with one another for visitor dollars. Communities are able to market their tours together. For instance, many Native American communities advertise their eco-cultural tours on the same brochure or web page, thus sharing the cost of marketing.

1.3.2.3 Immediate Objectives

To establish a source of funding for various cultural resource and environmental management programs conducted by the 'Ohana.

To provide income for at least two families (initially).

To further expand the 'Ohana's understanding of the history of Kahikinui by becoming more familiar with the history and archaeological sites in the moku.

To promote the value of Kahikinui to the larger community and to visitors.

To educate the larger community and visitors on the significance of Kahikinui to Hawaii's history and culture.

[4] Colin, Michael V. & Tom Baum, Eds. 1995. Island Tourism: Management Principles and Practice. John Wiley & Sons, Ltd. England. p. 23.

To involve the larger community and visitors in cultural, historical and environmental management.

1.3.2.4 Long-term Objectives

To generate economic support for mauka-makai management programs.

To institutionalize tours of high educational value.

> There is a great opportunity for the 'Ohana to participate in the growing demand for eco-cultural types of tours. According to a study in 1989 by the United States Travel and Tourism Administration, 16% of the total market travelers were looking to experience culture and nature-types of tours. It would still be beneficial to the area if availability for tours were still limited to a small about of visitors at one time. This would not discourage people from wanting the experience of Kahikinui. In contrary, it would serve to capitalize on its value.

Travel Intentions	Percentage[5]
Culture and Nature	16%
Beach	19%
Resort	16%
Sports/Entertainment	21%
Outdoor Recreation	9%

To continue utilization and maintenance of cultural, environmental and archaeological sites through visitor participation activities (i.e., reforestation).

1.3.2.5 Case Studies

The following case studies describe eco-cultural CBED programs existing in Hawaii and abroad. Case Study 5: Selva Bananito in Costa Rica seems to best fit the 'Ohana's vision of a CBED program that will support cultural and conservation efforts in Kahikinui. Most of the money generated from the program is allocated to preserving a forest reserve.

[5] Ibid. p. 35.

Case Study 1: *Kapāpala ranch, Hawaii*
Gordon Cran, Owner
Rachael Keʻolani Epperson, Eco-Tourism Operator

Kapāpala Ranch lies on the slopes of Mauna Loa near Pāhala on the Big Island and is owned and operated by Gordon-Cran. In an effort to maintain the ranch, which has been in the family for generations, Cran decided to embark on an educational eco-tourism venture. Visitors to the ranch would pay to learn about ranching and history of the area, while sharing in ranch duties. "It's not really a dude ranch," said Cran in an interview with Big Island, "We're talking about sharing a lifestyle." The ranch offers visitors two-hour trail rides and guided camping trips along the coastline of Kaʻū. Cabins that once served as housing quarters for ranch employees have been renovated into guesthouses. Rachael Epperson runs a story-telling and "adventure" program for children called "Donkey Tales of Hawaiʻi." Children who participate in the program learn to ride, groom and care for Kona Nightingale donkeys, which descendents were brought from Africa to work on coffee and sugar plantations.

Kapāpala Ranch also runs a game-bird hunting club, in conjunction with the Department of Land and Natural Resources. The ranch operates hunting stations for exchange of credit from the State. The club is helping to eradicate mongoose in the area, in order to protect the endangered nēnē goose.

Case Study 2: *Anahola Ancient Cultural Exchange Program, Kauai.*
John and Suzanne Rose Pia

AACE is a non-profit organization that provides the community in Anahola, as well as visitors, the opportunity to learn about Hawaiian culture and environmental preservation. The program utilizes approximately 6 acres of the ahupuaʻa of Anahola along Anahola River. This land was leased to the Pias by the Department of Hawaiian Homelands in the early 1980's. In 1991, after years of heavy physical labor, the Pias established AACE. Queen Liliʻuokalani Children's Center, Atherton YMCA and various community organizations on Kauai support the program. AACE also receives money through fees charged to hālau, private organizations, and community members who use the area for parties and events. The main program hosted by AACE is a free summer program for the youth of Anahola. The summer program hosts 75 children ages 7-14 and provides job sites for teens employed by Alu Like, Inc. During the course of the program, children learn Hawaiian language, music (including ukulele instruction) crafts (lauhala and coconut frond weaving, kapa cloth making), agricultural practices, and mauka-makai management.

Case Study 3: *Friends of Moku'ula, Inc., Maui*
Akoni Akana, Executive Director
Chris Bergeijk, CBED Program Manager

Friends of Moku'ula Inc., is also a non-profit organization aimed at promoting cultural awareness to the community. The area, which was once a baseball park in down-town Lāhainā, has been transformed into a learning center where Hawaiians and Non-Hawaiians can "immerse themselves in pre-contact lifestyle."[6] Presently, the organization is working on reestablishing lo'i and fishponds in the area. The organization employs 4 full-time and 3 part-time workers.

Case Study 4: *Mauka-Makai Excursions (Kanikāpupu), Oahu*
Dominic Kealoha Aki & Chris Hearns,

Mauka-Makai Excursions is a Hawaiian-owned and operated eco-tour company specializing in full and half-day field trips on Oahu. The company's mission is for visitors to learn about Hawaiian culture and history while promoting ecological awareness.

Case Study 5: *Selva Bananito Lodge, Costa Rica*
Conselvatur Company

The Selva Bananito Lodge in Costa Rica is a family-owned and operated alternative tour destination. Money generated from tours is used for the protection of a privately owned 2,000-acre rainforest and other special conservation projects in and around the rainforest. The Lodge also offers a rainforest study program for high school and college students, nature and bird watching tour, and a Spanish immersion program. The Lodge is currently working on a program to allow scientific researchers to study their rainforest for a donation. In order to minimize the impact of tourism, the Lodge only hosts a small number of visitors to the area at any given time for families.

1.3.2.6 Project Activities

The 'Ohana will determine the maximum amount of visitors in the area at any one time. Initially the 'Ohana will limit tours to local groups to lessen the cost of advertising and limit the amount of visitors to the area. These groups would include schools, hālau, research groups, and other local organizations. As more funding and human resource are available, the 'Ohana will advertise the eco-cultural tour program to non-local visitors interested in learning traditional and customary Hawaiian cultural resources and usage.

[6] Durbin, Paula. 1999. "Lāhainā Group Rescues a Heritage." Ka Wai Ola O OHA. October. P. 10.

The 'Ohana will formulate a need assessment plan for the program. There is need for tour-leaders knowledgeable in:

- Hawaiian history, culture, religion and medicine
- Hawaiian crafts, music and hula
- Mauka-Makai management practices
- Native flora and fauna
- Ocean resources and fishing
- Conservation

There is also a need for bathroom facilities (portables) near tour sites. Moreover, equipment, supplies, and other accommodations that will be provided to visitors on tours will need to b determined.

1.3.2.7 External Support

External funds are needed initially to support the cost of portables, equipment for tours, and operational costs. Marketing would be done in conjunction with Ke 'Alo O Kahikinui. Marketing cost would be decreased by cost-sharing partnerships with other eco-cultural-types of programs, such as Moku'ula.

There is great opportunity for financial support for CBED projects focused on education, cultural perpetuation and eco-cultural tourism. Such agencies include the Office of Hawaiian Affairs, the Association of Native Americans, the State Tourism Special Fund Program, Queen Lili'uokalani Children's Center, the State Special Tourism Fund and the Hawaii Foundation.

1.3.2.8 Risks

There is a risk of negative return if too much money will be spent on marketing efforts through Ke 'Alo O Kahikinui. Small-scale eco-cultural tours that first benefit the Native Hawaiian and local communities should be the focus of this program. There is also a risk of desecration of cultural and archaeological sites, as described in the Cultural Resource Management section of this report.

Moreover, although natural and cultural resources are in abundance in Kahikinui, human resources, as well as infrastructure for water, roadways and utilities are unavailable. The eco-tours program should begin as a small, close-interaction, informal venture emphasizing on conservation, culture, and the sharing of mana'o.

1.3.3 Mālama Nā Kumuwaiwai (Recreational Access Management Program RAMP)

The recreational resources at Kahikinui, namely, fishing, camping, hiking and hunting are potential attractions for visitors willing to enjoy nature in an environmentally responsible manner. With minimal input, the access to Kahikinui's recreational resources can be managed to yield revenue. This program is not expected to generate small revenue initially, but it will establish a system of controlling, managing and taxing recreational use of the land and resources at Kahikinui. Overtime, this program will be tied to other visitor oriented activities like nature watch, bio-diversity tours and heritage tours.

1.3.3.1 Justification

The 22,809 acres of land of the Moku is biologically diverse both in terms of vegetation and animal life. In addition, it has several mile long shoreline that can host low impact recreational activities like fishing and camping. While the details of the proposed recreational activity will follow in the tour related project description, there is a need to control, manage and impose fee on the recreational use of the land and its resources. The proceeds of this program will fund access control and infrastructure improvements in specific areas of the Moku.

1.3.3.2 Project Activities

To identify and demarcate strategic access control points for constructing gates and appropriate fencing at places where unwanted encroachment by visitors or stray animals may occur.

To initiate a system of issuing visitor permits, monitoring number of visitors and briefing them on different aspects of ecological and cultural codes to be adhered to while in the Moku. Accordingly construct a briefing area and print a brochure to be handed out to the visitors to facilitate a better term of contract as they venture into the recreational areas.

To assign a team of 'Ohana members with the responsibility of managing the program, keeping records, printing necessary materials and permits and to control and keep vigil over the area.

Construct gates and fences in strategic location to control the access of visitors and stray animals.

1.3.3.3 Immediate Objectives

To control and manage access to the recreational and other resources of the Moku and establish revenue collection system to generate funds for protecting and managing the resources.

To generate 1-3 part time jobs for the participating members of the 'Ohana.

1.3.3.4 Long Term Objectives

To establish a completely self-sustaining mechanism for access management capable of generating revenue for constructing and maintaining access control and utility-related infrastructure.

1.3.3.5 External Support

The external support package will contain one-time financial support for access control infrastructure like fences, gates and toll kiosks. Additional support is required for printing touring code and brochures as well as for constructing and furnishing simple, eco-friendly briefing room at the community center.

In addition, a "travel-and-train" grant for 2 'Ohana members involved in this program to visit recreational access management programs of nature reserves, hiking trails and hunting reserves at two comparable locations in the state should be provided. This is expected to practical insights to access management strategies.

1.3.3.6 Risks

The financial sustainability of this program is dependent on the number of visitors coming in for recreational or other purposes. At the same time, lower visitation will automatically reduce access control burdens. It is however preferable that visitors increase in number but their impact in effectively controlled and the access is efficiently managed at the same time.

1.3.4 Ho'omalu A Mau 'Ia Ka Nahele (Trees For Future)

The 'Ohana envisages a complete restoration of the Mauka forest to its pre-ranching coverage and quality. While that remains an eco-cultural mission, certain patches of land within the mauka forest area and in the makai areas can be used, wherever suitable, to cultivate high value timber that do not threaten the indigenous or endemic species. One such species could be, for example, indigenous variety of Sandalwood.

This is expected to be a social project where the entire communities' participation will be considered mandatory. Each month every household will plant and nurture five seasonally appropriate saplings of high-value plants in the designated areas. A lead household will be elected to collect suitable saplings from local nurseries for monthly distribution. To regulate this activity and to encourage compliance this will always be the last agenda of the monthly 'Ohana meetings. This program is likely to generate at least two long-term benefits. It would provide a community resource building opportunity which is both easy-to-comply and true to the spirit of common property management. Second, in 10-15 years, these monthly efforts can accrue into substantial economic resource for the community.

1.3.4.1 Justification

The Moku has 22,809 acres of land spanning mauka-makai through different micro-climatic zones ranging in elevation and soil types. High value timber species like the indigenous variety of Sandalwood fetch good prices in the market while not destroying the local diversity. Specific plantation techniques and species that do not harm the local species have to be identified by the concerned experts, but the idea of high value timber plantation remains ecologically and economically feasible. Moreover, this program specifically targets building a long-term common property resource for the 'Ohana. A continuous and sustained effort on reforestation dedicated to building community resource is also expected to generate social cohesiveness in the community. Community organization in Agha Khan Rural Support Program in Gilgit, Pakistan, for example, managed to revive water shed area vegetation through mandatory and routine participation in community plantation within a few years. Kahikinui has tremendous potential in forest resources, by turning this into a long-term social agenda this program also seeks to build social capital in the course of the project.

1.3.4.2 Project Activities

Through expert help prepare an inception report identifying appropriate sites, species and plantation techniques for the reforestation work.

Prepare identified sites for plantation and devise ways of guarding the saplings from grazing and other potential physical damage.

Build and operate a small nursery at a convenient site to rear high value timber saplings for transplanting. Most species can be transplanted, is a certain species has a different growth disposition then appropriate methods have to be employed for such species.

Provide appropriate training to the household that wants to take up this work. The 'Ohana will arrange for the operation cost and labor either from internal resources

generated by the Community Development Fund or, alternatively, through external grants until the Fund becomes large enough to bear the cost internally.

Initiate a practice within the 'Ohana of planting seasonally appropriate 5 new saplings and caring for the planted ones at the end of each meeting.

Periodically review the growth and get expert opinion on the plantation.

1.3.4.3 Immediate Objectives

To mobilize the 'Ohana for the purpose of reforesting the Moku and establish a socializing routine with a productive agenda.

In a gradual and cumulative manner refurbish the forest resources for future harvest.

1.3.4.4 Long Term Objectives

Putting simple calculation to work, at the rate of 5 saplings per month the 'Ohana has the capacity to plant about 350 plants every month. Even if 40 percent of them survive to natural maturity, we would be speaking of 140 ready to harvest trees every month. This calculation, of course, has to be conducted at a more detailed and quantitatively reliable manner. But in the long term, this program can generate significant revenue for the 'Ohana.

1.3.4.5 External Support

External support for this program will comprise of funding for the inception plan that outlines appropriate species list in terms of commercial value, impact on vegetation, resilience (survivability) and nursery techniques. It would identify reforestation sites—for high value timber—and conduct soils tests on selected sites as required. It would also provide a yearly calendar identifying which months would be suited for transplanting which plants.

The second area of support will be in operating a small nursery in Kahikinui. It would include necessary training for the participating member (1 or 2 persons) and logistical support for the nursery.

Third, a fixed-term operating cost for the nursery has to be provided until the 'Ohana becomes able to sustain this activity through its own fund.

1.3.4.6 Risks

Species selection and plantation techniques employed for this program has to be careful and qualified. Introduction of wrong species or incorrect plantation practice can threaten indigenous species and may even create monocultural vegetation. In addition, plant protection both from physical and pathological threats remains a challenge when a large area is targeted for reforestation. However, this program is particularly less demanding on initial investment and the benefits from even low rate of success, with regard to plant survival rates, can accrue substantial benefits. The third element of risk lies in the capacity of the 'Ohana to actually mobilize the members to turn this into a regular "socializing" exercise; if the members do not take initiative the impact of this program will remain low.

1.3.5 Ho'oulu Kaiaulu o Kahikinui (Kahikinui Community Housing Project)

One of the major financial projects for every household trying to settle at Kahikinui would be construction of a home. A community-wide cooperation in this endeavor will not only add to the social capital of the community but also be economically beneficial to the homesteaders. A community managed labor credit program whereby an institutional mechanism to "bank" each individual's contribution (in terms of labor) to the community housing project or any other community work (e.g. community infrastructure) such that the individual can claim labor contribution back is to be established. That is, if an individual puts in 5 man-days of labor into building another member's house, he or she would get the same amount of labor contribution back. This is not to say that there will be *pro quid quo*'s between two individuals, it is the community that serves as a labor bank and assign members whose services are required for the particular job. In addition, interested members of the community housing project will be trained in low cost construction techniques, climatologically sound house designs and other relevant skills with a view that participating members become a group specializing in low-cost housing whose experience can acquire wider replicability and demand of services.

1.3.5.1 Justification

Housing at Kahikinui is not only a financial concern but an environmental one too. The 'Ohana has to devise ways of lowering the housing cost as well as using as less resources as possible. This program is designed to meet both ends. Since the 'Ohana members come from diverse skill backgrounds, including a few directly related to construction, it would be appropriate to engage their experience and skills in a manner that directly benefits the community and renders their skill more marketable for similar housing projects elsewhere as well. Secondly, the focus is laid on reducing the cost of housing and employing construction techniques that are environmentally friendly both in terms of

material use and design. This should reduce the burden on the local environment as the construction material is expected to come from the mauka forest area.

Labor pooling is a widely practiced culture among many indigenous peoples. Here, the notion of reciprocity has been given an institutional framework. The advantage of institutionalizing this practice is that through institutional framework the basic notion of reciprocity can be scaled up to a community level.

1.3.5.2 Project Activities

Generate consensus on the concept of labor reciprocity and develop a framework for labor banking within the community.

Provide basic skills to interested 'Ohana members on low cost construction technique and other sub-specialties like compost latrines, plumbing, solar power generation and road maintenance.

Assess labor demands on various stages of construction and quantify the amount of labor exchange required for housing the entire community, assess the material demand—especially, timber—to quantify the material input required and sustainable harvest rates of timber at source (mauka forest area).

Adopt modular designs—with the help of qualified architect—to simplify construction and to save on material and labor input.

Prepare a calendar of works, scheduling community work on construction and assess the need for outside skill and labor engagement. Operationalize the community housing program by mobilizing the community accordingly.

1.3.5.3 Immediate Objectives

To initiate an institutionalized labor banking process for community housing to lower the housing cost.

Co-ordinate construction activity to optimize material inputs, especially timber.

Gain experience and knowledge in low-cost community housing to be able to provide specialized services in other communities in future.

Gain social capital through community mobilization and reciprocal exchanges.

1.3.5.4 Long Term Objective

Through knowledge and experience gained in low-cost community based housing, the Community Housing Project can offer its services to other similar program as for-profit of not-for-profit organization in the island.

1.3.5.5 Risks

Operations of this nature require high degrees of existing social capital. In many ways, this project will be a challenge for the 'Ohana and its capacity to co-operate in and co-ordinate its own welfare. The mechanism suggested here outline the basic framework, the internal negotiation and mediation dynamics have not been elaborated here. Generally, instituting a functioning labor sharing process in a community entails extensive internal negotiations. There has been an effort here to scale up the reciprocal processes to associative levels (say, inter household to community) and that forms the potential area of project risk. However, the external inputs in this program is very marginal. In relative terms, the external investment in matters like skill training on low cost construction would not go waste. The community will benefit from such an intervention. Nonetheless, such benefits will not be widely distributed if the entire community cannot be mobilized for participation.

Self-help Housing Corporation of Hawaii—An Example

Self-help Housing Corporation of Hawaii currently runs a program to support low-cost housing efforts put up by community groups. Following are the key features of the program[7].

Team approach: families work together building homes as a team, not as individual owner-builders. Average team size is 10 families.

Technical assistance: a sponser agency provides technical assistence in financial counselling, procuring interim and permanent loans, teaching homeownership responsibilities, providing on-the-job instriction in home building.

Mutual labor: each family puts 32 hours/week of labor and helps each other build homes.

Construction Sepervision: families are taught skills on the job including masonry, framing, roofing, hanging cabinets, painting and finish carpentry.

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[7] Information provided by Claudia Shey, Executive Director, Self-help Housing Corporation of Hawaii.

Mass construction: each phase of the construction is undertaken for the units at the same time. All homes are completed at the same time and families mututally learn each phase of work.

Back-up family: if a family drops out a back up family assumes its place.

Construction time: with families contributing 65% of the labor, it usually takes 10-12 months to complete 10 homes.

Benefits: approximately 50% saving on the cost of homes, no down payments, stronger community, and acquisition of new skills by the community members.

Typical Start-up Costs

Permit processing	*$ 1000*
Architectural Fees	*$ 5000*
NGO Technical Fees	*$ 10000*
Utilities Fees	*$ 500*
Water	*$ 1000*
Electricity	*$ 100*
Contingencies	*$ 2400*
Total	*$ 20000*

1.3.6 Community Kitchen Project

A community kitchen will be located in the Kahikinui Community Center. It will introduce visitors to traditional Hawaiian food thematically organized to provide a taste of subsistence lifestyles. It will also serve to the local community. It will primarily use surplus harvest of the Moku or food produced and harvested by other traditional farming communities in Maui. Warm food will be served to the visitors as a part of the tour itinerary. This establishment is expected to support the production activities by providing market for the surplus produce, and facilitate eco-cultural tours in Kahikinui by providing an opportunity to taste and enjoy traditional food.

1.3.6.1 Justification

The kitchen is to provide a small scale food consumption and preparation space, so that local produce can get added value. It will help generate additional market to food producers, encourage community based activities and serve visitors. Surpluses from subsistence gathering like fishing and hunting as well as other potential agricultural

products can be channeled to the Kitchen for processing. It will also provide space for community and social gatherings, where the community can exchange ideas and talk stories.

1.3.6.2 Project Activities

Acquire the basic know-how on community kitchen operation from similar activities in other locations. "Community Kitchen Manual" published by the Cultivation of Community Self-reliance is a good resource. Exposure visits for key operators are also recommended.

Acquire necessary approvals. To serve food to the general public, appropriate permission from the Department of Health is required. Community support groups like the Cultivation of Community Self – Reliance are a good source of help and networking.

Other activities include setting up the necessary facilities, making schedules to assign operation time to individual/households, establishing a small group to maintain the Kitchen, cook and sell the food.

The physical space required for this activity is incorporated in the community center (The Village). Specific design consideration for a community kitchen has to be incorporated in that plan as well.

1.3.6.3 Immediate Objectives

To provide the community and visitors the opportunity to enjoy and appreciate Hawaiian food.

Mobilize one or two households to generate income from this activity.

To provide on-site surplus market for local food producers.

1.3.6.4 Long-term objectives

Under the same theme, the community kitchen can be expanded in scale and scope. It can, in the long run, become a restaurant co-operative.

1.3.6.5 External Support

External support for this activity will include assistance in permit processing and basic training to the lead household. In addition, a one-time financial support for facility expenses, maintenance fee and insurance would be required.

1.3.6.6 Risks

The successful operation of the Kitchen is closely related to the success of individual food producers. If there is no surplus production then the kitchen essentially becomes extension of city oriented consumption. In addition, the Kitchen should be able to generate minimum operation cost for which a threshold level market is required. Community support in this direction is also very valuable—the community itself is a market to the Kitchen. The community's collective support both in operation and patronage is essential for the success of this project, in the absence of which the Kitchen is likely to be unsuccessful.

1.3.7 Hānai Ka Piko o Ka Mo'omeheu (The Village)

This project build upon the 'Ohana's plan for a community center proposed in the Conceptual Land Use Plan. The purpose of this project is to create a community space for surplus exchange, information dissemination, visitor information, marketing of local produce and exhibition of historical artifacts found in the Moku. This "village" will be designed in a revivalist tradition of ethnic architecture, corresponding in form but adaptive in function of traditional Hawaiian villages. It would be the hub of the community activity of the 'Ohana and its interface with the outside world. It should bear the value of continuity, yet perform strategic modern day function of an economically and culturally productive community. Hina Mālailena project in Maui supported by OHA is an example to draw lessons in this direction.

1.3.7.1 Justification

This document envisages a vibrant community at Kahikinui engaged in multiple economic, cultural and environmental activities. It is the purpose of this project to consolidate those activities and provide space for them at a central location. In addition, it seeks to revive the image of ancient Hawaiian villages in these spaces, while instituting contemporary functions. This project meets both the spatial need and the cultural expression desired in a set up like Kahikinui. In addition, the idea of centralizing all community functions in one location help control the spread of construction in the Moku.

1.3.7.2 Project Activities

Select appropriate location, provide access and basic utilities to the site.

Commission a team comprising of a archeological historian, an architect and Kupuna to design the Village with impressions of the ancient settlements. The design should be low cost and as far as possible using locally available materials.

The construction of this site will be a local effort. The Community Housing Program will be mobilized to construct the structures and, ultimately, the management of facility this should be taken up by the program as well.

1.3.7.3 Immediate Objectives

To provide space for exchanges within the community and facilitate various communities based activities in one central location.

To institute a mechanism for maintaining and managing the facility and internally generate revenue to do so.

1.3.7.4 Long Term Objectives

This project is not expected to expand with time. Continued management and maintenance are the only two long term objectives.

1.3.7.5 External Support

The Village will not be treated as a real estate project. Since this project will be supporting various other projects, and in itself be an attraction to the visitors, it will be considered an infrastructural investment. Nonetheless, it contribution to other CBED activities remains crucial.

The external support for this program would include funding the entire package from design to execution. Since, the design is intended to be low-cost and the material used will also be largely local the cost of this project is not expected to be high.

1.3.7.6 Risks

The scale of this project has to correctly reflect the scale of community based activity expected in Kahikinui. There is a risk of this facility being either insufficient or under-used if it fails to assess the future activity.

Secondly, the construction activity would be new both in terms of style and technique due to the uniqueness sought in the design. Since the project is expected to be implemented by the 'Ohana—and not an outside contractor—this activity can take place only after Community Housing Program acquires certain maturity and enough skill and experience exists in the 'Ohana.

1.3.8 Hydroponics Project -

Hydroponics is a technique of agriculture that uses nutrient charged water instead of regular soil to grow plants. It is also referred to as "soil-less agriculture." In practice, the plants are fixed in a medium and nutrient charged water is circulated for absorption by the roots of the plant. This process uses less space and water compared to conventional soil-based agriculture. About 600 gallons per day of water can irrigate 80,000-100,000 plants. Totally organic methods can be adopted in this system and use of chemical pesticides is not required. About 4,000 square feet of hydroponics farm can provide income and employment for an entire household. This project intends to introduce and establish hydroponics in Kahikinui. The 'Ohana will mobilize interested members in a group, which will be trained in hydroponics techniques. Required technical and financial support will be sought from appropriate agencies and a hydroponics production system will be established. Initially, local market will be targeted and when the group acquires the necessary skill and experience the venture will be up-scaled to target larger markets. Through networking with other hydroponics producers, the producers will keep themselves abreast with new technology and markets.

1.3.8.1 Justification

Hydroponics has two specific relative advantages in Kahikinui. Since most of the land, especially in the makai area is formed on lava beds construction of hydroponics plant beds are easier. In any other case, concrete floors would be required for the same purpose[8]. In addition, volcanic beds are relatively more sterile and less infested with insects. Both form definitive advantage for hydroponics. In addition, peat gravel, which is in abundance in Kahikinui, is an excellent medium for the plant beds.

Moreover, given the soil composition of Kahikinui and state of the watershed conventional agriculture is feasible in very limited land of the Moku. Hydroponics can be a feasible form of alternative agriculture.

At Mālaekahana Farms in Oahu, a 350 feet long greenhouse in expected to yield yearly gross sales of $ 100,000 to 150,000. Scaling-up of operations in Kahikinui to that level can bring substantial income to the community at Kahikinui. In the spectrum of projects

[8] Inputs from interview with Craig Chapman of the Mālaekahana Farms.

recommended by this document, hydroponics remains one of the most profitable ventures. A more detailed business plan will be needed to further qualify this claim but the promises appear great.

1.3.8.2 Project Activities

Form a group of interested farmers to train them on hydroponics techniques and other related skills.

Find appropriate sites for housing hydroponics operation, construct required structures, install equipment and acquire other inputs.

Devise operation and management rules to monitor both the technical and financial aspects of the operation, clarify roles and responsibilities of each participating member.

Install and operationalize solar powered energy system for the pump and the fan in the green house.

Install and operationalize water supply system. Since water is the limiting factor in this operation in Kahikinui, base all capacity calculation on the basis of water availability.

Manage day-to-day operation of the farm.

Search appropriate markets within the community and out of it.

1.3.8.3 Immediate Objectives

To introduce and operationalize hydroponics system in Kahikinui as a feasible form of alternative agriculture.

To produce within the Moku, green vegetables for consumption as well as surplus sales.

To sustain and widen markets for future expansion.

1.3.8.4 Long Term Objectives

To scale-up the operation and participation to fully realize the potential of the technology and relative advantage of the place.

1.3.8.5 External Support

Provide training on the operation, marketing and technology of hydroponics to the participating group.

Provide financial as well as technical support in assembling, constructing and operationalizing the system.

- Connect producers at Kahikinui with other community based alternative agriculture projects for mutual learning and networking opportunities.

Commission a detailed expansion plan.

1.3.8.6 Risks

Kahikinui does not have water or energy supply at the moment. The pumping system used in hydroponics operations is not a high capacity one and usually a small solar system will be enough to provide power for the operation. But water remains a major problem. The 'Ohana is in the process of a getting a waterline to Kahikinui but it is not known yet, if there will be enough water for a large hydroponics operation.

Secondly, this operation does require an some initial investment and the risks of failure has to be effectively mitigated. Given the fact that most farmers taking up this project will be absolute novice to the process, the training has to be complete and rigorous and continued monitoring in the initial operation phase has to be provided.

1.3.9 Pili Pa'a I Pili Pono I Nā Lima Hō'ola (Agricultural Cooperative and Community Pasture)

"The 'Ohana will organize a cooperative for the growing of food and other crops and the raising of animals primarily for community self-sufficiency with surplus products being shared or bartered with other communities or marketed. The cooperative will assist in lowering production costs, assist in and coordinate production, coordinate the sharing and exchange of food goods within the community, coordinate the production of food goods for the 'Ohana's food service enterprise, and market products to the visitor and local community," (Covenants, 31).

"The cooperative will also establish one or several community pastures to provide a supply of beef and other ungulate meat products in the same manner as described above. The pastures will be strategically located to also serve as fire breaks," (Covenants, 31).

"All food products to be shared within the 'Ohana or distributed via the cooperative will be organically grown or fed organically grown grain or fodder. Within this context, the

use of chemical pesticides, herbicides, hormones, and fertilizers for the growing or raising of food products shall be prohibited. The cooperative shall establish and enforce guidelines and seek training programs and extension services to meet this goal. The cooperative will also apply to recognized national and international organizations to meet organically grown certification requirements," (Covenants, 31).

According to the Covenants, "Agricultural, community, and other entrepreneurial businesses consistent with the purpose and codes" defined by the Covenants can be conducted on each lot by the lessee for the benefit of the lessee. Therefore, the scale of this project will depend on the number of lessees who would like to establish farms on their lots or participate in ranching activities.

1.3.9.1 Justification

Kahikinui is an area rich with natural resources. In the Covenants, the 'Ohana states that "Natural renewable resources, such as timber, soil, quality of life, etc. are the chief capital assets of the community" (Covenants, 9). Such assets can be used to support spiritually, culturally, and ecologically compatible economic development. The agricultural cooperative and community pasture builds upon such assets.

The agricultural cooperative is a sustainable economic development project. It will help to maintain a clean environment, promote cultural sustenance, and reinforce 'Ohana-oriented values. It will help to preserve and enhance the quality of life at Kahikinui, (Kinsley, 11). Although the community pasture will also support agrarian and cultural values, grazing may have a negative impact upon the quality of the land.

Although the agricultural cooperative is ecologically sustainable it may not be economically sustainable or feasible. Although Kahikinui has vast amounts of land, water availability and soil quality are questionable. Kahikinui currently does not have a water storage system, nor does it have a water delivery system. Kahikinui needs an adequate, stable, and reliable water supply in order to develop a sustainable agriculture venture. In order for agriculture to be feasible, water must be affordable. Also, the soil and climate must be conducive to the growth of produce that can be exchanged within the community or with the external market. 'Ohana members may be able to begin some type of collective farming and ranching operation. However, without these vital resources, cooperative members will not be able to produce a consistent yield of products throughout the year and their returns for participation will be highly uncertain.

According to a soil survey conducted by the Natural Resources Conservation Service, the quality of land at Kahikinui is relatively poor. Soil analysis indicates that machines cannot till the land. It indicates that the type of agricultural activity most suitable for Kahikinui land is grazing.

Overall, the project is consistent with the 'Ohana's beliefs, values, and goals. The Covenants state that the 'Ohana would like to re-establish linkages with the surrounding environment. They also intend for new community members "to use the resources of the moku to provide food for the table, materials for dwellings, and other culturally appropriate subsistence and economic development activities while at the same time assuring the sustainability of these resources," (Covenants, 1). The project fulfills these objectives. Although the conditions at Kahikinui are conducive to the implementation of a potentially successful community pasture, the conditions at Kahikinui make it difficult to establish an economically feasible farming operation. In order to establish a feasible agricultural cooperative, the 'Ohana must find ways to address its water and soil limitations. Alternative agricultural techniques should be explored.

1.3.9.2 Project Activities

Farmers will cultivate crops and raise livestock. They will provide the food products that the cooperative will eventually market and exchange.

The agricultural cooperative will search for the proper external resources to help the farmers install the necessary infrastructure for crop and livestock raising, identify alternative cultivation techniques, provide technical assistance, and provide training seminars to interested parties.

The cooperative will help reduce production costs by purchasing resources in bulk. Farmers in turn will be able to buy these resources at lower prices.

The cooperative will help to coordinate crop and livestock production. It can offer members various services and benefits, such as access to low-interest loans and other funding opportunities.

The cooperative will also coordinate the sharing and exchange of food products within the community, as well as with other outside communities. It will identify markets, both local and international. It will promote Kahikinui produce and food products to visitors, the local community, and perhaps international communities through a Kahikinui marketing campaign. The cooperative will then distribute the products.

Plant and animal products shall be organically produced. Pesticide, fertilizer, hormone, and herbicide use will be prohibited. In order to achieve this, "the cooperative will establish and enforce guidelines and seek training programs and extension services to meet this goal. The cooperative will also apply to recognized national and international organizations to meet organically grown certification requirements." (Covenants, 31)

1.3.9.3 Immediate objectives

It will provide families with an immediate opportunity to establish small-scale farming and ranching activities for subsistence produce exchange. If enough surplus can be generated, it will give members an opportunity to generate income in a manner that is complementary to the 'Ohana's vision, culture, values, and Ahupua'a Concept of Planning and Land Management.

1.3.9.4 Long-term objectives

Long term objectives include finding higher yield agricultural techniques that can be applied within the soil and water limitations of Kahikinui. Installation of a water storage and delivery system should also be a priority.

If the 'Ohana can find the right technology, the 'Ohana can become self-sufficient. The 'Ohana can generate enough surpluses to market their produce to external markets. Various value-added products will also be created. Promotion of "the cultivation or sustainable gathering and value-added processing of understory plant materials for cultural, traditional medicines, cosmetics/personal care, ornamentals and decorative uses, and food products for community self-sufficiency and for economic development" will be a long term objective (Covenants, 32). If done properly, agriculture can be sustained and provide job opportunities for future generations as well (12).

1.3.9.5 External support

The agricultural cooperative and community pasture project will require external support for several different objectives. Agencies such as the United States Department of Agriculture (USDA) Cooperative Services Program can provide technical assistance and funding to initially form the cooperative.

Kahikinui will also need funding to set up the water storage and delivery system. The cloud catchment system could be pursued. The drilling of wells may also be required. A grant will be necessary to provide the finances for the establishment of such a system.

Relationships with the College of Tropical and Hawai'i Agriculture, the State of Hawai'i Department of Agriculture, and the State of Hawaii Department of Business and Economic Development and Tourism should be established. The first two agencies may be able to help with acquiring the necessary training. DBEDT can be contacted to help fund individual projects.

1.3.9.6 Risks

The 'Ohana risks of not having enough of the necessary resources to produce agriculture at the scale at which it would be economically feasible. The lack of a consistent and adequate water supply and quality soil makes the project risky to begin with. The farmers and ranchers run the risk of investing in a venture that is difficult to succeed in. The turnover rate of farm businesses is high. More farmers fail than succeed. There is also the risk of the 'Ohana using their renewable resources—such as soil and water—faster than they can be renewed.

1.3.10 Hō'a Ka Na'auao o Kahikinui (Training Package)

The Challenges of an intentional community differ from that of an existing community. Capacity enhancement both as human development effort and institutional capability building effort needs to be emphasized for Kahikinui. At the same time, the various CBED projects proposed in this document have specific skill requirements. It would be easier for the 'Ohana and the funding agencies to co-ordinate the various training and training need identification processes if the 'Ohana takes the initial initiative to identify training needs and institutions that deliver such training.

In addition, the 'Ohana members come from a variety of skill backgrounds. In keeping with the Hawaiian tradition of mutual learning, the 'Ohana can enrich its experience and knowledge through formal and informal horizontal learning practices within the 'Ohana and with other community based organizations that share similar interests.

This document has compiled a list of agencies in the appendix that provide skill and capacity building training. Given below are four broad categories of training areas to be considered:

Revival of subsistence skills. For some 'Ohana members the concept of subsistence living is going to be new. Basic agricultural production skill to gathering skills are required to follow the envisioned lifestyle in the Moku. The 'Ohana will take the initiative in inviting resource persons from other communities who can impart these skills to its members.

Training related to CBED programs. This category will include specific skill training identified by the various Community Based Economic Development Programs. It would cover a large range of training from low-cost construction technique to hydroponics agriculture.

Training related to NRM and CRM activities. This category would include skill training identified in the cultural and natural resource management plans. It would have training related to indigenous practices and knowledge like sustainable fishing practices, cultural

practices like environmental ethics in Hawaiian tradition as well as modern skills like archeological inventorying.

Training related to governance and capability building. Training on participatory planning, negotiation and mediation dispute resolution and communication should contribute to the institutional development of 'Ohana. The 'Ohana will identify its specific training needs so that funding agencies with matching interests can be identified for furthers cooperation.

1.4 Prioritization of CBED Projects

Community members were asked to rank the nine projects proposed in the CBED plan. After being given a brief narrative and written description of each project, the community members then ranked the projects. The most preferred projects were given a 1 and the least preferred projects were given a 9. The rankings given to each project were then averaged. The results of the ranking exercise is listed below, with the first project being the most preferred and the last project being the least preferred:

1) Ho'omalu A Mau 'Ia Ka Nahele (Trees for the Future)
2) 'Imi I Ke 'Alo o Kahikinui (Image of Kahikinui)
3) Ho'oulu Kaiaulu o Kahikinui (Kahikinui Community Housing Project)
4) Kahikinui Certified Community Kitchen
5) Hānai Ka Piko o Ka Mo'omeheu (The Village)
6) Mālama Nā Kumuwaiwai (Recreational Access Management Program)
7) Hydroponics Production
8) Nānā I Ke Ka 'Āina (Eco-cultural Tours)/Nānā I Ke Kumu (Native Hawaiian Heritage Tour)
9) Pili Pa'a I Pili Pono I Nā Lima Hā'ola (Kahikinui Farmers Co-op)

These rankings are based upon the preferences of those who are already on the land and are willing to participate in the projects immediately. Therefore, it is expected that these projects are to be implemented by members of the 'Ohana who currently reside at Kahikikui or who are actively participating in current 'Ohana endeavors. It will be this core group that will provide the manpower for these projects when they are funded and implemented. Another ranking exercise can be conducted in the future for the next phase of the 'Ohana. This future ranking exercise could be used to identify and prioritize other projects that the next phase of the 'Ohana would like to implement.

The results of the ranking exercise are important for the prioritization and the research and implementation of the various projects for 'Ohana members who are currently active. Although the projects that are most favored by the community will be looked into first, it is suggested that some of the lower-ranking projects be looked into simultaneously. Because several of the projects are inter-linked with one another, the success on one business could also help another to succeed. A synergism could occur with the projects

in concurrent existence. It is proposed that these projects be implemented concurrently with one another because they would help each other to prosper. For instance, although the tours ranked low in preference for the community, its existence would help to support the community kitchen—which the community ranked fourth. The tours would help to create a customer base for the community kitchen. Products processed in the kitchen could be used to accommodate tour participants. For example, the 'Ohana could prepare meals for tour participants as part of a tour package. They would be charged for meals that would be prepared in the community kitchen and then. Other proposed projects would also contribute to the success of the community kitchen, including the Kahikinui Farmers Co-op and hydroponics production. These projects would help to support the community kitchen by providing it with product for processing. It is important to look at how all of the projects are inter-related and to consider funding all of the projects, even though they rank low in community preference—for the success of one could help to build the success of others.

The information from the 'Ohana survey showed that much of the human skills and resources that are necessary for the implementation of the projects are available within the community. All of those who responded agreed that they would like to participate in CBED projects. Therefore it is promising that all the skills listed will be available for immediate use. All of the 'Ohana members who listed their skills are willing to contribute their time, skills, knowledge, and energy.

It appears that much of the skills that are necessary to start all of the projects are available within the active community. Those skills that could contribute to the implementation of these projects include construction (including heavy equipment operation) and land development, business, clerical, agriculture and farming, food production, manufacturing, education, cultural skills such as hula and craft-making, survival and recreational skills such as hunting and diving, and archaeological knowledge of significant sites in Kahikinui. Several 'Ohana members have also exhibited their entrepreneurial spirit by pursuing their own businesses. Most importantly, however, the 'Ohana members who responded are enthusiastic, dedicated, and willing to volunteer their time and energy in order to see these projects succeed.

2.2 Problem Statement

Historic land usage in Kahikinui has adversely impacted cultural and natural resources within the moku. Activities associated with cattle grazing as well as feral goats and pigs have contributed to the destruction and loss of traditional Native Hawaiian sites and native plants. In regards to traditional cultural sites, Erkelens (1994) states, "Ranching activities have directly impacted the presence of archaeological sites in the area by the mechanized clearing of vegetation that took place to increase the available pasturage. In addition, the destruction to archaeological sites from trampling and erosion caused by the passage of cattle and goats had major impact on the preservation of sites" (pp. 5).

Uncontrolled access to the makai management area also has led to adverse impacts on cultural and natural resources. This is particularly true for the eastern portion of the district in and around Manawainui and Mahamenui. On the eastern side of the moku, Pi'ilani Highway's alignment brings it much closer to the shoreline. This, coupled with incomplete fencing and inadequate signage denoting DHHL property are all factors in unauthorized entry by non–'Ohana members. Most "trespassers" are engaged in various recreational activities such as hunting, fishing, camping and hiking and many have caused damage to traditional Native Hawaiian sites by dismantling structures to use as building materials for firepits (or in some cases have used sites themselves as firepits). Moreover, they have left behind trash and there is also some evidence to suggest that there has been some looting of traditional Native Hawaiian sites in the area (Van Gilder & Nagahara, 1999). These activities indicate a gross disrespect for the land and its resources.

There is an absence of plans and policies specific to Kahikinui that address protection, preservation, and management of traditional Native Hawaiian sites and natural resources. This lack of a regulatory framework has been complicit in the continuing degradation and destruction of pre–historic and historic cultural resources and the continued mismanagement of natural and marine resources (see Section 3 for further discussion of natural and marine resources in Kahikinui). In the absence of any plans and policies, these problems will continue unchecked which could result in the irretrievable loss of valuable cultural assets. These sites represent a doorway to the past from which present and future generations of Native Hawaiians can learn about their heritage. The loss of traditional cultural sites translates into a loss of knowledge; knowledge which can be used as a means to perpetuate Native Hawaiian culture.

A Federal–State Task Force commissioned in 1982 to address the unreasonable waiting period to receive a homestead award and the need to accelerate the distribution of those awards, found that: "Rehabilitation of the Native Hawaiian implies that traditional and cultural practices of native beneficiaries, to the extent not precluded by law, should be respected and acknowledged by the DHHL in order to enable native beneficiaries to return to their lands and to provide for their self–sufficiency and initiative and for the preservation of their culture" (Ka 'Ohana O Kahikinui, 1993, pp. 2). The Kahikinui Resettlement Program, the Kahikinui Forest Reserve Conceptual Management Plan and

Section 2

2 Kahikinui Cultural Resources Management Plan

2.1 Objectives

Ka 'Ohana O Kahikinui has established an on–going working relationship with the State Historic Preservation Division (SHPD), Patrick Kirch, and Michael Kolb, to survey, inventory, and interpret the moku's traditional Native Hawaiian sites[9]. In addition, SHPD is assisting the 'Ohana in its cultural resource management planning activities. It is not the intent of this cultural resources management strategy to replicate or undermine those efforts, rather, the objective is to develop a document which lays out a set of proposed activities that will pave the way for the 'Ohana to assume management responsibilities of Kahikinui's cultural sites. Also, many of the activities proposed here can serve as building blocks for the eventual development of a comprehensive, long–range cultural resources management plan.

While it is recognized that DHHL is the ultimate steward of the land, it is also recognized that a lack of staffing and funding may inhibit DHHL from performing their necessary management responsibilities in an adequate and timely manner. Part of those management responsibilities are to ensure the protection of properties which have traditional cultural significance which is defined as the "... significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices" (Parker & King, 1990, pp. 1). The 'Ohana has expressed willingness and perhaps even the right to assume the responsibility of caring for and protecting the land and cultural resources of Kahikinui.

It is not within the scope of this document to identify specific sites for preservation, restoration and reuse activities intended by the 'Ohana. 'Ohana members in consultation with kupuna, ancestral descendants of Kahikinui, as well as other relevant and interested parties will make site identification. Additionally, at this stage, it may be premature to make irreversible decisions based on the available historical and archaeological data.

While the primary focus of this plan is the Makai Management Area, the issues and proposed projects and programs are applicable to the entire moku.

[9] In this document, the term "traditional Native Hawaiian site(s)" is synonymous with "archaeological site(s)". It was felt that the term archaeological sites implied a sense of ownership. By intentionally using the term traditional Native Hawaiian site(s), ownership and responsibility of these sites are being explicitly assigned to the descendents of the people and culture that created them.

Hānau o Kaua'i, he moku
Hānau o Ni'ihau, he moku
He ula a o Kaho'olawe
(Edith Kanakaole Foundation, 1996)

In this cosmogenic tradition, the earth and sky unite to bring forth the birth of the Hawaiian islands. Papa, Earth Mother and Wākea, Sky Father, mate to create the islands of Hawai'i and Maui. The two join in union from which a daughter, Ho'ohōkūkalani, is born and with whom Wākea desires for his own (Edith Kanakaole Foundation,1996). Wākea, with the assistance of his kahuna, establishes a new social code, the 'aikapu that separates men and women from eating together, as well as prohibiting women from eating particular male kinolau, body forms of the gods. 'Aikapu literally translates to "sacred eating" (Kame'eleihiwa, 1996, p. 144). The establishment of the 'aikapu gives an opportunity for Wākea to mate with Ho'ohōkūkalani (Kame'eleihiwa, 1992). The union between Wākea and Ho'ohōkūkalani results in a stillborn child, named Hāloanakalaukapalili, the long quivering stalk. From the burial site of this child, it is said the first kalo plant begins to grow. Wākea and Ho'ohōkūkalani mate again, bearing a second child with the same name, Hāloa. It is believed that Hāloa is the progenitor of all Kanaka Maoli (Beckwith, 1970). One of the primary lessons derived from this mo'olelo is the concept of mālama 'āina, which literally means to "care for the land" because it is the 'āina, which is an elder sibling to Nā Kanaka Maoli, the indigenous Hawaiian race.

Within the context of Native Hawaiian epistemology, the illustrated lesson is the importance of the 'aikapu as a "religion and as a central metaphor of separation around which traditional Hawaiian society was organized" that considered women an enigma. Classical understanding of the 'aikapu system suggests that the separation of men and women was due to the menstrual cycle and the "defiling" connotation it represents (Kame'eleihiwa, 1996). However, a varied perspective suggests that rather than depicting the menstrual cycle as so defiling that women were socially isolated in a separate house, this period of time reveals the supernatural connection between women and Hina, the goddess of childbirth, war, and politics. It is the sanctifying nature of this relationship that actually increases the mana, the power possessed by nā wahine. Another key point is that in the oral tradition, for any of the events to occur in establishing the 'aikapu, it is Papahānaumoku that must consent to the establishment of a new system. Thus, from these social determinants, women were not allowed to eat particular foods that were considered kinolau, physical manifestations and forms of the male akua, because their mana might have been overpowering and pose a spiritual threat to the male akua (Kame'eleihiwa, 1999, p. 33).

The metaphor alludes to much more than the separation of the male kapu from the desecration of female essence. It defines and "exemplifies the role of the kahuna in separating the divine Ali'i Nui, ruling chief, from the defiling influence of the maka'āinana," the commoners. This is accomplished by means of establishing a rigid kapu, defined and enforced social parameters of acceptable action and behavior, which arose in conjunction with the 'aikapu (Kame'eleihiwa, p. 36). In this comparative

the proposed Makai Area Management Plan represent rehabilitation opportunities for Native Hawaiians to reconnect with the land and with their culture. Alienation from the land has led to the loss of traditional land management practices and the Makai Area Management plan can help to "re–establish cultural linkages to the land and sea while fostering supportive relationships within extended families and with the rest of the community..." (Ka 'Ohana O Kahikinui, 1998, pp. 4).

2.3 Current Uses, Facilities, Access, Improvements

The makai management area is currently used by 'Ohana members to engage in cultural practices and for subsistence activities such as hunting, fishing and salt collecting. Some people identified as non-'Ohana "trespass" into the area and seem to also engage in hunting, fishing and camping activities.

The Department of Hawaiian Homelands has fenced most of the perimeter of the makai management area. Fencing along the eastern portion of the property is incomplete. DHHL signage in this area is also sporadic. These conditions have facilitated the unauthorized entry of non-'Ohana visitors into the makai management area which have led to some of the problems discussed in the problem statement.

A mauka–makai jeep trail with a gated entry at Pi'ilani Highway is located in the western portion of the moku near Luala'ilua Hills. This trail extends seaward and terminates near the shore at Wākea Point. The Hoapili Trail, a historic trail constructed between 1824 and 1940 (Ka Ohana O Kahikinui, 1993), traverses the moku and runs roughly parallel to the coastline. The Hoapili Trail intersects Pi'ilani Highway near Manawainui. It is in this area, where the highway's alignment brings it close to the shore that much of the damage to traditional Native Hawaiian sites and trash have been found.

There are no facilities and no built improvements in the makai management area. One camping area for use by 'Ohana members has been designated at Niniali'i and is served with portable toilet.

2.4 Guiding Principles

'O Wākea noho iā Papahānaumoku
Hānau o Hawai'i, he moku
Hānau o Maui, he moku
Ho'i hou 'o Wākea noho iā Ho'ohōkūkalani
Hānau o Moloka'i, he moku
Hānau o Lāna'ikaula, he moku
Liliopu punalua'o Papa iā Ho'ohōkūlani
Ho'i hou 'o Papa, noho iā Wākea
Hānau o O'ahu, he moku

He aloha nō au iā Niniali'i
Ke ali'i 'o Pi'ilani a Maui a Kama
Ka makani ka Moa'e e hiki mai he hoa aloha
He hoa kanaka kākou e ola
Eō mai ka 'ohana o Kahikinui
E ala e
(1999)

The salient feature of Kahikinui, and perhaps its most notable unique land feature, is its spacious coastal plain. As suggested by both cited literature and archaeological studies, the coastal area contains an abundance of fishing resources. Numerous fishing heiau, both ko'a and kū'ula varieties exist along Kahikinui's shores. There are also several hālau wa'a, canoe houses that remain intact. Another interesting feature is that along the relatively arid landscape, there exist numerous wiliwili trees. The wiliwili is a very buoyant wood, that in traditional times, was used mainly for making surfboards, outrigger floats, and fishnet floaters (Malo, 1951, p. 21).

The shoreline of Kahikinui varies in its abundance of fishing resources as well as its physical form. The coastal area is marked by a metamorphosing landscape that quickly transposes itself from flatland coastal reef areas that provide natural salt beds to cascading mammoth sea cliffs where schools of moi and uhu abound in the deep waters below. However, there is little limu along Kahikinui's shores (Handy, 1972, p. 276).

There is little written and oral documentation of pre–historic and early historic life in Kahikinui. Most of what is assumed about land use and settlement patterns has been derived from the archeological record and from known settlement patterns of nearby areas and/or environmentally similar areas.

For the most part, Kahikinui has been uninhabited since the mid 19th century (1860s) when large scale cattle ranching was introduced in the region, although early research indicates that Kahikinui may once have supported a population of approximately 1,500 to 1,800 inhabitants (Walker, 1931). Concentrations of traditional Native Hawaiian sites are located primarily in three zones–the coastal zone, the mid-elevation zone, and the upland zone. In the coastal zone, between the shoreline and the Hoapili trail, there exists a dense clustering of sites, including but not limited to habitation sites, heiau, burials, kū'ula and ko'a. Between the Hoapili trail and the Pi'ilani highway, the density of sites decreases dramatically. At the mid elevation zone, an area that roughly straddles Pi'ilani highway, habitation sites have been found even though the area is "...devoid of productive resources..." (Erkelens, 1994, pp. 93). In the upland zone, where the pastoral lots of the current resettlement project are laid out, there is also a fairly dense clustering of traditional Native Hawaiian sites. According to Dixon (1999), "A strong correlation was noted between the location of permanent habitation sites and the presence of underlying *'a'a* or *pāhoehoe* bedrock, most sites being located on or within outcrops of usable

understanding, what are the implications then of maka'āinana, the "common man?" The metaphor would suggest that through a unifying mo'okū'auhau, genealogical line, Nā Kanaka Maoli stem from the same piko, the central point of origin and birth through Hāloanakalaukapalili (Crozier, 1998).

This oral tradition illustrates a primary point of defining the relationship between Native Hawaiians and the 'āina. The 'āina is viewed as the kua'ana, the older sibling whose responsibilities in the 'ohana structure, a distinctive social and familial unit, is to ho'omalu (protect), hānai (feed), and to kauoha (command). The role of Nā Kanaka Maoli was that of the kaikaina, the younger sibling, whose responsibilities was to mālama (nurture), aloha (love), mahalo (respect), and to ho'olohe (listen) (Handy, 1972). Therefore, although there was a distinct social division that provided order to traditional society, all Nā Kanaka Maoli belong to one genealogical lineage that connects them to the 'āina, the land and all of its natural resources. More importantly, the cultural associations between Nā Kanaka and the 'āina are strengthened by the definitive spiritual connection of the akua, with their various kinolau forms, to both man and the environment. It is from this indigeneous perspective that traditional land use management and practices can be understood as well as applied in the moku of Kahikinui.

In the makai area management plan, efforts need to be guided by an understanding that the entire ahupua'a must be considered as one kino, one living body. The forests and dry-lands cover the slopes along Haleakalā crater. The pristine ocean waters and its resources are the foundation that supports and nurtures the coastal plain.

Another important aspect is the need to establish and conduct ceremonies recognizing and integrating cultural, spiritual, and environmental needs. These ceremonies would support all work done in the moku such as land restoration, land preparation, and cultural practices. These ceremonies would become the bridge between traditional behavior and contemporary need.

Using the established principles set forth in the Vision Statement, members of Ka 'Ohana o Kahikinui need to integrate a cultural focus into its management activities and try to incorporate cultural principles and ideals into every aspect of the planning process. The potential for the 'āina of this moku to be reawakened as a pu'uhonua, a refuge and wahi pana, a sacred place, exists as long as the 'Ohana recognize the importance to mālama 'āina, aloha 'āina, and laulima. These principles will aid this indigenous community to care for the land in a manner which recognizes the moku as a living spiritual entity.

2.5 Land Use and Settlement Patterns

Mai ke 'one o Kakuhuihewa
A hiki i ke kua o Luala'ilua
'O Waiakeakua ka hale a Kāne me Kanaloa

2.6 Place Names

In Hawaiian thought, natural areas possess mana, a spiritual power that exists because these areas either possess the elements of the gods or are manifestations of the gods themselves. The presence of the akua and 'aumakua are personified through the natural elements of rain, wind, sun, earth, cloud formations, and ocean forms that are significant to a particular place (Kamakau, 1951). The understanding and application of Native Hawaiian epistemology is vital to the future planning of Kahikinui. It is in the relationship that Nā Kanaka Maoli possess with the natural elements where we begin to see how the success and survivability of the community is defined by understanding, physically and spiritually, the roles that both man and the natural elements assume in creating a sustainable environment.

In defining this relationship with the land and natural environment, one key concept is the significance of place names. The name of an area usually reveals some information that describes the natural elements, historical events, spiritual associations, and cultural resources that exist for that area. David Malo, a noted Hawaiian historian, in his text Hawaiian Antiquities (1951), illustrates the significance of names given to rain and the relationship to a particular area:

> "There are many names used by the ancients to designate appropriately the varieties of rain peculiar to each part of the island coast; the people of each region naming the varieties of rains they deemed fitting" (p. 14).

In Pukui and Elberts' text, The Hawaiian Dictionary (1986), there are several hundred different names for rain that are named for the region it comes from, the manner in which the rain falls, the intensity of the rainfall, and other qualifiers. In Hawaiian poetry and song, rain often signifies joy, life, growth, and greenery. It can also refer to elements of good fortune (light rains and mists) or grief, sorrows, and tears (heavy rains). Rain can also signify the presence of gods or royalty, sexual relations, beauty, or even hardship (Pukui & Elbert, p. 509). According to the Kamapua'a tradition, the tempting of Pele by Kamapua'a is naturally staged where rain clouds and a verdant landscape encroach upon active volcano areas, including Kahikinui (Kame'eleihiwa, 1998, p. 140). Likewise, as there are numerous descriptions and associations with rain, so are there with all other natural elements, including wind.

Regarding the area of Kahikinui, the most prominent wind name that reveals itself in chants and other oral traditions is "he Moa'e ko Kahikinui", the Moa'e wind of Kahikinui. This wind is a dry yet powerful trade wind that blows along the coastal plain. The origin of this wind comes from offshore conditions, sweeping across the natural terrain. The association of the Moa'e wind to Kahikinui is mentioned in two Maui chants, speaking of how the wind "sweeps away the clouds, it sweeps constantly over the water courses." Another chant speaks of the Moa'e wind as one that "gathers the fish, Moa'e is the wind fish bag", suggesting that with the arrival of this wind, schools of fish

construction material. Surrounding slopes more often contained evidence of small–scale agricultural modifications, while shallow swales were occasionally found to contain more substantial agricultural terracing."

Three general theories of settlement patterns in Kahikinui have been proposed by various archaeologists. Erkelens (1994) succinctly summarizes the various theories as:

- *residential mobility* - a seasonal migration between upland (summer) and coastal areas (winter)
- *logistical mobility* - the centralized location at mid elevation allowed for easy access to upland and coastal zones and resources
- *exchange* - permanent settlements upland and on the coast with inhabitants of the two zones exchanging of products and resources

"The three strategies, residential mobility, logistical mobility, and exchange need not be regionally exclusive and probably all existed with varying degrees of success within south Maui" (Erkelens, 1994, pp. 94).

During the post–contact period, a number of factors altered the traditional settlement and land use patterns. Dixon (1999) asserts that habitation in the upland forest periphery was abandoned during the early post–contact period. Various factors may have induced abandonment and relocation to lower elevations near the Hoapili trail and the mauka horse trail.

For more detailed descriptions, analysis and interpretation of possible settlement patterns refer to Nā Mea Kahiko O Kahikinui (Kirch) and Phase I Archaeological Investigation, Hawai'i Geothermal Project (Erkelens).

Missionary census data recorded in the 1830s indicate that while Kahikinui still supported a Native Hawaiian population, it was significantly less as compared to nearby districts like Kaupō. By mid century, the number of native inhabitants in Kahikinui was quite small. As Dixon (1999) states, "by 1853, a census map compiled by Coulter (1931) suggests that only 50 inhabitants were living in the entire district, with some perhaps still residing at the village of Hanamau'uloa on the coast of Lualaʻilua *ahupuaʻa*." Since the mid 1800s, land use in Kahikinui has been primarily limited to cattle grazing. There are records of grazing leases that date back to 1876 (Ka 'Ohana O Kahikinui, 1993). In 1920, Kahikinui was designated as Hawaiian Home Lands. According to Dixon (1999), by the 1920s Kahikinui Ranch house "was the only locus of semi–permanent habitation in the district." In the subsequent decades following its designation, DHHL has leased Kahikinui to various lessees for cattle ranching, the final lease expiring in 1992. In the summer of 1999, DHHL finally awarded pastoral leases to beneficiaries who will soon be occupying the land.

kapa, and ʻawa, the ʻohana could request that the loved one be transformed into a shark ʻaumakua. If the kahu felt that all things were in order, the ceremonies would take place on the night of Kāne, the most sacred of all nights. At the dawn of this day, a fire was lit at the koʻa shrine of the ancestral shark. With the hoʻokupu offered along with the body wrapped in kapa, the prayers were offered to the ancestral deity. The distinctive markings of the kapa that wrapped the dead corpse would become the distinctive markings of a particular manō as the human form began the transformation to shark form. The distinctive markings would allow the family to recognize their family protector (Kamakau, p. 77). This shark ʻaumakua would become a family pet, whereby the value of mālama, aloha, and laulima are again exemplified. The ʻohana would be responsible to nurture and feed the shark, in turn the shark would offer protection, assist in catching fish, and in other ways ward off danger (Beckwith, p. 128). The relationship that occurred between ʻohana and manō ʻaumakua was a very friendly and intimate one. However, there existed a dualism, common in Hawaiian epistemology, whereas the manō ʻaumakua had the potential to be used for evil as a fetcher to kill an enemy. After post-Christian contact, the aliʻi became rigid against such evil practice but still retained much of the old gentler ways of associating with their traditional beliefs (Beckwith, p. 129).

In Maui traditions, there are many families that worship the manō ʻaumakua, for the specific reasons to have a puʻu pale, a protector in the sea. According to Samuel Manaiakalani Kamakau, noted Hawaiian historian, one of the major ʻaumakua associated with the moku of Kahikinui is the shark god, Kāneikōkala. Kāneikōkala (Kāne in the kōkala fish) was a manō kumupaʻa, an ancestral shark originating from Kahiki. The kumupaʻa were considered to be almost like guardian angels that possessed many kinolau forms, one of that was human. The body of this god was separate from his kinolau form as a shark, but the kōkala fish was consecrated to him. Kāneikōkala was a kind ʻaumakua that would assist people, who either capsized or were shipwrecked, and would bring them to shore. Kāneikōkala protected the shores of Kahikinui, and because of this, no family from Kahikinui would eat the kōkala fish, or even make contact with things that it may have touched (Kamakau, p. 87; Beckwith, p. 129). There are numerous accounts of fishermen from this area that were attacked by a large shark, perhaps sent by the powers of ʻanāʻanā, death. Often, the eyewitness accounts describe that upon a call for help, a smaller yet powerful shark would appear from nowhere and attack the larger shark, thus protecting the ʻohana member (Thrum, p. 122).

In another oral tradition, a story is told that explains the significance and purpose of the various koʻa and kūʻula sites constructed throughout the coastal plain of Kahikinui. Heiau koʻa were fishing heiau, most times built on a small scale close to the beach, in seacoast caves, or on top of sea-cliffs. The koʻa heiau is distinguished by a kuahu constructed were a puaʻa was baked and offered as a hoʻokupu, an offering (Kamakau, 1976, p. 133). It is suggested that pig was offered as a sacrifice because the puaʻa is one kinolau form of Lono. In this manner, by making an offering with the kinolau of Lono, the idea is that it is showing that Kūʻula's power, under the auspices of the Kū form, reigns supreme at that time. When the offering was made and the pig eaten, the koʻa was left exposed but the imu and its stones were covered with dirt. The purpose of koʻa heiau

are more abundant along the coastline (Alu Like, 1999). The description of this wind name in these ʻoli describes the natural element, associates it to a specific area, and subtly reveals the keen awareness that the kupuna had to the natural order of things.

Another wind described in other oral traditions is the "Kaiāulu", a comforting gentle breeze that originates from the ocean, moving up the coastal plain into the uplands. This wind envelops the entire moku, thus the name "Kaiāulu" is also another name given to describe the word "community." Thus, the use of the rain and wind names in oral tradition historically documents the natural element to the specific region and links it to a physical site, in this case, Ka Moku o Kahikinui (Pukui, 1974, p. 115).

2.7 The Essence of Moʻolelo: Mythological Associations

Nā ʻaumakua mai ka lā hiki a ka lā kau
Mai ka hoʻokui a ka halawai
Nā ʻaumakua iā ka hina kua iā ka hina ʻalo
Iā kaʻa ʻākau i ka lani
ʻO kīhā i ka lani
ʻOwē i ka lani
Nunulu i ka lani
Kāholo i ka lani
Eia ka pulapula a ʻoukou, o nā ʻōiwi o Hawaiʻi nei
E mālama ʻoukou iā mākou
E ulu i ka lani
E ulu i ka honua
E ulu i ka paeʻāina o Hawaiʻi
E hōmai ka ʻike
E hōmai ka ikaika
E hōmai ka akamai
E hōmai ka maopopo pono
E hōmai kaʻike pāpālua
E hōmai ka mana
(Edith Kanakaole Foundation, 1996)

In the traditional times of the ancients, the ʻaumakua and the kumupaʻa, ancestral deities, were protectors that counteracted any hana ʻino, evil action. The ʻaumakua were healers with powers to restore life. One form of ʻaumakua is nā manō, the sharks. Manō have many kinolau forms including limu kala, papaʻi, iʻa hilu, pauʻu. Manō are ancient and chiefly ʻaumakua (Kameʻeleihiwa, 1999). Often, the manō was a metaphor for particular aliʻi skilled in warfare. According to the Kumulipo tradition, manō were born in the second wā, the second time period, which would indicate that manō are ancient creatures and thus very powerful akua. Some ʻohana would take a loved one who had passed away to a kahu manō, a shark keeper and with proper protocol and hoʻokupu including a puaʻa,

(bonito); and the continued practice of constructing and maintaining kū'ula. In one story, 'Ai'ai observes Kānemakua, a fisherman, who was not having a successful venture. Prior to their meeting, 'Ai'ai sets up a kū'ula and ko'a 'āina by establishing triangulation markers at Koanui. It is at Koanui that 'Ai'ai meets up with Kānemakua. Kānemakua paddles out to 'Ai'ai, who is floating on a wiliwili log. Before Kānemakua reaches 'Ai'ai, 'Ai'ai greets Kānemakua, catches and gives him the first fish from this ko'a . 'Ai'ai gives Kānemakua the kuleana, the responsibility of maintaining this ko'a. 'Ai'ai teaches Kānemakua the value of generosity by sharing those things given by the akua with others (Kame'eleihiwa, 1999). Through this mo'olelo, the concept of mahele, of sharing in fishing tradition and protocol is introduced. Local fishermen that have grown up in Hawai'i often share their bountiful catch with anyone that might be on the beach. In addition, the introduction of various fishing techniques and the importance of maintaining a spiritual connection that essentially creates a link between man and environment are illustrated.

After establishing ko'a heiau in the Hāna and Kīpahulu district, the mo'olelo continues with 'Ai'ai constructing ko'a in Kaupō, then to Kahikinui. An unnamed ko'a heiau is noted in Manu's Hawaiian Fishing Traditions at Kahikinui. The ko'a heiau is in the deep sea, and there are places were pole fishing, ulua-fishing, and three kinds of net fishing were utilized due the physical landscape of the moku and the direction of the wind along the ocean. However, the kū'ula, in this region, are located on the shore (Manu, p. 22).

Another oral tradition associated with the moku of Kahikinui is the epic of Kāne and Kanaloa. These two gods are said to have created the fresh water springs and streams throughout the islands. The nature of dualism is exemplified by these two akua. Kāne is the giver of life and the provider of freshwater and living creatures with freshwater (Handy, et. al., 76). Kāne is associated with the directions of north and east, canoe building, sunlight, bamboo, taro, kō, wauke, pōpolo, and coral. Kanaloa is the god of the ocean, provider and keeper of living things in the sea, primarily the squid and octopus. Kanaloa is associated with the directions of south and west, canoe sailing, ocean winds, and bananas (Gutmantis, 1983, p. 5). Together, the two metaphorically represent the two essential elements that life can not survive without, freshwater and salt. Without either element, there is no continuance of life. At Kahikinui, there are two places, Waiakeakua (Waters of the Akua) and Kanaloa, where it has been suggested as places within the moku that the two akua opened up fresh water springs while looking for 'awa. Kāne would strike a piercing blow with his kauila stick, causing water to gush forth from the rock. The two would share in a bowl of 'awa and often upon their departure would plant 'awa at these sites.

The purpose of recounting these mo'olelo is to emphasize a major point: these kinds of stories depict events of important historical significance, illustrate the cultural concepts of mālama 'āina and aloha 'āina, and portray the events that created and formed that physical landscape. Through these mo'olelo, the connections of nā akua me ka 'āina i ka po'e Hawai'i (of the gods with the land to the people) are clearly shown and further provide documentation that Kahikinui has a distinct cultural landscape. 'Aumakua

was singular but essential: to bring life to the land by means of providing an abundance of fish. There were many fishing gods including but not limited to Kū'ula, Kānemakua, Kinilau, Kamohoali'i, and Kāneko'a. Ko'a were also built near freshwater sources as well to increase the abundance of 'o'opu fishes in streams, rivers, and fishponds.

Kū'ula were ko'a fishing heiau built by ali'i but maintained by the maka'āinana. The ali'i were the ones that possessed the mana that brought life to these structures and it was the role of the maka'āinana to foster those things that the ali'i provided. These types of heiau were built along the shorelines, and often times built in the water itself. The purpose was to maintain a spiritual connection to the akua Kū'ulakai, an older akua who was the propagator and sustainer of all living things in the deep sea (Kame'eleihiwa, 1999). Kū'ulakai is also associated with fishponds, a Hawaiian innovation not found in other parts of the Pacific (Manu, 1992, p. 10). In the dualism aspect, fish are considered to be both of male form, a phallic symbol, drawn to the land, depicted in the Papa and Wākea epic as female. The loko i'a, fishponds, are considered part of the land and are also female in nature. The metaphorical description of the loko i'a is like a womb, nurturing and feeding, and finally giving birth to a bountiful supply of fish.

In the construction of a kū'ula heiau, usually a kuahu, an altar is built composed of both black rock and coral stones. The black lava rock symbolizes Kū'ula, and the white coral represents Hinapukui'a. Kū'ula and Hinapukui'a lived at Leho'ula in the district of Hāna, Maui. Kū'ula had a human body, but was possessed with mana kupua, that allowed him an extra-sensory ability to control and direct the movement of fish and other sea creatures. Kū'ula devoted his life to fishing, building and constructing the first fishpond and setting upon a rocky platform, a hale that was consecrated. Kū'ula would offer the first fish caught to the akua, and because of his fulfillment to his kuleana of ho'omana, of increasing the power of the akua through offerings, the akua would bless Kū'ula with an abundance of fish. Kū'ula's ability became legendary and he was appointed to tend to the ali'i of that time, Kamohoali'i (Manu, 1992, pp. 2 - 7). The use of the two stones represents the union akua. The physical construction of the kū'ula represents an innovative fishing method. By creating and maintaining the kuahu that is built in the sea, the cultural application and practice of ho'omana and offering ho'okupu, the values of making the akua grow and become more powerful, becomes a continuing process of physical and spiritual growth. This *cultural perception* of the landscape and the *implementation* of giving ho'okupu, which were often the body forms of the gods such as mai'a, coconut, creates a fishing ground for fish accustomed to repetitive nature of being fed daily.

During this time, Kū'ula and Hinapukui'a, join in union and give birth to a son, who was named 'Ai'aiakū'ula, who was also blessed with mana kupua. 'Ai'ai was trained in proper protocol and events through his life propelled 'Ai'ai to become just as legendary in the fishing traditions as his father. Through various mo'olelo, 'Ai'ai brings four gifts that are utilized in fishing: Manaiakalani, the great fishhook of Maui; the leho'ula or luhe'e lure to catch squid; the pā hī aku named Kahuoi, a trolling lure to catch aku

2.9 Archaeology[10]

Winslow Walker under the sponsorship of the Bishop Museum conducted the first formal archaeological survey in Kahikinui in the late 1920s. According to Kirch (1997), Walker's research focused primarily on larger structures such as heiau. In the subsequent decades virtually no other survey work was undertaken in Kahikinui with the exception of a cave excavation in Mahamenui in 1961 by Kenneth Emory (Kirch, 1997).

During 1966 - 1967, Peter Chapman began surveying the ahupua'a of Kīpapa and Nakaohu. The work focused on the upland area and the more prominent makai areas. According to Kirch (1997), "a large part of the mauka region was mapped, as well as the entire coastal strip" (p. 10) of Kahikunui. Chapman never fulfilled his intention to completely survey both ahupua'a , thus his work was never published.

Patrick Kirch resumed Chapman's Kahikinui work in 1995. His intent was to fill in the areas missed by Chapman's 1966 - 67 survey. In the summer of 1996, Kirch returned to Kahikinui, this time focusing on "selected Kauhale settlement sites in the Kīpapa uplands" (p. 11). Returning again in 1997, Kirch this time focused his survey activities in the area between Pi'ilani Highway and the coast strip.

In anticipation of the resettlement of Kahikinui, the Department of Hawaiian Homelands contracted with the State Historic Preservation Division to survey the areas that would be impacted by the resettlement program. Beginning in 1995, SHPD's Maui Field team concentrated on the upland areas of three ahupua'a, Kīpapa, Nakaohu, and Naka'aha. In 1998, SHPD revisited Kahikinui, this time surveying the coastal area from Manawainui to the "the hypothetical border between Nakaohu and Nakaaha ahupua'a" (Van Gilder & Nagahara, 1999).

Other major archaeological work in Kahikinui includes Kolb's heiau study and Erkelens study for the Hawai'i Geothermal Project. Michael Kolb began a study of the heiau in Kahikinui in 1996. He has worked through most of the moku and has inventoried large heiau down to smaller household heiau. In 1994, Conrad Erkelens conducted an archaeological investigation as part of the Environmental Impact Statement for the Geothermal Project. His area of study focused on a narrow corridor that roughly follows the alignment of Pi'ilani Highway.

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[10] For specific details and results of the various studies, consult the following documents:
Walker, Winslow. (1931). Archaeology of Maui.
Erkelens, Conrad. (1994). Phase I Archaeological Investigation, Cultural Resource Survey, Hawai'i Geothermal Project, Makawao and Hana Districts, South Shore of Maui, Hawai'i.
R. M. Towill Corporation. (1995). Final Environmental Assessment: Kahikinui Kuleana Homestead Project, Kahikinui, Maui.
Kirch, Patrick (Ed.) (1997). Nā Mea Kahiko o Kahikinui: Studies in the Archaeology of Kahikinui, Maui.
Van Gilder, Cynthia & Nagahara, Valerie. (1999). Kahikinui District Makai Archaeological Survey: Preliminary Results and Management Recommendations. Draft Manuscript.

worship embodied the concept of spirit worship in which each family carried its own accounts concerning the association between the spirit and particular animals, plants, or natural forces. The mo'olelo of Kānekōkala connects a family's genealogy to the region from which this family resides, associates the family's 'aumakua to the region, and gives one account for the various place names along the coast of Kahikinui.

2.8 Written and Oral Histories

There is a dearth of historical documentation on Kahikinui. Most information must be gleaned from sources not specific to Kahikinui district. In the mid-60s', Peter Chapman conducted a series of interviews with a local informant, Mr. Sam Po. Po describes the landscape from Hāna to Honua'ula. In his accounts, he mentions a few of the prominent natural landmarks like Luala'ilua Hills, but also describes lesser-known features like fresh water springs and fishing grounds. Inez Ashdown in her Ke Alaloa o Maui, also makes several brief references to Kahikinui as she recounts various legends of Maui. Thomas Manupau, in a recently published journal of a journey he took with late Kenneth Emory of the Bishop Museum to the district of Kaupō in 1920, also makes brief mention of Kahikinui. The journal was originally published during the early 1920s, in the Hawaiian language newspaper, Ka Nūpepa Kūokoa as a series of weekly installments. During a side trip to Kahikinui, Manupau describes the landscape. Of particular interest are the enigmatic footprints embedded in the lava flows. Emory also wrote about these mysterious footprints in an article that appeared in the July 1, 1922 issue of Paradise of the Pacific.

To date, the most comprehensive historical resource published is the ethnographic research undertaken as part of the Environmental Impact Statement for the Hawai'i Geothermal Project. The proposed Hawai'i Geothermal Project area encompassed the south Maui region, which includes the districts of Kaupō, Kahikinui, and Honua'ula. Completed in 1996 by a multi–disciplinary team, the report focuses on gathering ethnographic information, particularly on traditional cultural places. The report provides an historical overview, an assessment of site and district significance, and ethnographic fieldwork which addresses among other things, religious practices, natural resources, native plants, subsistence activities, and gathering practices. While this report, like previous documentation is not specific to Kahikinui, there is much relevant material that can be culled from the report.

responsibilities defined by a mutual understanding that one element can not survive without the other. This perspective places the individual into the definition of the landscape and thus its success is measured, in part, by that individual's commitment to protect, perpetuate, and preserve those things left by those who have come before.

In terms of designing the cultural landscape of Kahikinui, particular areas need to be designated by the 'Ohana as areas of particular special cultural significance. These areas will function as learning centers for various cultural activities such as land restoration, stonework and heiau restoration, ocean management, and astronomical and navigational instruction.

The reality is that there are defined parameters established by federal and state agencies that have set legal precedent as to how sites should be addressed. There exists a necessity to find the common elements between the two epistemological frameworks and perhaps create an innovative methodological approach to cultural site management.

According to Kim (1998), the definition of "historical significance should include an evaluation of important legislation" (p. 3) unique in framing a legal understanding of land use management in the State of Hawai'i. Particular federal legislative measures have addressed the need to include alternative perspectives on land use management, including:

> The Archaeological and Preservation Act of 1974
> The American Indian Religious Freedom Act of 1978
> The Archaeological Resources Protection Act of 1979 (as amended in 1988)
> The Native American Graves Protection and Repatriation Act of 1990.
> Local and State Ordinances and Provisions (Kim, p. 3)

The strength of the Archaeological Resources Protection Act of 1979 is that it requires Native American tribes to be "notified prior to any negative impact on cultural and spiritual sites located on federal lands" (MacKenzie, p. 260). While this legislation does not directly affect Kahikinui as it is not federally controlled land (Kahikinui is designated as State-managed under the auspices of the Department of Hawaiian Homelands), the Act does set precedence in the language. In the legal documentation, it emphasizes that the inclusion of the indigenous perspective as essential in all land use related matters.

The Native American Graves Protection and Repatriation Act of 1990 evolved from a House Resolution (H.R. 5237, 1990) that expanded the definition of "cultural assessment" by requiring public and private institutions to be more accountable in matters regarding ancestral burial remains. The purpose of H.R. 5237 is to protect Native American burial sites and the removal of human remains, funerary objects, sacred objects, and objects of cultural patrimony on federal, Indian and Native Hawaiian lands. The Act also sets up a process by which federal agencies and museums receiving federal funds will inventory holdings of such remains and objects and work with appropriate

2.10 Cultural Resource Management: A Matter of Perspective

E hōmai ka 'ike mai luna mai e
'O nā mea huna nō'eau o nā mele e
E hōmai, e hōmai, e hōmai e
(Edith Kanakaole Foundation, 1996)

Varying perspectives of western vs. Native Hawaiian thought permeate issues pertaining to cultural site management and usage. The western perspective defines a cultural landscape as "a geographic area, including both cultural and natural resources, and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values" (Birnbaum, 1995, p. 1). The indigenous perspective defines the area not by the physical make-up of an area. Rather, it is the essence, the breath of an area that defines its significance. The physical and natural elements are representations of the presence of akua. The constructed sites are living tools left by kupuna, elders, to be utilized with proper instruction and understanding to its fullest potential. The indigenous perspective includes the observer into the definition of the landscape rather than some neutral external variable.

The western perspective considers the potential significance of a particular area based upon physical evidence that has been excavated or documented in a scientific manner. Contrary to the Native Hawaiian view of significance "... Archaeologists most often view cultural significance as relating to the site's ability to provide information about a culture, and/or its being a well–preserved "type" of that culture's creations" (Cachola–Abad, 1992, p. 19). Based upon the findings, choices are made that define which site is "more significant" than another site. However, the indigenous perspective does not apply a "one site vs. another site" approach. The totality of the cultural landscape is considered because of the familial and intimate association that exists between Nā Kanaka Maoli and the 'āina. "Hawaiians, as with others of traditional cultures, view the significance of a site not merely in terms of architectural features or research potential, but in relation to the mana (spiritual force) afforded the object, structure, and/or location as a result of its associations with deities or persons possessing great mana" therefore "... cultural significance of a site is best evaluated by those of the culture from which it derived since cultural significance is not empirically identifiable in the entity itself" (Cachola–Abad, 1992, p. 18).

The western approach to site management attempts to categorize the primary treatment of a site based upon a curatorship methodology. The site is analyzed, its defining features documented, and based upon an external framework of social values that "interprets" the significance of the landscape, a decision is made to capture this dynamic entity in a static form. Landscape interpretation, from a western framework, links itself to the physical integrity and salvageable condition of the site in question (Birnbaum, 1995, p. 12). The indigenous perspective, as mentioned, considers each piece of 'āina to be a living and breathing entity, whose responsibility is that of the Kanaka Maoli to mālama and aloha. The management of the cultural landscape is viewed as a guardianship, with reciprocal

build campfires, or in some instances use the sites as fire-pits themselves. People using the area also leave behind their trash such as bottles, cans and bullet casings. Van Gilder and Nagahara (1999) note a correlation between an area's amount of trash and its ease of accessibility. To a lesser extent, the activities of feral goats and pigs also a threat to traditional cultural sites.

Generally, looting of traditional Native Hawaiian sites has not been that large of a problem in Maui. Unfortunately, there have been some indications that looting of some sites in Kahikinui has occurred. More distressing still is that the looted sites shows evidence that the looters were familiar with archaeological field techniques (Van Gilder & Nagahara, 1999).

Unrestricted/uncontrolled access to certain portions of the makai management area has led to degradation of traditional Native Hawaiian sites. Sites that are easily accessible need increased monitoring. Addressing the unauthorized access to the makai area can mitigate most of these threats. The 'Ohana will restrict access to the makai management area by non–'Ohana, especially around known significant sites such as heiau and burials.

Activities[11]

Complete perimeter fencing along the eastern portion of the makai management area.

Restrict access of non–'Ohana members to a few specific areas.

Install additional signage designating the makai management area as DHHL property.

Provide fire-pits and trash receptacles at designated camping and fishing spots.

2.11.2 Development of External Support

Description

Development of external support will supplement the internal capacity of the 'Ohana and will assist them to achieve their cultural resource management objectives. External support can consist of cultural, technical and financial assistance. An entity such as a Cultural Practitioner Council or a Cultural Advisory Council will be developed which will do more than maintain an "advisory" role pertaining to general cultural matters, it will be held accountable for actions taken. Regarding "agencies of authority", the Native Hawaiian Burial Council is one of the few entities that exist with powers greater than an advisory capacity (Minerbi, et al., 1995).

[11] Activities to address immediate threats were suggested by Van Gilder and Nagahara (1999) in the Kahikinui District Makai Archaeological Survey: Preliminary Results and Management Recommendations.

Indian tribes and Native Hawaiian organizations to reach agreement on repatriation or other disposition of these remains and objects (MacKenzie, p. 262).

Regarding local statutes, in 1976, the Hawai'i legislature enacted a historic preservation law, codified in Hawai'i Revised Statutes, chapter 6E. According to the Native Hawaiian Legal Handbook, the Department of Land and Natural Resources administers the law, which was structured after the National Historic Preservation Act of 1966. This law requires DLNR to administer a comprehensive historic preservation program. As originally defined by HRS-6E, historic preservation is "the research, protection, restoration, rehabilitation, and interpretation of buildings, structures, objects, districts, areas, and sites, including underwater sites, significant to the history, architecture, archeology, or culture of this State, its communities, or the nation" (MacKenzie, p. 253). In 1988, Act 265 amended HRS-6E, whereby provisions were set up to include the ancestral burial sites of Native Hawaiians into the historic preservation law. However, a major failing of this amendment was that in the decision-making process, the indigenous voice was unheard. In 1990, the State legislature passed a bill, Act 360, which amended Chapter 6E of the Hawai'i Revised Statutes by providing procedures for determining the proper treatment of Hawaiian burials and established Burial Councils. The councils would determine the proper treatment of burials, inventory unmarked burial sites, and enforce penalties for violations against the burial law (Springer, 1999, p. 9).

Enforcement of codification, statutes, and laws, would be an effective solution to address management related matters to historical and cultural significance of various sites in the moku of Kahikinui. However, these legal resolutions are still framed in the context of a western perspective whose definition of "historical significance" is slighted by judicial precedence. Thus, there is a need to re-examine the existing dichotomy. Specifically, for matters pertaining to indigenous land use issues, the indigenous perspective must be made paramount to any alternative external perspective by right of defined kuleana, responsibilities, that are *inherent* between the indigenous community to its environment.

2.11 Management Activities

The following activities are intended to assist the 'Ohana in assuming management responsibilities of Kahikinui's cultural sites. The activities range from immediate and short–term projects of limited scope and duration to on–going, long–term programs.

2.11.1 Address Immediate Threats

Description

Immediate threats to traditional Native Hawaiian sites continue to be posed primarily from campers, fishermen, hunters, etc. that dismantle sites in order to use the rocks to

2.11.3 Staffing

Description

The role of the cultural resources staff or committee is to oversee the management of Kahikinui's cultural resources. The staff will provide administrative support to the Cultural Practitioner/Advisory Council. Management includes ensuring compliance with the stated goals and objectives of the 'Ohana's Long Range Cultural Resource Management Plan and reviewing CBED projects for compliance and potential impacts to traditional Native Hawaiian sites. Other functions would include on–going monitoring of sites, planning and scheduling restoration activities, and seeking financial sources and technical assistance to facilitate cultural preservation activities.

Activities

Identify 'Ohana members interested and willing to serve on the cultural resources staff/committee.

Assess the staffs' skills in relation to cultural resource management, and if necessary provide the staff with education and training opportunities to enhance their capacity to assume their management responsibilities.

2.11.4 Skills and Interest Assessment Project

Description

The goal of a skills assessment and interest project would be to determine the following:

- How many 'Ohana members, if any, have ancestral ties to Kahikinui. What knowledge do they possess about the district; can they shed light on the purpose, usage, significance, etc. of traditional Native Hawaiian sites.
- The level of knowledge related to Native Hawaiian cultural practices and traditions possessed by 'Ohana.
- The range of skills 'Ohana members have which can be applied to cultural site restoration and management. This skills would include, but not be limited to archaeological research (site identification, surveying, inventorying, etc.), ethnographic research and knowledge of traditional construction techniques.
- The interest level of 'Ohana members in participating in the revival these cultural practices and site restoration and management activities.

A thorough assessment of these skills, knowledge and interests constitute the foundation upon which Ka 'Ohana O Kahikinui can build a self–determined, cultural resource management program. The survey will identify what human resource capacity exists

According to Lowry and Umemoto, a key point in defining a community is that the "acceptance of historical perspective invariably becomes a determinant of futuristic outcomes." Another key point is that every public issue has competing stories (Lowry & Umemoto, 1998). Often times, whose story gets heard is dependent on the ability to "project" one's voice out to the community. In this case, levels of participation have developed over the last six years with the emergence of watchful grassroots community organizations, like the 'Ohana, that are willing to make their voices heard. 'Īlio'ulaokalani, a non-profit organization of cultural practitioners, has already networked their resources with other non-indigenous community and environmental organizations like the Outdoor Circle, Earth Justice, and Life of the Land. The objective for 'Īlio'ulaokalani, as the indigenous voice within this intricate network, is to insure the perseverance of Native Hawaiian gathering and access rights. If the 'Ohana can establish a linkage with such a formidable partner, the continuance of an indigenous-driven community initiative can be almost assured.

Funding/granting sources can assist the 'Ohana to jumpstart their cultural preservation activities including the preservation of cultural practices, documentation of cultural traditions and practices, educational/training programs, preparation of a Long Range Cultural Resources Management Plan, etc. Grants are viewed as seed money to initiate cultural resource management projects and programs. Once the full community is on–site and economic development projects have been implemented, it is expected that the 'Ohana will decreasingly rely on outside financial sources to support cultural resource management activities. Part of the profits from Kahikinui's CBED programs will be channeled to support cultural resource management initiatives.

Activities

Form a Cultural Practitioner Council or Cultural Advisory Council made up of selected 'Ohana members and representatives from the larger Hawaiian community.

Establish links with other cultural and indigenous organizations as well as non–indigenous community and environmental organizations with similar goals and objectives to expand the 'Ohana's resource and support base.

Maximize the potential of external linkages in primarily political and legal forums, thereby allowing the group focus to pursue educational and cultural agendas.

Locate funding and granting sources and acquire financial assistance to initiate cultural resource management activities.

and would fall short of being exhaustive (M. Kelly, personal communication, December 1, 1999).[12]

Kahikinui was awarded to a chief during the Mahele which in turn, was surrendered to the government. There is a single kuleana claim and accompanying testimony from Kahikinui. These testimonies are often used as a tool to reconstruct past land use patterns and lifestyles of an area. In the absence of those testimonies, it becomes all the more critical to conduct an exhaustive study before any decisions about cultural sites are made. The Hawai'i Geothermal Project ethnographic report can serve as a foundation upon which further ethnographic research can be based. While further ethnographic efforts may be considerable, it would be advantageous for the 'Ohana to gather all the information possible.

It is critical to locate and interview any living person(s) or their descendents who have ancestral ties to Kahikinui. These people are the best sources to identify significance of sites, usage, burials, etc. A first step might be to contact residents of Kaupō and Kanaio and see if they may be able to identify families that used to reside in Kahikinui. Kaupō presents a much more accommodating living environment than Kahikinui and has therefore supported a small, but continuous population. Kahikinui on the other hand has not supported human habitation for over a century. Because that continuity has been broken, it will necessarily take more effort to recreate an understanding of its past (N. Napoka, personal communication, November 16, 1999).[13]

This ethnographic information is critical to complement the archaeological record. Information on pre–historic sites such as their function and use are often not readily available. It has been common practice for archaeologists to interpret sites and assess significance based on the archaeological record alone; a methodology that relies on typologies based on physical traits. Additionally, judgements may be biased by the archaeologist's training and research goals (Cachola–Abad, 1992). It is recognized also that traditional cultural properties are not always identifiable through the archaeological record. "The existence and significance of such locations often can be ascertained only through interviews with knowledgeable users of the area, or through other forms of ethnographic research" (Parker & King, pp. 2). This may be especially true for burial sites.

Prior to the development of a long-range cultural resource management plan and the decisions to identify sites for restoration or preservation, it is necessary to acquire a much better perspective and understanding of past life in Kahikinui.

[12] Marion Kelley, Associate Professor of Ethnic Studies, University of Hawaii at Manoa (via email).
[13] Nathan Napoka, Branch Chief for Culture and History, State Historic Preservation Division, Department of Land and Natural Resources (via interview).

within the 'Ohana and what assistance needs to be acquired from outside the 'Ohana in order to conduct cultural resource management activities.

Activities

Determine whether the survey will be conducted by 'Ohana members or if outside assistance needed.

- Prepare a questionnaire and determine the appropriate venue for conducting the survey (e.g. phone, mail, and personal interview).

Assess the skills, knowledge, and interest of 'Ohana members in regards to cultural resource management activities.

Identify what types of assistance need to be acquired from outside the 'Ohana.

2.11.5 Ethnographic Project

Description

In preparation for the Environmental Impact Statement for the Hawai'i Geothermal Project (no longer being pursued by the State of Hawai'i), an ethnographic study was conducted of the southeastern coast of Maui which included the districts of Kaupō, Kahikinui, and Honua'ula. The purpose of the study, completed in May 1996, "... was to gather information on Hawaiian ethnographic resources in the regions of Puna and southeast Maui, particularly traditional cultural properties ... the concept of traditional cultural properties refers to those beliefs, customs, and practices of a living community of people that are associated with natural resources and pre–historic or historic sites." These aspects of culture have been passed down through the generations, usually orally or through practice. Properties to which traditional cultural value is ascribed often take on a vital significance, so that any damage to or infringement upon them is perceived to be deeply offensive to, and even destructive of, the group that values them (National Register Bulletin #39)" (Matsuoka et al., 1996, pp. 2).

Data on traditional cultural places was gathered from focus groups and interviews with persons who have ancestral ties or had knowledge of the natural and cultural resources of the area. A total of 37 informants were interviewed, 7 of which could be categorized as having genealogical ties to the area or were members of Native Hawaiian 'ohana who reside in the area and have ahupua'a tenant gathering rights. It must be remembered that the study area encompasses three districts and is not specific to Kahikinui. Therefore, the actual number of informants with knowledge specific to Kahikinui may be less than the 37 informants. A handful of visits were made to Maui in order to conduct these interviews. Informants were limited to people already residing in the area or nearby. Because of the project's time constraints, the depth of ethnographic research was limited

2.11.7 Education Program

Description

Future community activities of Ka 'Ohana o Kahikinui will continue to be an important part of developing cultural practices that will be inherent to Kahikinui. The cultural and educational programs implemented by the 'Ohana will perhaps provide a model for how the Department of Hawaiian Homelands can implement other community-building initiatives that are designed, implemented, and destined by Nā Kanaka Maoli. The cultural success of Kahikinui is dependent upon the integrity of cultural knowledge that will be used in an appropriate context. Through the support of cultural practitioners, community groups, educational institutions, and dedicated volunteers, the potential community growth of Kahikinui is limitless.

One strategy may be the development of cultural orientation immersion experiences for everyone involved with the community building effort. These immersion experiences can introduce the involved groups to the sanctity and cultural significance of the moku through site visits, historical information, videos, maps, and pictures and provide instruction on Hawaiian language, creation stories, environmental ethics, and cultural practices and values. The goal would be that each individual involved with the community effort, whether or not they are a direct lessee of the Homelands, develop a personal connection with the moku and will incorporate Hawaiian values into their daily behavior and practice.

On a more formal level, the 'Ohana may set up an internship/learning program with SHPD or a university to teach 'Ohana members inventory/surveying skills, etc. and other management practices. The goal of these educational initiatives would be to build the capacity of 'Ohana members.

By necessity, any educational program must include the children of Kahikinui. They are the future, the keepers of the flame; it is they who will perpetuate the culture and fulfill the promise of Kahikinui.

Activities

Assess the cultural knowledge of 'Ohana members.

Design an educational program to address the particular needs and desires of 'Ohana members, including its children.

Link with other Native Hawaiian organizations that can assist in designing and developing the 'Ohana's cultural education programs.

Set up an internship/learning program with outside institutions to enhance the internal capacity of the 'Ohana in regards to cultural resource management activities.

Activities

Review existing literature and other sources to determine the extent of historical documentation on Kahikinui.

Acquire the services of a qualified ethnographer, preferably someone conversant in the Hawaiian language and who possesses some knowledge of archaeology and cultural resource management issues.

Locate and acquire funding sources to initiate the project.

2.11.6 Documentation Project

Description

An existing conditions report will document and create a record of present conditions of the landscape and of the cultural sites in Kahikinui. The report establishes a baseline that can be utilized as an evaluative tool to ascertain the effectiveness of other plans and programs. In other words, the present condition becomes the reference point and will facilitate the documentation of restoration progress and the effectiveness of mitigation efforts. An existing-condition plan could include, but is not necessarily limited to, photographs, aerial photographs, scaled drawings, axonometric drawings, and video. This report will also form the foundation for any preservation and/or restoration plans and treatment alternatives.

According to Birnbaum (1994), "All features that contribute to the landscape's historic character should be recorded. These include the physical features ... and the visual and spatial relationships that are character–defining" (p. 7). The Existing Conditions Documentation Report may also be expanded to include flora and its relationship to traditional Native Hawaiian sites and the landscape. National Register Bulletin #38, Guidelines for Evaluating and Documenting Traditional Cultural Properties and Preservation Briefs #36, Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes may be used by the 'Ohana for developing documenting guidelines and procedures.

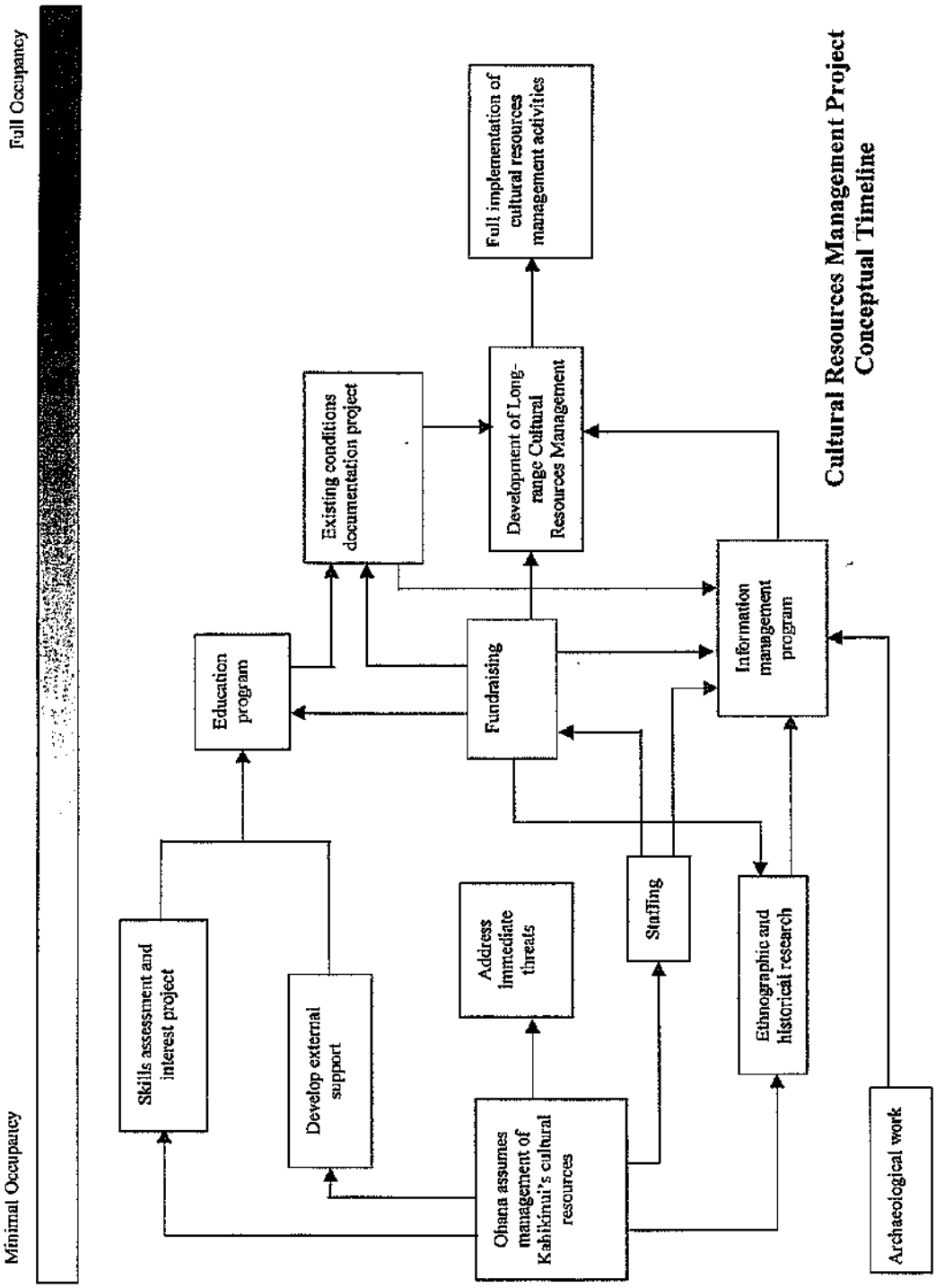
Activities

Determine if any 'Ohana members have the necessary skills to conduct any or all of the documentation activities or whether outside assistance is needed.

If outside assistance is needed set up training program with an organization to build the 'Ohana's internal capacity to undertake documentation activities.

Locate and acquire funding sources to initiate documentation activities.

Figure 4. Cultural Resource Management Project Conceptual Time



2.11.8 Information Management Program

Description

An information management program will assist the 'Ohana to systematically organize collected data pertaining to the traditional Native Hawaiian sites at Kahikinui. The system will facilitate compilation of research results from various archaeological sources, historical and ethnographic research, and burial sites. Compilation of this information into a database and even perhaps a geographic information system will greatly facilitate accessibility and management of information and above all, can serve as a valuable tool for site management and cultural resource planning. The cultural resources management staff will manage the program.

Activities

Assign cultural resources staff to assume responsibility of the information management program.

Cultural resources staff will research and select appropriate software and hardware requirements that best suit the 'Ohana's information management needs.

Locate and acquire funding sources (if necessary) to purchase appropriate hardware and software.

Define appropriate mitigation measures to protect cultural resources

2.11.10 Management Issues

The following discussion provides a brief overview of cultural resource management issues that have been identified at this point in time. These issues will be considered when conducting cultural resources management activities and in preparing the Long–term Cultural Resources Management Plan. As the 'Ohana progresses with its cultural resources management activities, it is expected that additional issues will be identified and considered.

2.11.10.1 Plans for restoration and reuse of sites

The 'Ohana's goal is to promote and support archaeological research, protect burial sites and restore traditional Native Hawaiian sites of religious significance, shrines and dwellings as well as agricultural and pedestrian infrastructure. These goals are established primarily to support the educational, religious, ceremonial, recreational, and subsistence living (i.e. cultural) use of the Kahikinui community and the Native Hawaiian community-at-large. The majority of the makai area, approximately 4,500 acres will be committed to cultural management activities. This will be an area of limited access, where beneficiaries may come to restore sites with the 'Ohana and where Native Hawaiians can practice their cultural traditions including the making of traditional crafts and cultivation of lā'au lapa'au. The 'Ohana will manage village sites and will protect heiau according to cultural resource management guidelines development by the 'Ohana.

The following objectives have been expressed in the Conceptual Community Land Use Plan for the Ahupua'a of Kahikinui (1993): 1) to conduct a comprehensive inventory of historic/cultural sites at Kahikinui and to prioritize these sites for restoration and utilization in traditional ways, 2) encourage 'Ohana members to attend historic sites curatorship training sessions, 3) involve 'Ohana members in the identification of priority locations for restoration, 4) allow the 'Ohana to develop and enforce management guidelines for the restoration and use of cultural resources, with consultation from various experts, and 5) allow Native Hawaiian beneficiaries to practice their cultural traditions in the Cultural Land Management Zone.

The 'Ohana have selected some preliminary sites for possible restoration and reuse. The area around St. Inez Church and Kahikinui House, mauka and makai of Pi'ilani Highway, has been identified to serve as a community center; a focal point for activities at Kahikinui. According to the Conceptual Land Use Plan (1993), "It would be a place where 'Ohana members trade goods, attend community meetings, engage in community sports activities, and attend educational workshops. ... In addition, other activities and facilities will be constructed for use by tourists or non–Kahikinui residents ... The

2.11.9 Development of a Long Range Cultural Resource Management Plan

Description

A Long-Range Cultural Resource Management Plan will provide the guiding framework for management activities. The plan will identify and prioritize specific sites for interpretation, preservation, restoration, and economic use based on a wide array of considerations such as the cultural resources management objectives developed by the 'Ohana, site significance, community based economic development project proposals, project costs and available finances. The plan will also detail mitigation measures to address anticipated and unanticipated impacts to sites, set benchmarks, provide evaluation and assessment tools and methods, and make further recommendations as the 'Ohana's management efforts grow and evolve.

After further ethnographic and other historical research is completed the 'Ohana will be in a better position to make determinations as to site significance and the designation of sites for various activities. These determinations will be made with the input of kupuna, genealogical descendents, beneficiaries and other relevant entities.

Ethnographic and historical research should be initiated immediately or in the very near future. Research results, along with archaeological data will provide the 'Ohana the foundation upon which to develop specific management goals, objectives and policies. Concurrent with the on–going research, the 'Ohana will work to establish a cultural practitioner/advisory council and linkages with other Native Hawaiian organizations. During this period, the 'Ohana with appropriate consultation will develop cultural resource management goals and objectives, strategies to accomplish those goals and objectives, a timeline for activities and acquire startup money for projects and programs. As these activities wind down, it should dovetail with the arrival of beneficiaries (approximately 3 to 6 years) at which time there will be an on–site community that can actively participate in preservation and restoration activities such as cultural practices workshops and site restoration.

The long-range cultural resources management plan will be assessed at regular intervals and amended to reflect management achievements and the identification of new goals and objectives. It is a dynamic, constantly evolving document that will adapt to the needs and desires of the growing and changing community at Kahikinui.

Activities

Locate and acquire funding sources to initiate the development of the Long–term Cultural Resources Management Plan.

The 'Ohana, in conjunction with the Cultural Practitioner/Advisory Council, will develop cultural resource management goals and objectives, strategies to accomplish those goals and objectives, and a timeline for activities.

2.11.10.3 Registered sites

Nine sites are listed on the State Register of Historic Places. While listing does not preclude any of these sites for restoration and reuse for subsistence or economic purposes, listing will slow down the approval process as all restoration and reuse plans must go through a review process with SHPD. The following is the list of registered sites in Kahikinui, their State designated site number, and the date it was entered into the State Register.

Site Number	Site Name	Hawai'i Register
50-50-15-179	Alena Habitation Site	5/18/81
50-50-15-182	Luala'ilua Heiau	5/18/81
50-50-15-1160	Kaluakakalioa Cave	5/18/81
50-50-15-1161	Luala'ilua Cave	5/18/81
50-50-15-1162	Papakea Petroglyphs	5/18/81
50-50-15-1164	Hanamau'uloa Complex	1/14/78
50-50-15-1170	Kīpapa Archaeological District	5/18/81
50-50-15-1389	Luala'ilua Terrace Complex	5/18/81
50-50-15-1536	Kahikinui House	5/18/81

2.11.10.4 Preliminary site selection by SHPD for preservation for public education purposes

Van Gilder and Nagahara (1999), in her draft report of the Kahikinui District Makai Archaeological Survey recommends two sites that are of interest to SHPD for preservation for public education purposes. The two sites are the areas around Kamoamoa and Uliuli. These sites were recommended for the following: 1) the areas possess a wide variety of sites within close proximity, 2) they are easily accessible relative to other sites in the district, 3) the amount of historical documentation available for these sites, 4) there is already a foot-trail to the area which is "only mildly difficult" and marked (albeit by vandals), and 5) the harsh coastal environmental discourages vegetation growth, therefore vegetation clearance and maintenance efforts will be minimal.

Public education programs might include tours guided by 'Ohana members to school groups or special interest groups "... with supplementary written materials provided by our office, or on–site signage, or some combination thereof" (Van Gilder & Nagahara, 1999).

The 'Ohana needs to identify how these plans fit in with their overall objectives for the makai management area as well as their community–based economic development plans.

community center will be the focal point for the community and visitors, where information, practices, and goods can be shared and where the 'Ohana can solidify its mission and coordinate its community work activities" (pp. 40). The village just mauka of Pi'ilani Highway, near Kahikinui House could be restored and utilized to house one or several of the proposed community activities envisioned for the area. Other preliminary selections include the fishing village at Hanamau'uloa in Luala'ilua and a nearby Hale Wa'a. The Hoapili Trail, is also preliminarily planned for restoration, however, due to the sensitive nature of the trail and nearby sites, access will be limited to 'Ohana members and their guests.

As further historical and cultural research gets conducted, greater understanding of land usage in Kahikinui and the significance of particular sites will be known. As a more comprehensive, long–range cultural resource management plan evolves the selection of these sites for restoration and reuse purposes may be reconsidered.

2.11.10.2 Long–term threats

Potential long–term threats to traditional Native Hawaiian sites including burials are from exposure to weather, economic use, and the general increase in human activity in and around sites. The threats posed by the utilization of sites for economic purposes are not quantifiable at this point, but general protection measures should be implemented until specific economic uses are proposed and specific impacts are identified. Protection measures might include designating buffer zones around sites preliminarily identified for preservation because of their special cultural significance.

Proposed economic development projects will be reviewed prior to implementation to ensure conformity with cultural resource management goals and objectives and to identify potential impacts associated with those projects. Implemented economic development projects utilizing or located near traditional Native Hawaiian sites will be subjected to ongoing monitoring and assessment to ensure that those sites are not adversely impacted.

Any proposed economic development project that involves land alteration may be required to conduct a reconnaissance survey before any construction begins to identify the potential of uncovering traditional Native Hawaiian sites. If there exists a high potential, a more intensive survey will be required to identify and document those sites and to prepare an appropriate treatment plan. If, during the process of land alteration, sites are inadvertently discovered, Draft Hawai'i Administrative Rules Title 13, Department of Land and Natural Resources, Subtitle 13 State Historic Preservation Division Rules Chapter 280 specifies procedures to be followed in the case of inadvertent discoveries of historic properties during a project. Chapter 300 specifies the rules of practice and procedures relating to the discovery of burial sites and human remains.

> Westerners have much to learn philosophically and religiously from the Hawaiian view. We too often see ourselves as divorced from the universe, as so superior to it that we can use it as we will. We are now beginning to realize that, with such an attitude, we can destroy not only our environment but ourselves as well (p. 7).

Ka 'Ohana o Kahikinui encourages its members to begin conducting they're own cultural assessment of those areas in the moku utilized for hunting, gathering, fishing, and other cultural-related or subsistence-related activities. The need to document these activities becomes more imperative as future cases involving land use related issues (such as the recent PASH clarification case) continue to present themselves. It is also critical that the cultural knowledge and values that flourish in the members of the 'Ohana be incorporated into every aspect of community-building activity and curriculum development. By allowing the indigenous perspective to set the standard, the voices of our kupuna shall always be acknowledged and respected.

2.11.10.5 Bridging cultural resource management and economic development

How can the 'Ohana continue to engage in both community economic development projects and address the preservation of traditional and customary values and gathering practices, if precedence outside the moku boundaries purports a persistence of abuse of natural and cultural resources? According to Minerbi (1998), the goals stated for the global trends of Pacific Nations are to 1) maintain cultural identity; 2) achieve economic stability; and 3) maintain environmental security. The role of grassroots organizations, like the 'Ohana, is to actively pursue its goals, learn from past experiences, and re-engage its directive for future development. The only way this pursuit can achieve success is by means of redefining the approach to indigenous land use. In short, the epistemology exemplified in most current policy making decisions evolve around concepts of commercialization of resources and engaging in active forms of profit maximization. Sustained economic growth is a prerogative, but the role of cultural resource management is to insure that the growth does not and will not infringe upon both the pristine and spiritual nature of the moku of Kahikinui. Unless there is a proactive attempt to set new standards based upon both indigenous and contemporary frameworks, the status quo will remain and abusive land use practices will continue. The metamorphosis begins with analyzing the initial stages of the planning process for this community.

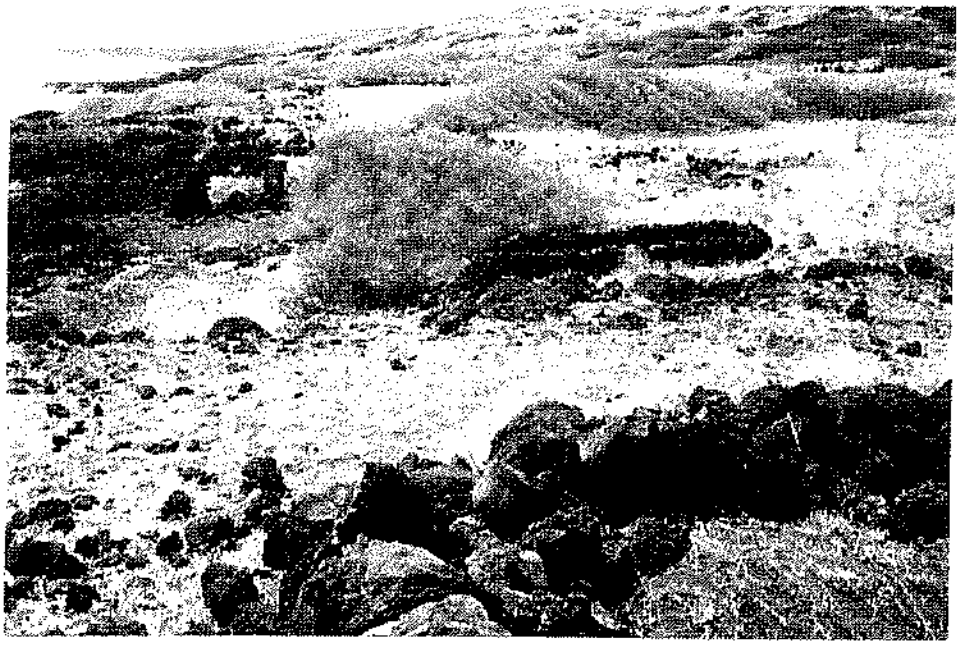
For the 'Ohana, a key point is that community participation needs to occur prior to any type of "assessments" initiated by commercially driven interests. In other words, instead of reacting to proposed actions after the issue has been introduced to the public, both the 'Ohana and cultural practitioners need to actively participate in the "mapping" of their community resources whether it is land, materials, or its people.

Regarding issues of site restoration, protection and the implementation of economic and cultural projects, the challenge to the Kahikinui community is to defining how the core values of the community can be incorporated, and more importantly, maintained in the projects as the community continues to grow and flourish.

2.12 Conclusion

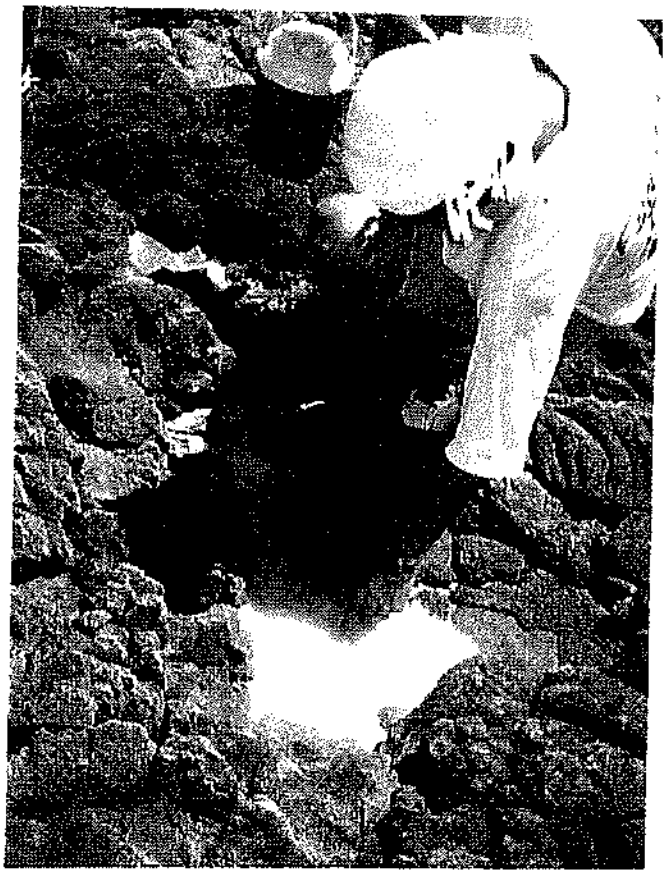
The 'oli cited in the Guiding Principles of the Cultural Resources Management Strategy calls upon the ancestors of Nā Kanaka Maoli to guide and bless those who ask for the ability to physically, mentally, and spiritually pursue the goal at hand. It depicts the energy upon which Nā Kanaka Maoli call upon: the thunders of the heavens, the crackle of lightning, the surge of power from heavens to bless Nā Kanaka Maoli with knowledge, strength, intelligence, wisdom, foresight, and power.

Jean Charlot wrote an article (1979) which speaks from the perspective as a non-Hawaiian. The points emphasized by Charlot are based upon a need to invoke an individualistic change in thinking before any public policy can be initiated:

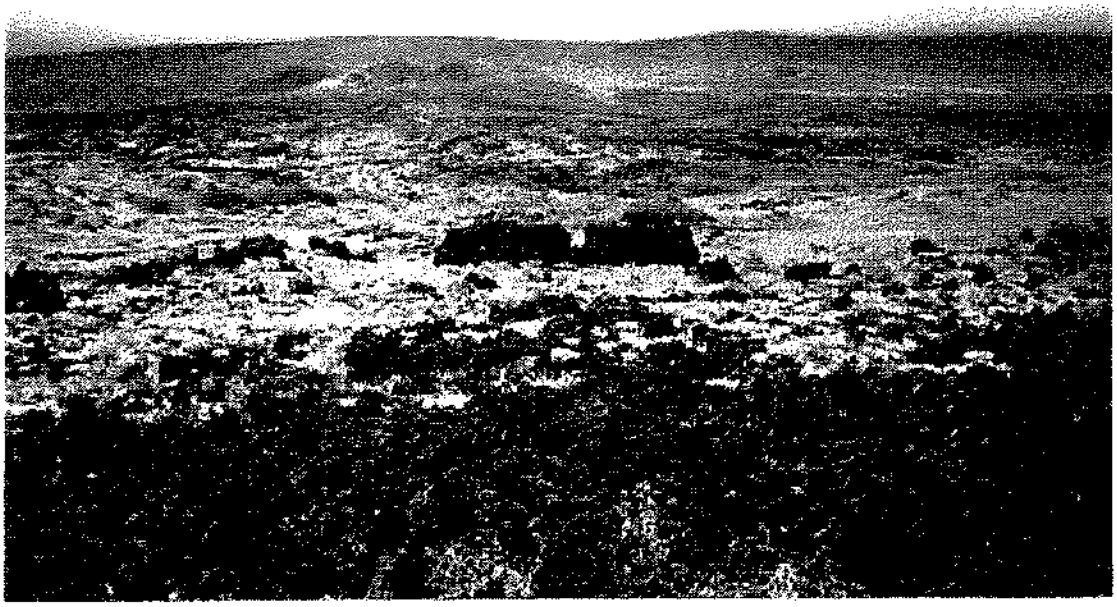


Ruins of ancient sites

Naturally-occuring salt pans on a'a rock on the coastline



Ancient Hawaiian sites pointing to Tahiti at Kahikinui



Under each subsection, recommendations are presented in the form of specific activities that the 'Ohana can undertake.

3.2 Kahikinui Profile

3.2.1 Natural Resources Profile

The moku of Kahikinui is rich in natural resources that are, for the most part, untouched by modern development. Seven miles of coastline, south of the Pi'ilani Highway, are rich in historic sites and native species. The panoramic view of a continuous, undisturbed shoreline is one of Kahikinui's most unique assets. The following provides a general profile of Kahikinui's natural resources and environment.

Geographical Description

The moku of Kahikinui covers an area of 22,809 acres where much lava flow is visible. It is located at the southern slope of Haleakalā in the district of Hāna. The parcel of land is seven miles long and six miles wide, with elevations that range from sea level, (along parts of the coast) to 10,000 feet along the mauka side of the moku. Kahikinui is 32 miles from Kahului, eight miles from Kula, and 20 miles from Hāna. The moku contains several pu'u (hills), mainly forming the Luala'ilua Hills. There are also several large gulches and gullies along the eastern side of the moku. The coastal area of Kahikinui is characterized by swift ocean currents and rocky lava splash zones that precipitously drop-off at the coast. The swift ocean currents prevent most fishermen from spearfishing offshore. There are no safe swimming beaches, due to crashing waves, rocky reef areas, and powerful ocean currents.

Climate

Kahikinui has a climate that is somewhat unique. The average temperature ranges from 82°F at the shoreline to 62°F mauka. Average rainfall ranges 10 -15 inches makai and 20 -30 inches mauka. The influence from the ranges in temperature, rainfall, and the configuration of recent lava flows has created diverse variations in vegetation between the mauka and makai regions of the moku.

Vegetation

The land south of the Pi'ilani Highway supports a mixture of native and non-native dry-land plants. Between the 'a'a lava flows, fields of pili grass (*Heteropogon contortus*), a'ali'i (*Dodonaea eriocarpa*), pa'uohi'iaka (*Jacquemontia ovalifolia*), and other native grasses can be found. Non-native species include lantana (*Lantana aculeata*; family name: *Verbenaceae*), haole koa (*Leucaena leucocephala*), and kiawe trees (*Prosopis pallida*). The most prominent vegetation in the makai area is the native Hawaiian

Section 3

3 Natural Resource Management Plan

3.1 Introduction

This section identifies appropriate guidelines and techniques for restoring and sustaining the natural resources of the moku of Kahikinui. Recommendations made within this section are intended to provide a guideline for both the community of Kahikinui and other stakeholders of the Kuleana homesteads program including sectoral agencies of the State. Many of the families that make-up the community of Kahikinui are not yet living on the land. This should encourage the evolving community of Kahikinui to revisit this plan to complement the community's evolving vision and quest for continuity. This document intends to set that process in motion.

This section begins with a profile of Kahikinui, including both the natural resources and their users. The long-term objectives of natural resources management provide the guideline for the subsequent sections. Once long-term objectives have been identified, the community of Kahikinui can begin collecting baseline data to document the conditions of the natural resources in the management areas. This information can then be used to define appropriate boundaries for the makai and ocean management areas of Kahikinui. This will be the first step in determining long-term sustainable uses of natural resources.

Users of natural resources play an important role in ensuring that the resources are not over-harvested. Therefore, it is necessary to establish for a code of conduct in utilizing the natural resources of the makai and ocean management areas. The communities of Kahikinui will assume active responsibility in sustainable management and use of resources at Kahikinui. There is a need to implement agreeable norms for resource use and replenishment activities related to the natural resources of the moku. While developing the framework for natural resources management and education, it is recommended that the 'Ohana create a *Kahikinui Makai and Ocean Management Board* to oversee the makai and ocean management areas. The Board, as a vehicle to achieve natural resource management objectives of the 'Ohana, will develop procedures for monitoring and enforcing Kahikinui's natural resource management guidelines. These efforts of the 'Ohana can ultimately be coordinated with other coastal management efforts along East Maui that complement Kahikinui.

This report also includes subsections on appropriate techniques, resources, and activities relevant to natural resource management in Kahikinui. Information on the following topics is included: 1) alternative natural resource management techniques, 2) environmental education for visitors and new residents, 3) external support and networking resources, and 4) funding opportunities and resources. The final subsection summarizes program activities identified in the Natural Resources Management Plan.

Kahikinui regularly attend monthly 'Ohana meetings and participate in various community-based activities and decision-making processes.

The residents of Kahikinui predominantly use the natural resources in the moku for subsistence purposes. The residents place highest priority on fulfilling subsistence needs of the community. Subsistence uses are, therefore, valued above all other uses of the resources. As the residents gradually grow in number and the community acquires a larger form, the residents of Kahikinui will need to assure that their natural resources will sustain them as well as the future generations that will follow.

Marine Resource Users

The Kahikinui marine resources are affected by two sets of users. They can be divided into terrestrially based users and ocean-going users. The terrestrial users primarily consist of the community of Kahikinui and non-resident visitors. Kahikinui does not have existing boat ramps for launching ocean-going vessels. Therefore, the ocean-going users must enter the coastal area of the moku from outside Kahikinui. These users are predominantly non-residents of Kahikinui.

3.3 Natural Resource Management

3.3.1 Long-term Objectives of Makai Area NRM Plan

Resource Sustainability

The 'Ohana is responsible for ensuring sustainable use of coastal resources for the current and future generations of Hawaiians residing in Kahikinui. For a community that utilizes natural resources for subsistence purposes, resource sustainability is a clear priority—an issue directly linked to the sustainability its of livelihood. Therefore, there is a direct incentive for the community to adhere to appropriate codes of conduct in utilizing the makai resources. The explicit mandate and the underlying incentive further justify the importance of the community's role in managing the natural resources of the moku. The community needs to acquire direct control of resources upon which their subsistence is dependent and have the ultimate responsibility as well as authority to manage vital resources of the land. With this in place, state agencies such as the Department of Land and Natural Resources (DLNR) and DHHL will benefit in the following ways:

- The complementary processes of community-based monitoring, enforcement and management will greatly enhance state efforts in Kahikinui.
- State agencies, in cooperation with Kahikinui's community management efforts, will learn from the community's knowledge of its resources. These management efforts

wiliwili tree (*Erythrina sandwicensis*) which takes root through the lava rock. The 'Ohana has also noted the presence of 'uhaloa (*Waltheria indica*), a native plant used for lā'au lapa'au (traditional native Hawaiian healing practices that utilize medicinal plants).

Animal Life

Cattle, feral goats, pigs, and deer are abundant in Kahikinui. Problems of erosion and native plants' destruction are caused by the abundance of feral goats, cattle, pigs and deer in search of food and water. These feral animals also assist in the spread of non-native species by spreading seeds through their feces, and through seeds that cling to their fur coats. Past goat-eradication efforts and open hunting seasons in the moku have not been successful in significantly reducing the amount of goats in the area. Further eradication must be a priority for the restoration of native plants in Kahikinui.

Lava Tubes

There are many underground lava tubes or caves in Kahikinui. These have, historically, been known to serve as shelter and storage locations. In addition, many of these tubes in the makai area are known to contain fresh water springs. In past years, these springs served the resident populations' drinking water needs.

Ocean

The ocean, with its deep-sea swells, brings marine life to the shores of Kahikinui. Fishermen accounts testify to the abundance of fish in the region, particularly due to the presence of brackish waters created by freshwater flows from gulches and underground springs. Fishermen say that the mix of fresh and salt water along the shoreline hosts an array of sea life. For a complete listing of fish that are known to be found along the shores of Kahikinui, see *Management & Subsistence Information on Fish Found In Kahikinui* under Appendix C.

3.2.2 Users of the Makai and Ocean Resources

The Community of Kahikinui

The community of Kahikinui consists of both families currently living on the land, and families not currently living on the land, but that have signed Kahikinui Kuleana Homestead lease agreements with the Department of Hawaiian Homelands (DHHL). Those families not currently living on the land are required to build homes on their lots within a specified timeframe. The majority of the community is not currently living on the land in Kahikinui. The individuals currently residing are utilizing their lots in for residential and subsistence uses. Many of the lot owners who do not currently reside in

active recruitment of lessees to participate in 'Ohana committee activities and monthly meetings.

The following condition are considered important to successful implementation community-based natural resource management program:

1) Sizable number of lessees should begin living on their Kuleana Homestead lots.

2) The 'Ohana should initiate environmental education, consensus building, and visioning activities within the community. These activities should also encompass specificity of the makai and ocean management needs of Kahikinui.

3.3.2 Baseline Data

Assessment of the natural resources is mandatory for determining the health of those resources. This assessment can be accomplished in many ways. A baseline survey is the first comprehensive survey done of an area. It can then be compared to other surveys of the area over time. The residents of Kahikinui should conduct a baseline survey in much the same manner that fishermen of Kaho'olawe surveyed (see story below).

Program Activity: Formulate a survey instrument to collect baseline data on Kahikinui's makai and ocean natural resources.

Kaho'olawe Case: *On Kaho'olawe, fishermen using boats assess marine resources. The fishermen actually look at and record benthic resources. Much has also been learned from gathering and recording the oral history from the kūpuna of the area. The information they collected led to the temporary closure from fishing in certain areas that were over-fished. The closure is intended to allow these fish populations a habitat in which to recover. Catch reporting is mandatory for all fishermen of Kaho'olawe. Catch reports provide valuable information for resource managers when formulating resource policies that are in accordance to the health of the fisheries.*

<u>Evaluating Cataclysmic Events</u>

It is important to survey marine resources of Kahikinui and identify those resources that the residents use. Cataclysmic events, such as hurricanes (caused by nature) or oil spills (caused by humans) can destroy natural resources (see case below). By establishing baseline data on Kahikinui's natural resources, the effects of cataclysmic events can be better evaluated. Following such an evaluation, appropriate recovery measures can be identified to assist the community and the natural resources. In the event of an anthropogenic event, like an oil spill, baseline surveys are extremely useful in

will help state agencies to identify alternative approaches to working with other Hawaiian communities statewide.

- State agencies will learn new approaches to integrating contemporary environmental management techniques with traditional Hawaiian practices specific to subsistence lifestyles.
- State agencies working supportively with the Kahikinui community will benefit from a long-term working relationship with over 100 Hawaiian families that will be living a subsistence lifestyle in Kahikinui.

In order to support the sustainability of Kahikinui's natural resources within the makai management area, the community must achieve the following objectives:

- Establish and maintain baseline data on the condition of the natural resources of both makai and ocean resources.
- Define the makai and ocean natural resource management areas to be managed by the community of Kahikinui.

- Establish and adhere to a code of conduct in using the makai resources in the defined area that complement the sustainability of those resources.

- Effectively manage and educate those visitors and new residents to the moku of Kahikinui about the natural resources and the proper use, take, and replenishment of those resources.

- Establish a *Kahikinui Makai and Ocean Resources Management Board* to oversee the makai and ocean management areas.

- Establish monitoring and enforcement personnel and procedures that complement objectives 2, 3 and 4 (above).

- Coordinate Kahikinui's natural resources management efforts with efforts of those coastal regions outside and complementary to the moku of Kahikinui (e.g., East Maui).

Community Development

Another important aspect of natural resources management for Kahikinui is that of community development. Since only a few residents currently live on the Homestead land in Kahikinui, a majority of community development activities cannot occur until lessees are living on the land. Despite this, community-building efforts are already in progress. The 'Ohana regularly explores ways to improve communications with those lessees not yet living on the land. This is done through newsletters, surveys, and the

Subsistence Fishing Areas

Program Activity: Establish a community-based subsistence fishing area in Kahikinui.

The regulation that supports the establishment of community-based management of subsistence fishing areas is HRS 271, 1994, amending Hawai'i Revised Statutes Chapter 188, and adopted by the Seventeenth Legislature of the State of Hawai'i. This Act provides rationale for establishing a *Kahikinui Community-Based Subsistence Fishing Area*. "Subsistence" is defined as "the customary and traditional native Hawaiian uses of renewable ocean resources for direct personal or family consumption and sharing."

Designation of a community-based subsistence fishing area:

The Department of Land and Natural Resources may designate community-based subsistence fishing areas and carry out fishery management strategies for such areas, through administrative rules adopted pursuant to Chapter 91 to reaffirm and protect fishing practices that are customarily and traditionally exercised for subsistence, cultural and religious purposes.

Proposals may be submitted to the Department of Land and Natural Resources for the Department's consideration. The proposal shall include:

- The name of the organization or group;
- the charter of the organization or group;
- a list of the members of the organization or group;
- a description of the location and boundaries of the marine waters and submerged lands proposed for designation;
- justification for the proposed designation including the extent to which the proposed activities in the fishing area may interfere with the use of the marine waters for navigation, fishing, and public recreation; and
- a management plan containing a description of the specific activities to be conducted in the fishing area, evaluation and monitoring processes, methods of funding and enforcement, and other information necessary to advance the proposal.

Proposals shall meet community-based subsistence needs and judicious fishery conservation and management practices.

determining just compensation for the community against the purveyors of the catastrophe.

West Kauai Case: *Hurricane 'Iniki is believed to have permanently changed the West Kauai shoreline and reef. A baseline survey of West Kauai's resources prior to the hurricane can be compared to surveys done after. This greatly enhances the ability to evaluate the health of reefs after natural disasters. Marine resource boards can then determine when fishing activities should resume.*

Formulating a Code of Conduct

The baseline survey will also be used for the day-to-day management of marine resources by a marine resources board (see Community Mobilization, Kahikinui Makai and Ocean Resources Management Board). A code of conduct in using, taking, and replenishing the resources within the moku can be formulated using the baseline data. A marine resources board can then formulate an appropriate code of conduct use information from the baseline survey, knowledge from fishermen, guidelines from the lunar fishing calendar, information from catch report data, and insights from kūpuna. Baseline data can also help other similar areas in the Hawaiian Islands. For example, over-fished reef communities can use baseline data from Kahikinui to compare and contrast with their own. Doing this may provide insights on how to restore the health of their reefs, and identify appropriate management techniques.

Catch Reporting

Catch reporting is one method of collecting baseline data of an area's marine resources. Catch reporting involves recording the date, area, species, number, and size of marine life caught. Catch reporting should be done for all marine species, including invertebrates. Catch reporting could also include fish-gut-content analyses, which for fishermen of Mo'omomi, proved helpful in determining the health of biotic reef communities. Catch reporting is only effective when it is mandatory for everyone using the area. Catch reporting may, in fact, be the predominant form of collecting baseline data on fish in Kahikinui. Strong ocean currents in Kahikinui may prevent the use of other techniques for surveying certain ocean resources.

3.3.3 Defining the Makai and Ocean Management Areas

Ultimately, the community must determine appropriate boundaries for the management areas. Baseline surveys, interviews with users, catch report data, and access requirements will all be useful in defining the management areas. This subsection on defining the makai and ocean management areas provides examples of how this can be done. However, once baseline data has been obtained, the results from that information may suggest that other approaches to defining the management areas may be necessary.

Reasons for choosing the makai area boundary:

- It preserves the scenic beauty of Kahikinui's undeveloped coastline.
- It allows an opportunity to complete the fencing along the roadside to manage and control grazing by goats in the makai area.
- It allows access management by limiting access points.
- The area provides a manageable buffer between the road and ocean to manage polluted runoff into the ocean.
- By limiting access points, informational bulletin boards can be built at access points to provide current use information to all users.
- By limiting access points, catch reporting data can be easily collected (which is one of the limited approaches to inventorying the ocean resources due to the rough and dangerous sea conditions that limit other methods of inventorying ocean resources).
- By limiting access points, the extent and type of uses can be managed for particular sectors of the makai management area.
- By limiting access points, community-use areas can be preserved for subsistence use.
- By limiting access points, cultural restoration areas can be preserved and restoration projects can be properly managed.
- By fencing-off the area and limiting access points, indigenous plants can be given a chance to recover by limiting the disturbances from grazing and foot traffic.
- The area, when fenced, provides a somewhat controlled environment to study plant recovery efforts, and to encourage environmental and cultural education activities.

Management Sections

The coastal area in Kahikinui covers approximately seven miles. One approach to managing this coastal area is to divide it into ½-mile management sections that can be assigned to resource management personnel for monitoring, enforcement, information collection, and educational purposes.

Native Plant Restoration

Program Activity: Designate native plant restoration areas within the makai management area.

Further goat eradication efforts must be a priority for all designated native plant restoration areas of the makai management area. Fencing, or other protective measures, must precede these restoration activities.

Mo'omomi, Moloka'i Case: *Mo'omomi defined their fishing management area by setting up a task force, hiring consultants, and conducting an island-wide random survey to assess the importance of subsistence activities. The task force then came up with recommendations as to the boundaries of the area.*

Program Activity: Define the makai natural resources management area for Kahikinui.

In order to implement appropriate management activities, the management areas need to be defined. One approach that can be used to define the makai management area is to use existing boundary markers. In defining the ocean management area, examples from other areas in Hawai'i can provide guidelines that will be useful to Kahikinui. The following offers one approach to defining the makai and ocean management areas in Kahikinui.

Makai Area Boundaries

Generally, the proposed boundaries of the makai management area can be identified using the following guidelines:

- Follow the Pi'ilani Highway from the Luala'ilua ahupua'a to Manawainui ahupua'a of the moku of Kahikinui to form the northern border.
- Follow the west boundary along the Luala'ilua ahupua'a to form the western border.
- Follow the east boundary along the Manawainui ahupua'a to form the eastern border.
- The coastline itself forms the southern land border for the land section of the makai management area.

The purpose for using the Pi'ilani Highway as the guiding land boundary is to further utilize existing trends in land uses. Existing fencing along the makai side of the highway provides a current structure for the management control of the land between the Pi'ilani Highway and the coastline. Once fencing is complete, goats can be effectively removed from the makai area, allowing native plant restoration efforts to begin in the makai area.

Using the Pi'ilani Highway as a boundary marker also simplifies control over the usage of the makai area. The Kahikinui community will be able to manage and inform individuals of appropriate activities in the makai area. Bulletin boards with current use information can be placed at each access point to the coastal area. Several of the proposed management instruments (see subsection Alternative Approaches to Resource Management) are more easily applied when the boundary of the makai management area is clearly defined. Using the Pi'ilani Highway as a boundary line across the entire moku clearly distinguishes the makai management area ("anything makai of the road") for non-residents and residents alike.

Mo'omomi, Moloka'i Case: *Mo'omomi fishermen use the Hawaiian lunar fishing calendar and fish-gut-content analysis to come up with their own specific calendar by which they fish. This regulates when they fish, and what species they are allowed to take. Each fisherman also agrees to a code of conduct. This approach is intended to protect the resources from over-harvesting. For instance, throughout the year, fishermen are generally limited to taking 'opihi for only what they and their immediate families can eat. However, large quantities of 'opihi can be taken by individuals, but only for very special occasions, and with permission from the Konohiki. The Konohiki then regulates how many 'opihi takings are allowed for special occasions by each fisherman per year.*

Setting-Up a Code of Conduct

Program Activity: Develop a Kahikinui Code of Conduct that includes appropriate activities for the use, take, and replenishment of natural resources in the makai and ocean management areas.

- The community through an extensive baseline survey must first inventory natural resources. Example: Kaho'olawe (see subsection Baseline Data, *Kaho'olawe Case*).
- A *Kahikinui Makai and Ocean Resources Management Board* should be set-up for the moku (see subsection Community Mobilization, Kahikinui Makai and Ocean Resources Management Board).
- Any issues associated with the resources should be identified through discussions with the various users and kūpuna of the area. Example: *"All the big 'opihi are gone."*
- The Board must then meet to outline the issues and devise solutions.
- The Board then presents problems and solutions to the 'Ohana through a host of meetings where they receive input from the community.
- The Board evaluates and votes on alternatives developed from community meetings.
- A "Code of Conduct" is then written and posted at community gathering areas, such as St. Inez Church, and at each makai access point (on marine resources bulletin boards).
- The *Volunteer and Education Coordinator* then alerts families to any revisions of the code (see subsection Community Mobilization, Kahikinui Makai and Ocean Resources Management Board).

Kuleana

Already developing in the Kahikinui area is the idea that everyone who takes from the resource has a kuleana (responsibility) to give back to the resource. This is already in place for those current users of the makai area in Kahikinui. Fishermen are allowed access to the makai area and in turn, they contribute by upkeeping the roads and caring

Ocean Area Boundaries

Program Activity: Define the ocean resources management area for Kahikinui.

The community of Kahikinui should also be actively involved in the management of the ocean uses beyond its coastline. Possible boundaries of the ocean management area can be identified as follows:

1) From the land-based makai management area's eastern and western borders, identify points two miles ocean bound using global positioning system (GPS) readings.

2) The ocean boundary should follow the coastal contour using GPS readings two miles out.

3.3.4 Code of Conduct

Natural resources management is a misnomer. Natural resources are not the focus of management, but rather the human interaction with those resources. Management of these interactions is necessary for the long-term sustainability of the natural resources. Coastal and marine resources play a vital role in the Hawaiian culture. These resources should be managed in a way that perpetuates the Hawaiian culture.

Traditional Hawaiian management techniques should also be part of the integrated coastal management of the Kahikinui area. Unfortunately, over time, many of these techniques have been lost or they do not pertain to the methods that are employed today. Future resource health is dependent on the residents of Kahikinui to formulate appropriate ways to manage their resource uses. To do this they will need to fuse traditional and modern methods.

Nearshore resources elsewhere in Hawai'i are regulated by rules established by the state of Hawai'i, DLNR's Division of Aquatic Resources (DAR). DLNR's Division of Conservation and Resource Enforcement (DOCARE) enforces these rules. Over the years, many nearshore resources have been adversely affected by the difficulties in enforcing many of the state's resource conservation laws. This has led to many of the state's conservation laws to be scrutinized. The state also has been limited in its ability to provide adequate resources for enforcement of its conservation laws. Some communities have realized this, and have taken it upon themselves to develop their own management techniques using traditional Hawaiian methods. Kahikinui residents are in a unique situation to do the same. Establishing a code of conduct for makai and ocean users of the area may help to lay the foundation for other management techniques.

Controlled Access

Kahikinui residents have a unique opportunity to effect a plan that can ensure sustained marine resources for future generations. Kahikinui residents can limit access to near-pristine coastal resources. The community is not required to grant public right-of-ways that would otherwise allow non-resident fishermen terrestrial access to the nearshore environment. By being geographically remote from other urban areas of Maui, Kahikinui's resources are mostly intact. This, unfortunately, is not true of most nearshore areas in Hawai'i, where resources have been severely affected by over-harvest, and whose users are a diverse and vocal majority.

If the residents of Kahikinui choose to limit access to the shoreline for those who do not live in the moku, they should also develop access policies regarding residents' friends and family that do not live in the moku. It is far easier to be proactive than reactive. Questions that must be addressed should include:

- *How many friends should a resident be allowed to take to the shoreline?*
- *Do the friends have to be accompanied by a resident?*
- *Can they keep what they catch?*

Subsistence Uses

Program Activity:	Limit the day-to-day taking of makai and ocean resources to subsistence use.

Subsistence is the day-to-day take of natural resources for the purpose of immediate home consumption by residents of the area. When determining allocation of resources, subsistence uses should be the priority. Subsistence use is traditional and links Kahikinui families with the natural resources. "Banking" resources by storing them in a freezer is not typically subsistence use and does not support the sustainable use of resources.

Recreational Uses

Program Activity:	Require recreational users of the makai and ocean management areas to prescribe to codes of conduct that do not deplete resources for subsistence use.

Recreational use of resources involves the catch of marine life for the sheer joy of the action. Recreational use does not necessarily include killing the resource. For resource sustainability, catch and release techniques should be emphasized, if not mandatory. The kill of a resource should involve a plan to immediately use the resource, thus being categorized as a "subsistence use". If recreational uses are allowed in Kahikinui, permits should be required before accessing the coastal area. Catch and release techniques should be taught to recreational users when these permits are issued. This will help to reduce the wasting of resources by using destructive catch and release techniques.

for the areas they use. The users of the makai and ocean resources can also express this kuleana by educating new residents, visitors, and the youth about the appropriate code of conduct when utilizing these resources. If formalized, this can be done through apprenticeship programs.

3.3.5 Management & Education

The community of Kahikinui will need to actively participate in the decision-making and management of resources, resource uses, and environmental education within the moku. Ultimately, organized bodies must be assigned the responsibilities of management and education. Information provided in this subsection identifies several approaches to environmental management issues and techniques. The organization of an environmental management body is discussed separately, under subsection 2.2.9, which immediately follows. Within the proposed Board, several managing committees should also be formed. Among them, an *Environmental Education Committee* is proposed. This committee's formation and responsibilities are discussed later in this subsection.

Makai Access Management

Program Activity: After completion of a baseline survey of makai and ocean resources, the *Kahikinui Makai and Ocean Resources Board* should formulate an appropriate combination of management techniques that are specific to maintaining the health of the various species.

The community of Kahikinui is in a unique position to manage access to the makai resources of the moku. The makai area of Kahikinui lies on Hawaiian Home Lands. The Hawaiian Homes Commission Act, according to Attorney General opinions, exempts Hawaiian Home Lands from county zoning and special management area requirements. Hawaiian Home Lands, however, are not exempt from the laws protecting endangered species. The extent to which Hawaiian Home Lands are exempt from various statutes that affect land use is unclear and will be clarified by future court decisions (Frankel, 1997).

The community of Kahikinui is, therefore, not required to provide coastal recreational opportunities that are accessible to the public. This allows the community to manage its makai natural resources specifically for the subsistence purposes of the Hawaiian families living within the moku. There are few areas in Hawai'i where this is possible. The community of Kahikinui thus has an opportunity to formulate a makai management plan that is uniquely designed for subsistence practices by the residents of the moku. This can best be accomplished by uniting traditional Hawaiian practices with contemporary approaches to resource management.

Kahikinui's makai management principles. This will be a necessary first step in encouraging voluntary compliance by non-residents when Kahikinui implements its makai resources management plan. Any efforts that the community can make to reduce the need to police its shorelines will be valuable since Kahikinui does not have a boat ramp within the moku for launching ocean-going vessels. The greatest challenge in makai management planning for Kahikinui will be in ensuring that any outside users of the makai resources adhere to the appropriate codes of conduct when using or taking natural resources from the moku. This is where Kahikinui may find it useful to work with the State, specifically DLNR's Division of Aquatic Resources and DOCARE. The community of Kahikinui may also find it useful to propose an administrative rule that would require permits for taking resources from the moku (see Alternative Approaches to Resource Management, Hawai'i Administrative Rules and Rule-making). Non-residents of Kahikinui who are not affiliated to residents of the moku now enter the area and take resources. There have been several accounts of these non-residents over-harvesting the shoreline resources. It may be difficult to limit the frontier-style use of the shoreline by non-residents without establishing an administrative rule.

Hawai'i Administrative Rules

Program Activity:	Review existing Hawai'i Administrative Rules for community-based management of ocean resources and nearshore waters.

Since ocean waters are under the jurisdiction of the State, Kahikinui will need to propose it's own administrative rule for the management of the ocean fronting it's shoreline. Through a review of the existing Hawai'i Administrative Rules, the 'Ohana can explore the different alternatives to managing ocean resources of Kahikinui. Other Hawaiian communities, such as Mo'omomi and Kaho'olawe, may serve as prototypes for Kahikinui's management guidelines.

Ocean Resources Management

Traditionally in Hawaiian culture, the oceans were not open for taking by anyone. Miles of nearshore reef-life belonged to those living mauka of the marine resource. Foreigners were only allowed to partake in the use of the resources if the foreigners requested, and were granted permission by the Konohiki (regional resource manager). This aided the Konohiki in managing the uses of resources in the moku. This also gave the Konohiki an opportunity to inform foreigners of any rules or kapus (prohibitions) in the area. Since the makai resources belonged to the mauka residents, they were also more inclined to care for their makai resources in a sustainable manner, since adjoining makai resources belonged to others.

Today, the nearshore is open to anyone for taking resources. This has led to difficulties in managing marine resources. Resource managers have limited input on which

Economic Uses

Economic use of the natural resources may be inevitable as the community grows, however the natural resources of the area must be sustained to support future generations. Economic use of the makai and ocean management areas should not compete with subsistence uses, nor should it threaten the health of the resources. Any economic use should be regulated through the issuance of permits that limit the quantity and quality of resources taken, the frequency of taking, and allowable locations for taking resources.

Educational Uses

In order to develop well-balanced members in the community, an understanding of the natural resources will be essential. New residents and youth alike will need to learn about the subsistence resources available in the moku, how to use those resources, proper ways of taking those resources, and ways to help replenish the resources. The makai and ocean management areas can provide a plethora of opportunities to learn these skills. With the proper training, the youth and new residents can then share their knowledge with visitors, researchers, and others interested in learning about the moku of Kahikinui. This will also encourage the perpetuation of Hawaiian cultural practices that can be shared with future generations.

Makai Access Routes

Program Activity: Limit improvements to the makai jeep trails until the completion of baseline data collection on makai area resources.

Improvements to roads within the makai management area must also be carefully considered. It is estimated that over a hundred families may live in Kahikinui on DHHL property. The quality of the current road conditions limits the frequency of trips that individuals make to the nearshore resources. During the early phases of planning, the 'Ohana should maintain the jeep trail routes, and focus on collecting baseline data for their management decisions. This should be completed prior to improving the access routes to the coastal areas. This approach will limit risks of over-harvesting the resources. The quality of roads to the coastline within the makai management area can be one form of management control until other methods can be put in place.

Ocean Access Management

There have been several complaints in Kahikinui that non-residents entering the moku by boats tend to strip the shoreline of 'opihi. It may be difficult for the residents of Kahikinui to assess the behavior of those entering the moku and depleting Kahikinui's shoreline resources. The community of Kahikinui may find it useful to invite these non-resident users to participate during parts of the planning process to educate them of

Traditional Fishing Rights

On a global basis, there are many varieties of traditional fishing rights and management practices. These range from absolute individual ownership of the marine areas and resources therein, to transitory access rights to specified resources, to communal access to all resources.

Throughout the Pacific, there is much variation in the degree to which traditional management practices have been maintained. In some areas, particularly around capital cities, these practices have been abandoned completely as a result of population increases, the influx of foreigners, and the impact of colonization. In other areas, traditional management practices are still strictly maintained and enforced.

Contemporary Issues

It is important that cost-effective management systems be adopted. That is, the systems adopted must produce results that are commensurate with the value of the resources, both in economic terms and for the people of Kahikinui.

It is important to select a management system that can be operated by the community. Adequate funds, manpower and equipment are important elements. In the early stages, it is better to implement a modest monitoring and assessment program in a few selected areas, than it is to overextend available resources by attempting ambitious programs.

Devising An Ocean Management Regime

The purpose of management is to devise forms of control on ocean resources in ways that ensure they will continue to yield net benefits to the community in accordance with the 'Ohana O Kahikinui's goals. It is desirable to have a management regime because it can:

- aid in preventing conflicts between users of resources, or between the users and owners of the resources;
- promote fishing at both economically and biologically sustainable levels;
- help to sustain fisheries resources for future generations;
- encourage a more efficient utilization of resources; and
- ensure a more socially desirable distribution of the economic benefits obtained from fisheries.

Program Activity: Identify appropriate management techniques for the tidal zone.

individuals utilize resources in particular areas. This has led to many problems of over-harvesting marine resources on O'ahu.

When nearshore marine resources are open to all users, there is not an incentive for outside users of an area to manage their own use of the area's resources. Outside users can easily relocate to another area when the resources in one area are diminished. Whereas the mauka-living residents of the moku have direct incentives, especially those living a subsistence lifestyle. This supports the important role that the Kahikinui community should have in managing the resources of the entire moku. The community of Kahikinui is best situated to evaluate the degree to which users utilize the resources and then determine the impact of this use on the nearshore resources.

Customary Rights

Program Activity: Devise a community-based management regime for ocean resource uses that incorporates both traditional and contemporary ocean management approaches.

Over a large part of Oceana, customary laws dictate that most nearshore areas are usually owned by clans or 'ohana, and are therefore not subject to open-access fisheries (Munro & Williams, 1994). In the past, communities that practiced traditional conservation techniques managed these fisheries. Most traditional management centers around restricting the harvest of particular species, or harvesting within particular areas. These techniques were often interwoven with other aspects of life in the community. In recent times, traditional ownership of resources has been eroded or even abandoned. This is particularly true for areas near major towns, where the resources are heavily fished (Johannes 1977; 1978; Marriott 1984).

Customary rights to fisheries are established, and are effective, in many countries in the South Pacific. It may be worthwhile to re-establish these customary rights in Hawai'i where these systems have been historically eroded as a result of colonization, commercialization or population increases. It will also be appropriate to revive many traditional management practices in the moku of Kahikinui.

The major feature of customary rights is that controls are exerted at a local level, not from outside. This promotes self-sufficiency of the community, and can create excellent working relationship between the government and community. If the system works effectively, the costs of enforcement are minimized, as are many of the social and political conflicts between the government and the community. The main advantage of this approach is that the fishing community is likely to have a deeper understanding and appreciation of the management principles if they are discussed at a local level.

- licensing
- catch quotas
- gear restrictions

Community Education

Program Activity: Develop a *Kahikinui Environmental Education Committee* within the *Kahikinui Makai and Ocean Resources Management Board.*

Initial education should be inexpensive in terms of time and resources required. An *Environmental Education Committee* formed within the *Kahikinui Makai and Ocean Resources Management Board* could take advantage of opportunities to educate the youth, new residents, and visitors to Kahikinui. This committee could establish educational programs on coastal plants, native Hawaiian subsistence practices, fish found in Kahikinui, and issues of importance to the management of the environmental resources of the moku. The committee's role could be to:

- develop environmental education programs for the youth and new residents;
- actively collect and disseminate information to the community that is pertinent to environmental decision-making in Kahikinui;
- serve as a contact for outside groups;
- provide public education information on environmental issues of importance to Kahikinui; and
- formulate annual environmental education activities for the Kahikinui residents.

Youth and New Residents

Present residents should take youth and new residents "under their wing" and educate them about Kahikinui and the resource management goals. This can be done by requiring new residents to participate on an 'Ohana committee, and by developing apprenticeship programs designed to educate the youth about their moku, cultural heritage, and subsistence uses of the makai and ocean resources. The most effective way to establish voluntary compliance of resource management guidelines is through education and buy-in. This is why mentoring is so critically important. Through appropriate educational programs, the community will recognize their common ties to the land.

As discussed in the earlier section (See Community Based Economic Development Plan), there is a need to establish a community center with an embedded function of information dissemination and mutual learning on matters related with resource management. By establishing such a common location for collecting and sharing information on Kahikinui, the *Environmental Education Committee* will be able to compile that information and improve its use. This will later be beneficial to new

Tidal Zone Resources Management

The tidal zone can be categorized as the zone where the water reaches the coast at high tide and where it drops down at low tide. It is also referred to as the *splash zone.* In this zone, a few fishing activities are carried out. For example, throwing fish nets, spear fishing, gathering, pole and line. These activities affect the resources in the splash zone and thus need some form of management. Gear restriction is one management technique useful in the splash (or tidal) zone.

Gear Restrictions

The limitation in use of various fishing gears is a widely used management technique. It offers particular control over harvesting methods of nearshore resources. Gear restrictions are often introduced as an attempt to exclude commercial fishing interests from near shore fishing grounds.

Nearshore Management

Program Activity: Identify appropriate management techniques for the nearshore areas.

Nearshore marine resources in Kahikinui are plentiful. Thus it is very attractive to many types of fishermen. Some form of management measure is necessary in order to maintain the health of resources. In dealing with this, some management measures include:

- Access restrictions
- Seasonal closures
- Gear restrictions
- Permitting
- Quotas
- Fisheries Replenishing Areas

The management measures mentioned above are described in detail later in the report.

Pelagic Fisheries Management

Program Activity: Identify appropriate management techniques for the pelagic fishery areas.

The pelagic zone of Kahikinui is rich in tuna and swordfish species. Managing these resources will require cooperative efforts between the state and the community of Kahikinui. The 'Ohana O Kahikinui can coordinate efforts with DLNR to enforce state regulations. Some of the regulations these include:

misconceptions early in the process. As new residents begin building their homes and living on the land, they should be educated about the challenges they will encounter. Educational sections in the newsletter should be used to accomplish this.

In order to achieve the objectives of the Kahikinui Natural Resources Management Plan, the 'Ohana can begin organizing a committee, reviewing the program activities, and identifying immediate tasks. As more community members get involved, and as tasks grow, this committee can then evolve into *the Kahikinui Makai and Ocean Resources Management Board* (see below).

Program Activity:	Establish a *Makai and Ocean Resources Committee* within Ka 'Ohana O Kahikinui to begin work on the Kahikinui Natural Resources Management Plan.

Kahikinui Makai and Ocean Resources Management Board

Program Activity:	Establish a *Kahikinui Makai and Ocean Resources Management Board* to oversee the long-term management of makai and ocean resources areas of Kahikinui.

The Board should provide a forum for community discussions and activities related to the makai and ocean resources. A *Makai & Ocean Resources Management Board* should also make decisions about makai and marine resource activities that involve visitors, residents, and guests to the nearshore environment. The Board should include between eight and ten seats that are voluntary and advisory in nature. Since management will be needed on a daily basis, three paid positions are proposed for the day-to-day management activities. Board members would have voting rights, however the hired positions would not. Hired positions might include a *Coordinator of Marine Management*, a *Volunteer & Education Coordinator*, and a *Conservation Coordinator*. These positions will be responsible for managing the daily operations and tasks of the *Resource Management Personnel*. The following provides job descriptions for the three proposed environmental management positions:

Coordinator of Marine Management

Duties may include:

- Quarterly, must gather volunteers to survey the marine resources and resource users of Kahikinui.
- Chairs a Marine Resource Committee that will work on projects and audit proposed projects that would effect marine resources.
- Interacts with outside agencies when needed.

residents of Kahikinui, visitors to Kahikinui, and educational programs that can be developed in Kahikinui.

'Ohana Education

Another aspect of education is that of technical training, management training and networking. The members of the 'Ohana should set aside funds specifically for their own continual education process. This should be continued through members' participation in workshops, conferences, information collection, networking, etc.

3.3.6 Community Mobilization

'Ohana Newsletters

By maintaining the flow of information to community members not yet on the land, those families can stay informed about issues that will be important to them when they begin residing in Kahikinui. Within the newsletter, educational sections can be included that related to the various 'Ohana committees:

> *Example 1: When providing updates on the Design Committee, a paragraph can be included about compost toilets and where individuals can go (internet addresses, company names, addresses, phone numbers, etc.) to get more information about the installation, uses, and benefits of compost toilets.*
>
> *Example 2: During updates on the Roads Committee activities, a paragraph can be inserted describing the techniques for using cement on lava flow areas to build driveways.*
>
> *Example 3: During updates on Makai & Ocean Resources Committee (yet to be formed), include an informative paragraph on proper taking activities that will sustain 'opihi resources along Kahikinui's coast.*
>
> *Example 4: (Related to the Design Committee.) Include a paragraph on how to collect rocks when digging-out the foundation area for your house, also discuss techniques for building traditional Hawaiian rockwalls (for terracing) with the collected rocks.*

These educational sections will, at the very least, help to inform new residents to Kahikinui. It will also help them in their planning and design efforts prior to arriving in Kahikinui. As one current resident of Kahikinui explained, those that have lived on the land in Kahikinui longest have passed through a more enriching growth process than those newer to the land. Each community member begins their own growth process when they begin *living* on the land. Therefore, it is important to minimize

Once a *Resource Management Personnel* position is funded, the 'Ohana can hire a Kahikinui resident for the position. This individual can then begin collecting baseline data on the condition of the makai and ocean resources that are easily accessible. This should, however, only occur after an appropriate baseline survey document has been formulated for the management needs of Kahikinui.

Traditional Compensation Methods

Management takes time and energy. It is traditional Hawaiian practice to compensate environmental management positions. In ancient times, a resource manager was called the Konohiki. The Konohiki was responsible for managing the nearshore resources for the use by the people of the moku lying adjacent to those resources. In return, the Konohiki was granted the privilege of reserving one species of fish for his exclusive use. He was also entitled to a third of all the fish caught within the fishing grounds.

These "taxes" might not be remediable by the community, however the Board will need to devise an appropriate form of compensation. Funding sources could include a tax or fee to those who fish the area, a tax on income-generating activities within the moku, and/or from an outside grant.

Consensus Building and Visioning

Program Activity: Formulate and publicize a community-based vision of the environment of Kahikinui for the year 2050.

Consensus building and visioning are important components for implementing the Kahikinui Natural Resources Management Plan. Residents will need to develop an understanding of the issues, objectives, and history of previous community development efforts. One way to accomplish this is through consensus building and visioning activities. Important questions for visioning include:

- *What values do the community share with respect to natural resources?*
- *What roles do individuals of the community see themselves playing in the care of Kahikinui's natural resources?*
- *What skills or expertise are available in the community to improve the quality of natural resources?*
- *What priorities does the community have regarding the use of resources in the moku?*
- *What images of Kahikinui can the community identify with?*
- *What aspects of Kahikinui does the community want to preserve for their grandchildren to appreciate?*

- Coordinates a Fishing Committee that utilizes the marine lunar fishing calendar and fish-gut-content analysis to determine specific management strategies.
- Coordinates special events and determines special needs related to marine resources.
- Coordinates gate access to the coastal areas.
- Reviews complaints and suggestions provided by Kahikinui residents.
- Coordinates bi-monthly informal Kahikinui marine resource meetings.

- *Volunteer and Education Coordinator*

Duties may include:

- Gathers and assesses makai and marine resource use questionnaires collected from new residents.
- Coordinates the education of new residents and children about the makai and ocean resources and their uses.
- Develops and collects makai and ocean educational materials relevant to Kahikinui.
- Gathers volunteers for special projects.
- Acts as a liaison to other community-based organizations.
- Keeps Kahikinui resource users informed of events and concerns through a newsletter and education bulletin board at a makai and ocean education center.
- Develops a speakers' bureau for Kahikinui residents.

Conservation Coordinator

Duties may include:

- Ensures that everyone using marine resources in Kahikinui is permitted.
- Addresses non-compliance by revocation of privileges.
- Gathers volunteers to do occasional "patrols" of marine resources.
- Collects and analyses catch reporting, and ensures it is completed.

As each of the coordinator positions are filled, supportive positions, called *Resource Management Personnel*, will need to also be hired. These personnel will be delegated tasks by coordinators and the Board. These personnel will be necessary for accomplishing the day-to-day activities of makai and ocean resources management. These positions can also serve as a training ground, or a stepping stone for future coordinator positions. Each coordinator can identify the tasks for the personnel positions.

Program Activity:	Create funding resources for *Resource Management Personnel* positions.

The East Maui Marine Resources Coalition (EMMRC) is proposed to address marine resource problems and projects that affect the marine environments along East Maui. The Coalition should serve as a forum for mediation and dispute resolution for the region's resource users. The Coalition should enhance the collaboration between the users of the resources by utilizing their expertise and knowledge of those resources. The EMMRC could also serve as a forum for state and federal representatives to gain input from a wide range of East Maui coastal resource users. The Kāne'ohe Bay Regional Task Force provides an example of how this is done on O'ahu. DLNR would likely support further community-based management of the resource areas. DLNR has identified community-based management as one of the solutions to many resource management problems.

The Coalition should be made up of between nine and fourteen members, including representatives from different interest groups. These interest groups might include:

Subsistence Fishermen
Commercial Fishermen
Recreational Fishermen
Commercial Dive Operators
Recreational Diver
Commercial Whale Watch tours
Representative From Pacific Islands National Humpback Whale Marine Sanctuary
A DOCARE Officer or Representative
Commercial Tour Operator
Community Representatives from areas along East Maui's coast

A chair would be elected and subcommittees formed which could include a Fishing Committee, a Subsistence Use Committee, and a Tour Operations Committee. Members of the Board could be chosen in much the same way as the National Humpback Whale National Marine Sanctuary Advisory Panel, or the Gill Net Task Force. An advertisement is publicized in the newspaper to attract interested parties to apply. The applicant then writes an essay discussing why they would like to be on the Board. The Board may then be selected by DLNR and the Department of Fish and Wildlife Services.

3.3.7 Alternative Approaches to Resource Management

In addition to the community-based management efforts, the Ohana can consider drawing from state regulatory framework and other alternatives to manage its marine and wildlife resources. The options outlined here provide a two-fold approach: they utilize provisions already existing in the regulatory framework of the State as well as suggest alternative regulations to manage marine and wildlife resources of Kahikinui.

Monitoring

Program Activity: Construct check-in booths, or stations, at the access points to the makai area.

Fish-gut-analysis information can be collected at check-in stations, where *Resource Management Personnel* can "talk story" with fishermen of the makai area. Check-in stations at makai access points should include drop boxes for late-night fishing. Catch reports can also be collected at the check-in stations. The use of check-in stations at the makai access points will assist *Resource Management Personnel* in collecting baseline data on the makai and ocean resources. It will also encourage users to bring forth issues, problems, or emergencies to the attention of *Resource Management Personnel* attending the stations. Information on fish can be collected regularly at the check-in stations, and most importantly, it will be compiled at a centralized location that is also near the resources. Permits can also be issued and monitored at the check-in stations.

Enforcement

DLNR works with communities and users of resources to complement their natural resource management efforts. It also enforces operational parameters for community managed NRM programs. The residents of Kahikinui must be adequately informed about State resource rules and regulations in order to work effectively with DLNR's DOCARE office. When rules are violated, DOCARE can be called upon to come out and investigate. This is the premise for the Kāne'ohe Bay's *Bay Watch* program.

Coordination with Regional Management Efforts

Program Activity: Coordinate Kahikinui's natural resources management efforts with efforts of those coastal regions outside and complementary to the moku of Kahikinui (e.g., East Maui).

By coordinating with other communities along the East Maui coastline, Kahikinui will be able to extend its monitoring and enforcement capacity. Ultimately, a forum should develop for all East Maui communities that lie along the coastal area.

East Maui Marine Resources Coalition

Program Activity: Coordinate efforts with other East Maui communities to form an *East Maui Marine Resources Coalition.*

or if the proposal effects people on different islands. Every time a major change is made to the rule, another hearing must be held to address the community's concerns.

Attorney General

The Attorney General (AG) goes over the proposal to see if it has legal merit, and if the wording of the proposal will stand-up in court. The AG makes sure the proposed rule is in compliance with Hawai'i's constitution.

Governor Approves Public Hearings

The Governor goes over the administrative rule and authorizes an internal review. This process alone can take two months.

Public Hearings

Thirty days notice is required for all public hearings. These are formal events that must be announced in the local newspapers. Testimony is given.

Attorney General's Final Approval

The AG's office gives a final review of the language in the proposed rule.

BLNR Adoption

This finalizes the process. No changes are made after this step. The Board votes on approval of the proposed rule.

Governor's Final Approval

The Governor still has the power of veto on any issue. The Governor can simply not sign the document. The governor must be informed of the relevance of the proposed change. The community must take this initiative to educate the Governor and public about the need for the rule. At this point in the process, the Governor can either choose to sign the document, or not.

In order to propose an Administrative Rule, Kahikinui residents would first need to:

- Conduct a survey of their resources,
- Present a marine resources management plan which includes:
  --the stricter rules they want to enforce within the community
  --the stricter rules they want to enforce on users outside of the community; and
- Hold meetings garner input from members within and outside the community, and document the input that will be reviewed by DLNR.

After this, the proposed rule will be introduced into the rule-making process, starting with the Board of Land and Natural Resources.

Alternatives to administrative rule-making include, but are not limited to:

- Do Nothing - Past experience would suggest this is a bad idea.

3.3.7.1 Governmental Approaches

Permits

Permits can be used to generate funds for sustaining the makai natural resources. The issuance of permits can require educational prerequisites for those users of the makai area.

Hawai'i Administrative Rules and Rule-making

An administrative rule could include mandatory fishing permits for everyone, including residents. The permit would be revoked upon non-compliance to a code of conduct.

Managing the activities of outside fishermen using the resources within Kahikinui may be difficult without assistance from the State. Outside fishermen have been allowed almost limitless take of resources fronting Kahikinui. Motivating them to voluntarily give up that privilege will be difficult without legal backing. Educational efforts might succeed in having some outside buy-in, however it would be unrealistic to attempt to educate all of the users. Administrative rules provide the necessary legal backing to effectively manage uses of those outside the community.

Administrative Rule-making

Administrative rule-making (Hawai'i Revised Statute, Chapter 91) is being reviewed by the Lieutenant Governor's office to determine ways in which this process could be run more smoothly and quickly. Currently it takes at least a year to adopt a new administrative rule. The following outlines the procedures of DLNR administrative rule making:

Draft Rules

In some cases, interested individuals can write letters to the Department of Land and Natural Resources to change an administrative rule. When drafting a rule that is community-based, the community should have a resources management plan and have already help their own public hearings in relation to the rule they want changed.

The Board of Land and Natural Resources (BLNR)

BLNR approves hearings and meetings. The BLNR takes a first look to see if, in their opinion, the change is a good idea.

Public Hearing

This is an informal discussion that educates the public about proposed changes. At least one public hearing is held. More are held if demand is high,

therefore survive. Fish in permanently closed areas can seed through their reproductive effort better than other areas that are open to fishing.

It is important to maintain a healthy biological community. An equilibrium must be maintained that does not allow one species to completely out-compete another. Over-fishing of a particular species of fish has led to disastrous results elsewhere, allowing a population explosion of other species upon which the depleted species would normally prey upon.

California Case: *California witnessed the devastation of their kelp forest by sea urchins, because the sea urchin's natural predator, the California Sheephead, was over-fished. Subsequent moratoriums on the harvest of the fish remedied the problem.*

Catch Quotas

Catch quotas or bag limits are management measures that are used by the Division of Aquatic Resources. This form of management may yield benefits for the community of Kahikinui, as well as its resources. Since Kahikinui is a subsistence community, the concept of "take what you need" is very much alive. The 'Ohana, currently using the honor system, only catches what is needed for the family's meal. It is hoped that people from outside the moku of Kahikinui will respect management measures like catch quotas. The Kahikinui Makai and Ocean Resources Management Board can determine the amount of catch that can be allowed within the fishing grounds of Kahikinui. Catch quotas can then be proposed to the 'Ohana in their monthly meeting for approval and then enforced through the proper channels.

Gear Restrictions

Limits to using certain fishing gear are widely used management tools. Gear restrictions are often introduced in an attempt to exclude commercial fishing interests from near-shore fishing grounds. In the context of Kahikinui, restrictions can be imposed on specific fishing gear or on their specifications. For example, mesh size limitations on fishing nets. Both the composition of the catch and the size of individual fish caught are usually affected. Other gear restrictions could be aimed at selectively harvesting certain species. This gives an opportunity to optimize harvests of different components of the multi-species fishery by excluding generalized, non-selective fishing techniques which catch a wide range of species (Munro and Williams, 1985). The method works more effectively if it is used simultaneously with other forms of control; for example, restrictions on the number of units of a particular fishing gear that are permitted to be used.

Annual Licensing

The sale or issuance of a restricted number of annual licenses is a standard fisheries management practice that can be utilized in Kahikinui. By charging a nominal fee,

- Kuleana Rights - No precedent has been set for this. It would likely be time-consuming, however it would be very valuable.

3.3.7.2 Best-practice Approaches

Restrictive Harvests

Restrictive harvests limit the amount of resources taken, or they can place limits on other aspects of taking the resources. For example, restrictive harvests can protect small fishes. They can limit the total fish catch. They can restrict fishing by closing the fishery area for certain periods to protect all fish in the area. They can also prohibit the harvest of certain classes of fish or invertebrates (e.g., berried female lobsters and mollusks).

Minimum Size Limits

Although minimum size limits are the time-honored management measure, their applicability depends upon the fishing methods that are used. If the methods tend to seriously injure the fish, the imposition of minimum sizes does little to conserve the fishery and needlessly wastes resources. In Kahikinui, the applicability of this management measure is very attainable. With a Konihiki system in place, regulation of fishing methods can be enforced.

The State of Hawai'i's Division of Aquatic Resources publishes a booklet entitled *Hawai'i's Fishing Regulations* This booklet identifies species, allowable season (closed and open), minimum sizes and the allowable bag limit. Kahikinui can use State fishing regulations to determine their own minimum sizes (if more stringent than State regulations) or prescribe to State standards.

Problems With Size Limits

Many fish species have unusual modes of sexual reproduction in that they change sex. Two fish species that occur within Kahikinui change sex, moi and uhu. Moi and uhu are protogynous, which means they are first born female, and then the most biologically fit female within a school physically turns into a male to defend and herd his harem of females. For protogynous fish, size limitations may be an ineffective management tool that could also be dangerous to the fish population. If all the protogynous males fall under the legal size limit, there may be too few males available for the remaining females to mate with.

Larger fish produce healthier reproductive effort. One 64cm female red snapper can produce as many eggs as 100-40cm females. These eggs are also physically healthier. 99% of larval fish usually die due to starvation. Larger females produce more yolk for their larvae in their eggs than smaller fish of the same species. The more yolk a larvae has, the better chance it has to compete for food resources with other species and

Seasonal Closures

The harvesting of a number of marine resources in Kahikinui could be regulated to ensure that their populations are not threatened. Some of the resources to be considered include lobster, moi and 'opihi. Seasonal closures for these species may need to be implemented during the breeding season to allow the animals to reproduce. Again, the Konihiki typically determines when to harvest and when not to harvest a particular species. This method is also utilized by the State.

Limited Entry Systems

Limited entry systems are usually recommended in order to restrict the number of fishermen, vessels or gear in Kahikinui's fishing grounds. This may be done in order to maintain fish mortality levels that are optimal for harvesting. Again, the Konihiki or Board could determine these restrictions.

Exclusive Access

Exclusive access is an important management tool that may work well for Kahikinui. Right now, the 'Ohana have all the access points to the fishing grounds under their control. They control the gate to the ocean so they know who is down by the sea. The Konihiki and his/her committee can decide which place is reserved exclusively for the 'Ohana O Kahikinui, and if they choose to, they could designate certain areas for public or recreational access.

Indirect Management Methods

In addition to the direct or administrative management measures mentioned above, there are several indirect management methods that would benefit the 'Ohana O Kahikinui.

Development of Alternative Fisheries

Development thrusts have often attempted to create new fisheries, which give fishermen alternative fishing opportunities. Examples include the development of drop-lining techniques for deep-water demersal snapper and grouper fisheries and the construction and deployment of fish aggregating devices (FADs) which has promoted the development of trolling fisheries. This is a project that the Division of Aquatic Resources may want to promote along the coast of East Maui. In this case, fishers from outside Kahikinui would not exhaust the resources along the coast of Kahikinui. These fishers would instead utilize the fish aggregating devices closer to them.

Kahikinui can establish a source of funds to aid in the management of those resources that were harvested. This technique can help in controlling the quantity of resources taken from fishing grounds, and would be easy to enforce in the makai area, since there are only two gate entrances to the fishing grounds. This would not be an efficient means of controlling users who access the fishing grounds from the ocean. Monitoring would be required to manage the ocean-going vessels to prevent poaching.

Closures

Permanently closed fishing management areas are used to ensure that species have sexual diversity, standing stocks of reproductive adults with healthy reproductive efforts, and biological communities that are diverse. Permanently closed areas are unpopular because, in order to function, they require a large area. When other areas are over-fished, the stocks in the closed areas are usually coveted. When established, the purpose of the closure must be understood within the community, and the area's closed boundaries must be defended. Closing areas to fishing is a traditional Hawaiian fishing management method. Konohiki used to use whittled sticks of wiliwili to mark a closed area. Anyone caught taking from a closed area would face death.

In order to close an area, Kahikinui would first need to complete an inventory of their marine resources, through a baseline survey to determine what exists. The community would then need to determine whether or not there are any heavily impacted species. The residents will also need to identify areas for closure that are socially acceptable, and that are within the species environment. Boundaries should be point-to point along the shoreline. Kahikinui will then need to propose the closure to their Board for approval.

Example: Ŏopihi that are being stripped from the shorelines in Kahikinui may need to be given protection from harvesting by identifying specific closure areas that are socially acceptable and where 'opihi propagate.

Permanent Reserves

The creation of permanently protected areas in Kahikinui can serve as a nucleus for breeding stocks. This approach has been advocated in some areas like Hanauma Bay in the form of marine parks and other sanctuaries. Permanent reserves are strongly recommended for the moku of Kahikinui. Current evidence suggests that, depending upon the configuration of the coastline or reef systems, a significant proportion of juvenile fish or invertebrates resulting from local spawning will tend to settle relatively close to where they were spawned. The preservation of dense fish stocks in selected areas might therefore have beneficial effects for Kahikinui's fisheries. Since the 'Ohana members are familiar with their fishing grounds, they would decide which koa should be reserved as a permanent reserve. Baseline data on the fishing grounds should also be used. Furthermore, permanent reserve areas would also be of interest and value to tourists. Areas that are identified as being important nursery areas could also be protected using permanent reserves.

- Identify appropriate management techniques for the pelagic fishery areas.
- Develop a Kahikinui Environmental Education Committee within the Kahikinui Makai and Ocean Resources Management Board.
- Establish a common location for the collection and sharing of information on Kahikinui.
- Establish a *Makai and Ocean Resources Committee* within Ka 'Ohana O Kahikinui to begin work on the Kahikinui Natural Resources Management Plan.
- Establish a *Kahikinui Makai and Ocean Resources Management Board* to oversee the long-term management of makai and ocean resources areas of Kahikinui.
- Identify manageable tasks for the *Resource Management Personnel* positions.
- Create funding source for the *Resource Management Personnel* positions.
- Formulate and publicize a community-based vision of the environment of Kahikinui for the year 2050.
- Construct check-in booths, or stations, at the access points to the makai area.
- Coordinate Kahikinui's natural resources management efforts with efforts of those coastal regions outside and complementary to the moku of Kahikinui (e.g., East Maui).
- Coordinate efforts with other East Maui communities to form an *East Maui Marine Resources Coalition.*

3.5 Conclusion

Recommendations provided throughout the Kahikinui Natural Resources Management Plan are intended as guidelines for numerous subsequent tasks. As the community of Kahikinui grows and evolves, their desires for using the land may also evolve. With the two overriding objectives of resource sustainability and community development, the future path of Kahikinui will be well grounded. As many urban communities are distanced from many of the realities of their natural environment, the community of Kahikinui embodies these realities on a daily basis. The land sustains the community, the individuals sustain the land, the community sustains its individuals, and the cycle continues. Cooperative endeavors are rarely linear, but instead circular. As Mo Moler, the President of Ka 'Ohana O Kahikinui, always says, *"Help me to help you to help me to help you...."*

Aquaculture

The cultivation of marine organisms such as seaweed *(e.g. Eucheuma sp.)*, mollusks or finfish could also have impact on fisheries by reducing pressures on natural stocks. Successful aquaculture development programs give the fishermen the opportunity to move away from traditional fishing grounds and overexploited fisheries. The effectiveness of such schemes depend on fishermen moving out of overexploited fisheries and into the newly-developed aquaculture industry and on the resulting vacancies not being filled by new entries to the original fishery.

3.4 Makai Area NRM Program Activities Summary

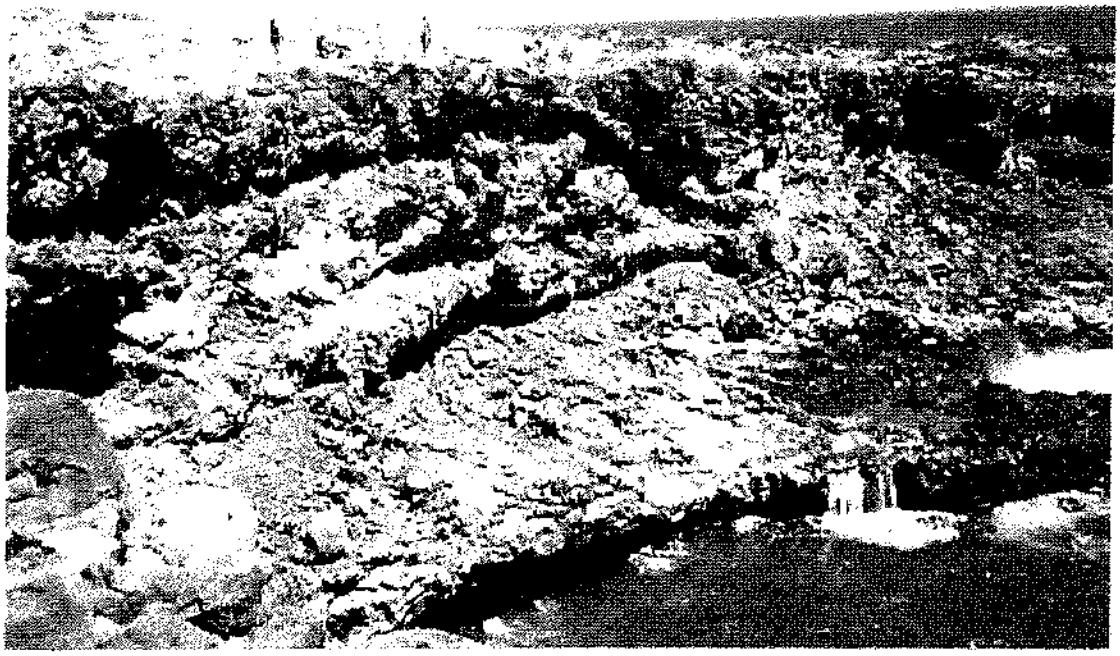
- Formulate a survey instrument to collect baseline data on Kahikinui's makai and ocean natural resources.

- Establish a community-based subsistence fishing area in Kahikinui.

- Define the makai natural resources management area for Kahikinui.

- Identify manageable sections within the makai management area of Kahikinui.

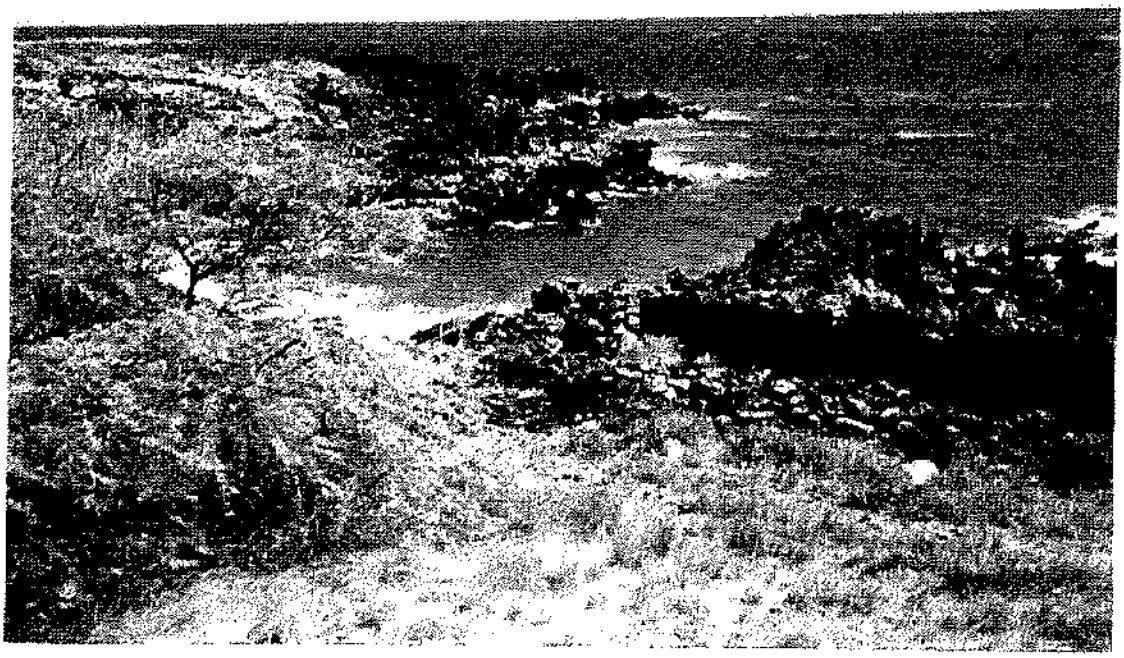
- Designate native plant restoration areas within the makai management area.
- Define the ocean resources management area for Kahikinui.
- Develop a Kahikinui Code of Conduct that includes appropriate activities for the use, take, and replenishment of natural resources in the makai and ocean management areas.
- After completion of a baseline survey of makai and ocean resources, the *Kahikinui Makai and Ocean Resources Board* should formulate an appropriate combination of management techniques that are specific to maintaining the health of the various species.
- Limit the day-to-day taking of makai and ocean resources to subsistence use only.
- Require recreational users of the makai and ocean management areas to prescribe to codes of conduct that do not deplete resources for subsistence use.
- Require that economic uses of the makai and ocean management areas not adversely impact the health or subsistence use of those resources.
- Limit improvements to the makai jeep trails until the completion of baseline data collection on makai area resources.
- Review existing Hawaiÿi Administrative Rules for community-based management of ocean resources and near-shore waters.
- Devise a community-based management regime for ocean resource uses that incorporates both traditional and contemporary ocean management approaches.
- Identify appropriate management techniques for the tidal zone.
- Identify appropriate management techniques for the near-shore areas.



Fishing sites and pools at Kahikinui

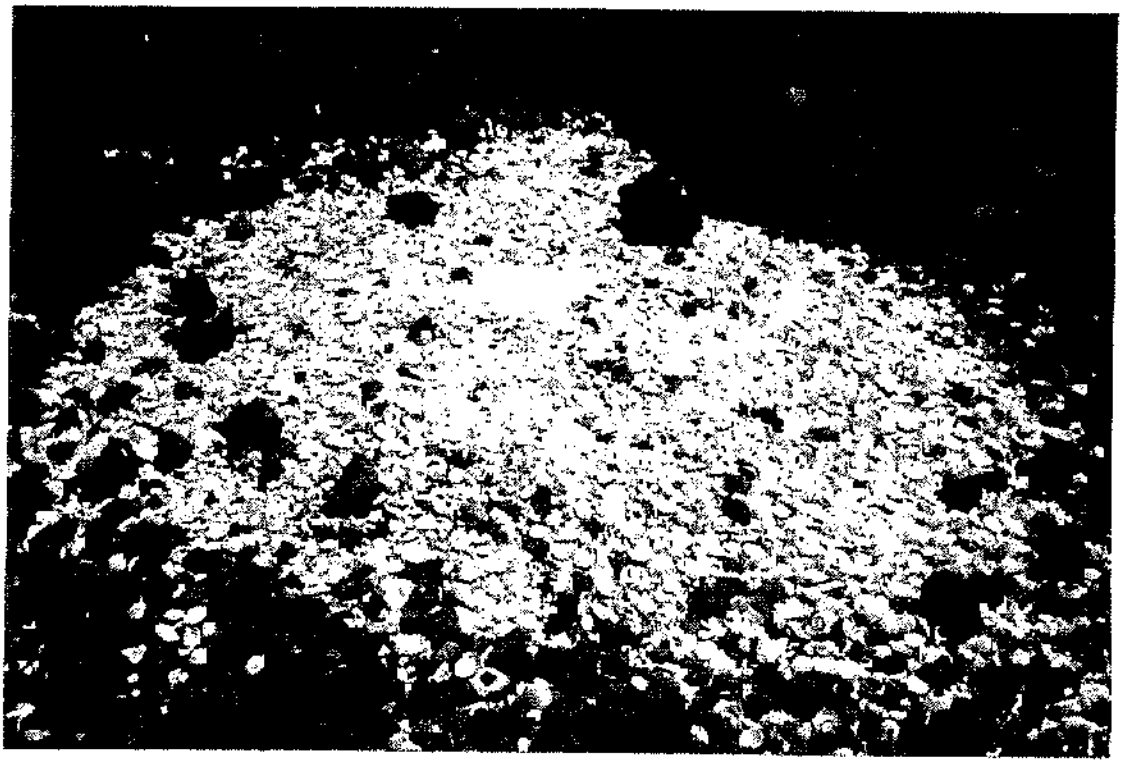
The wiliwili tree is connected to fishing practices

View of an intact Hale Wa'a at Kahikinui



Potential for farming in Kahikinui

Opihi in the ocean and in ancient Hawaiian sites at Kahikinui.



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Maps

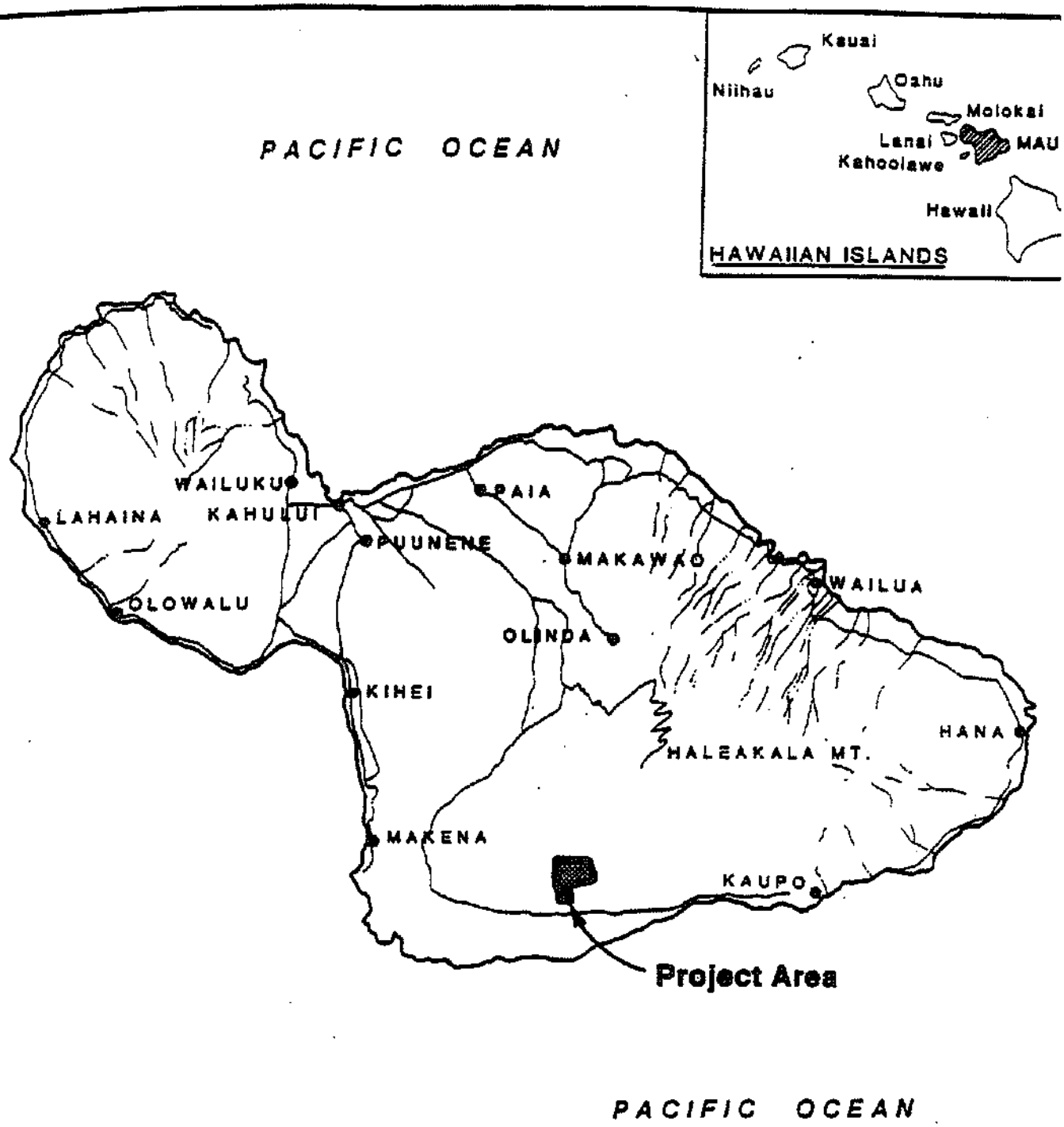


Figure 1

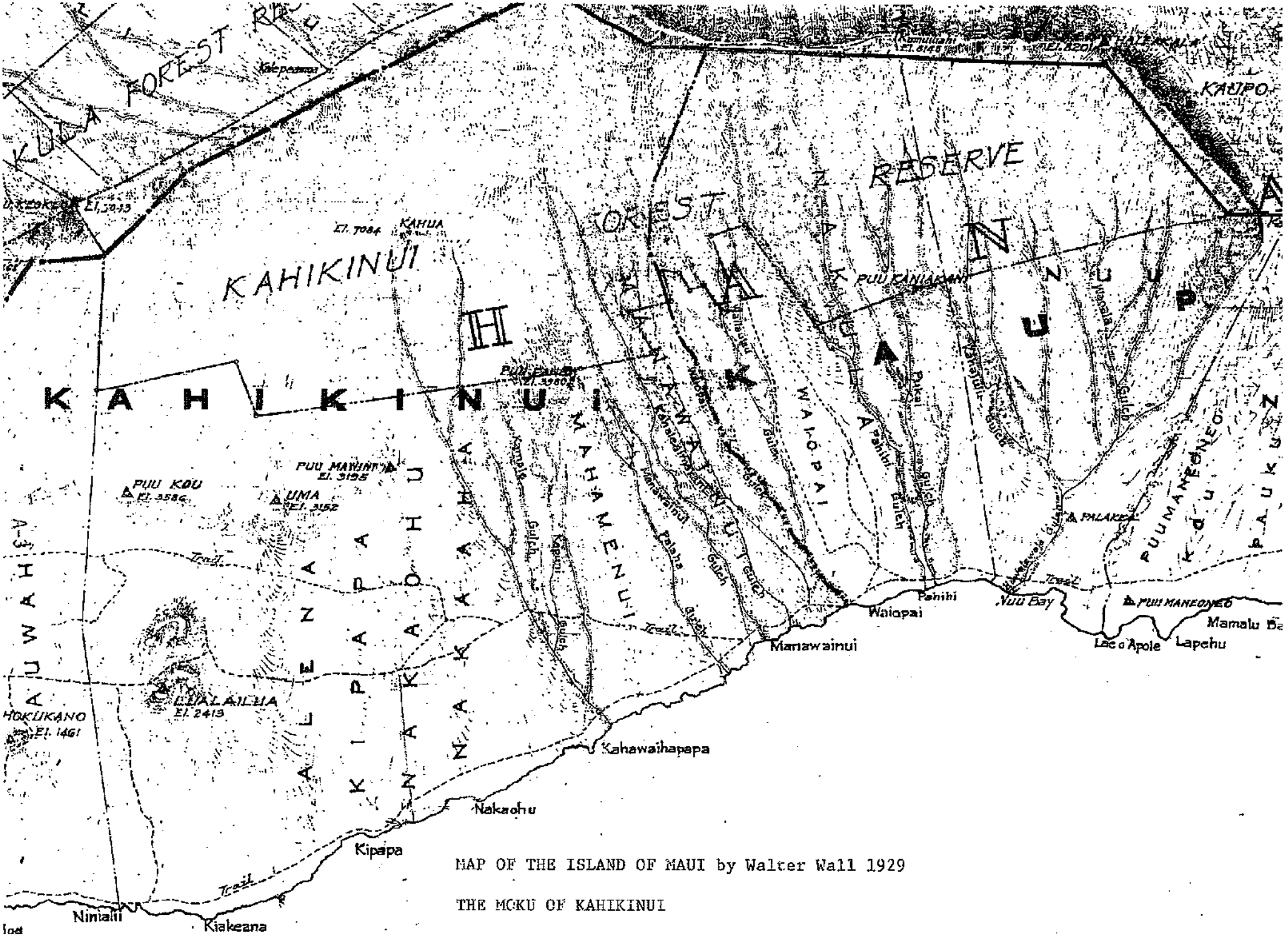
Location Map

Department of Hawaiian Home Lands
STATE OF HAWAII

12 0 12
Miles

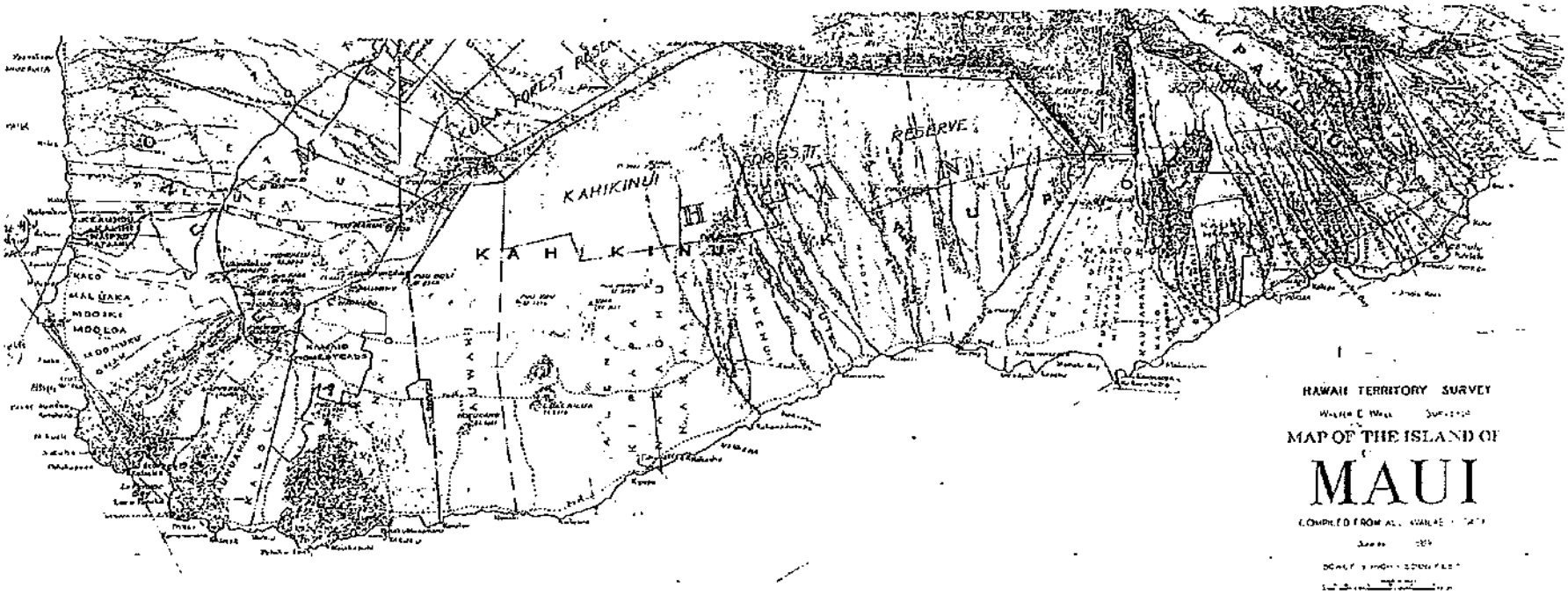
R. M. TOWILL CORPORATION
July 1995

List of Maps



MAP OF THE ISLAND OF MAUI by Walter Wall 1929

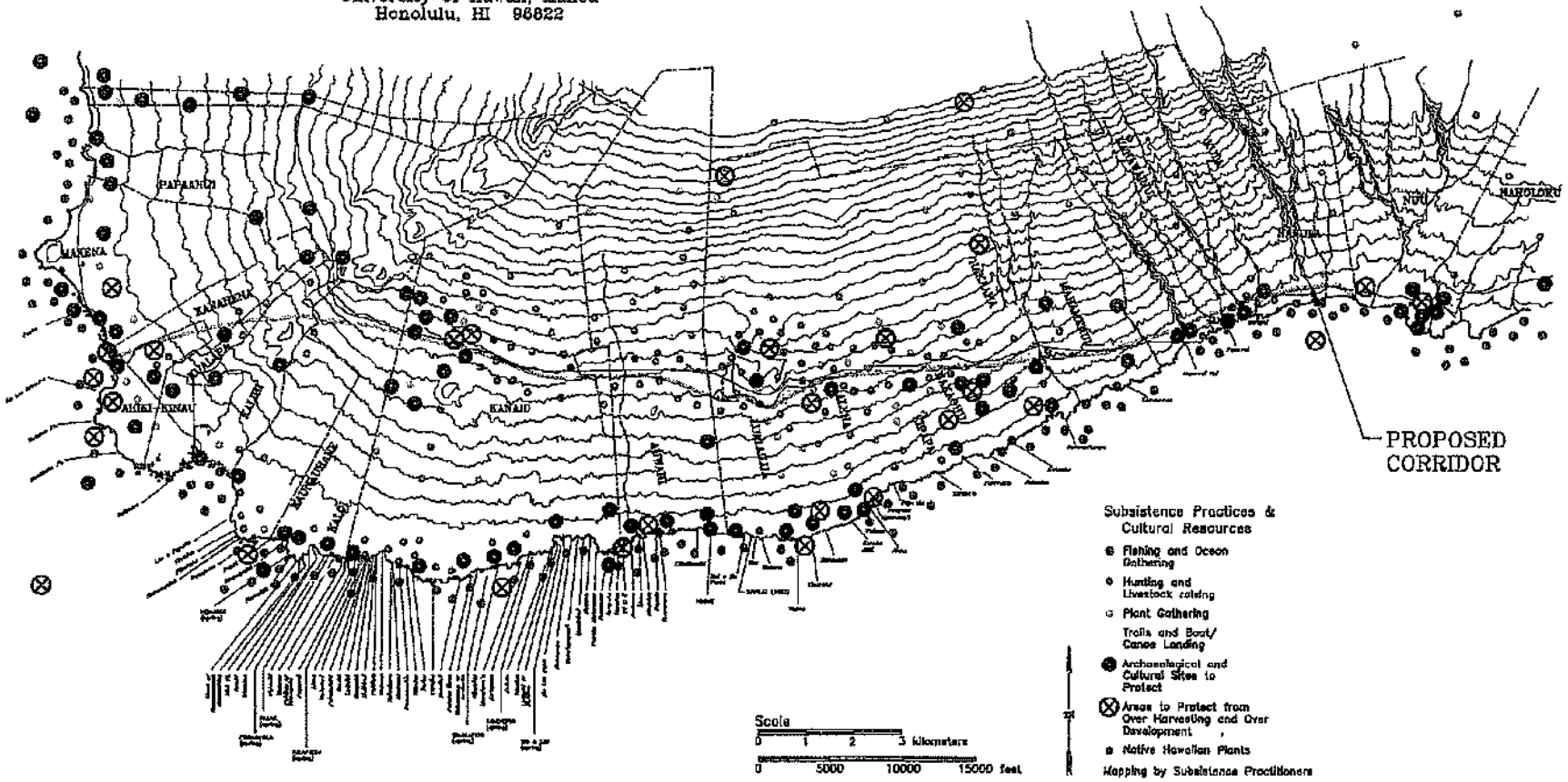
THE MOKU OF KAHIKINUI



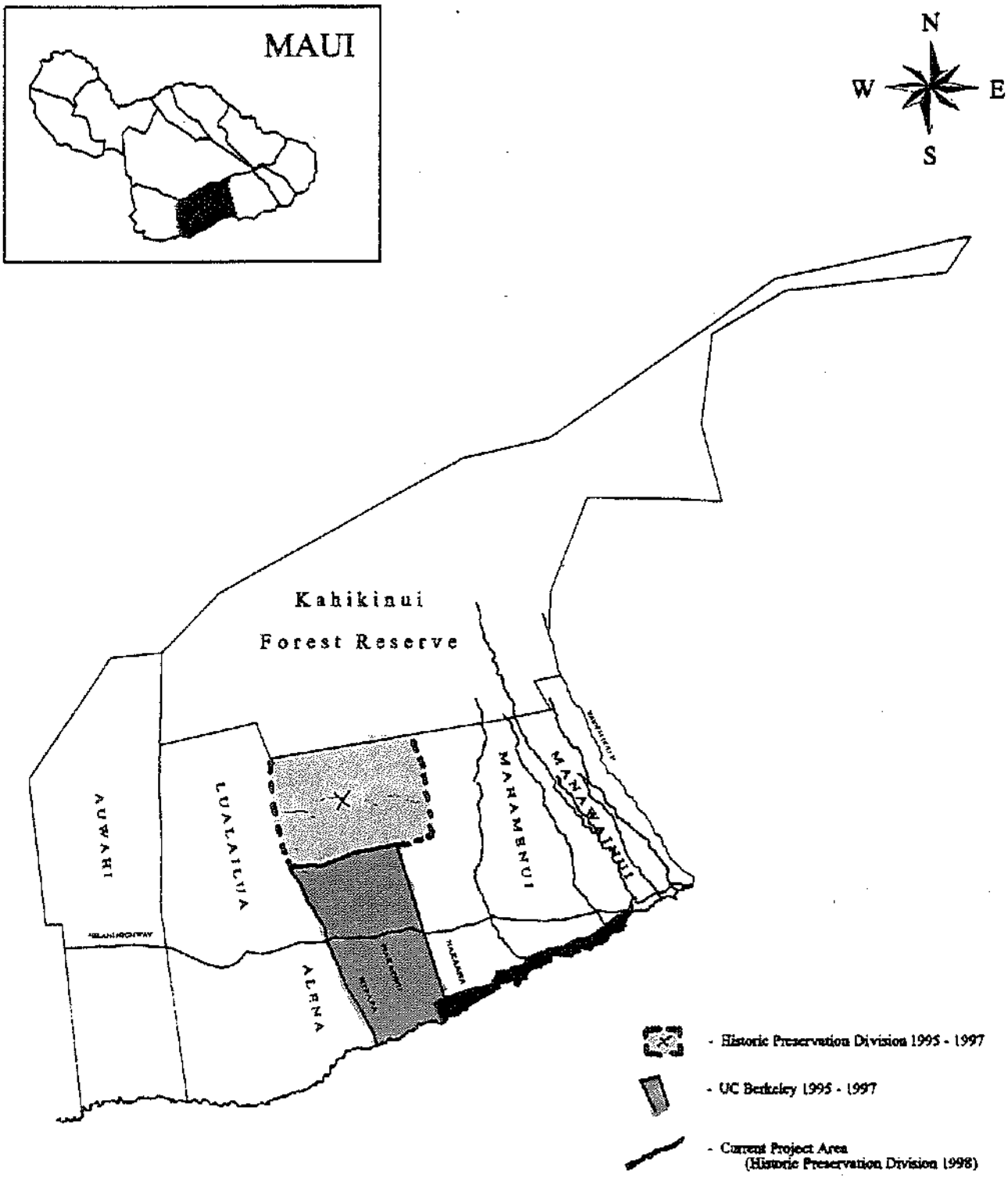
MAP OF THE ISLAND OF MAUI by Walter Wall 1929

SOUTH MAUI- Kahikinui Vicinity Map

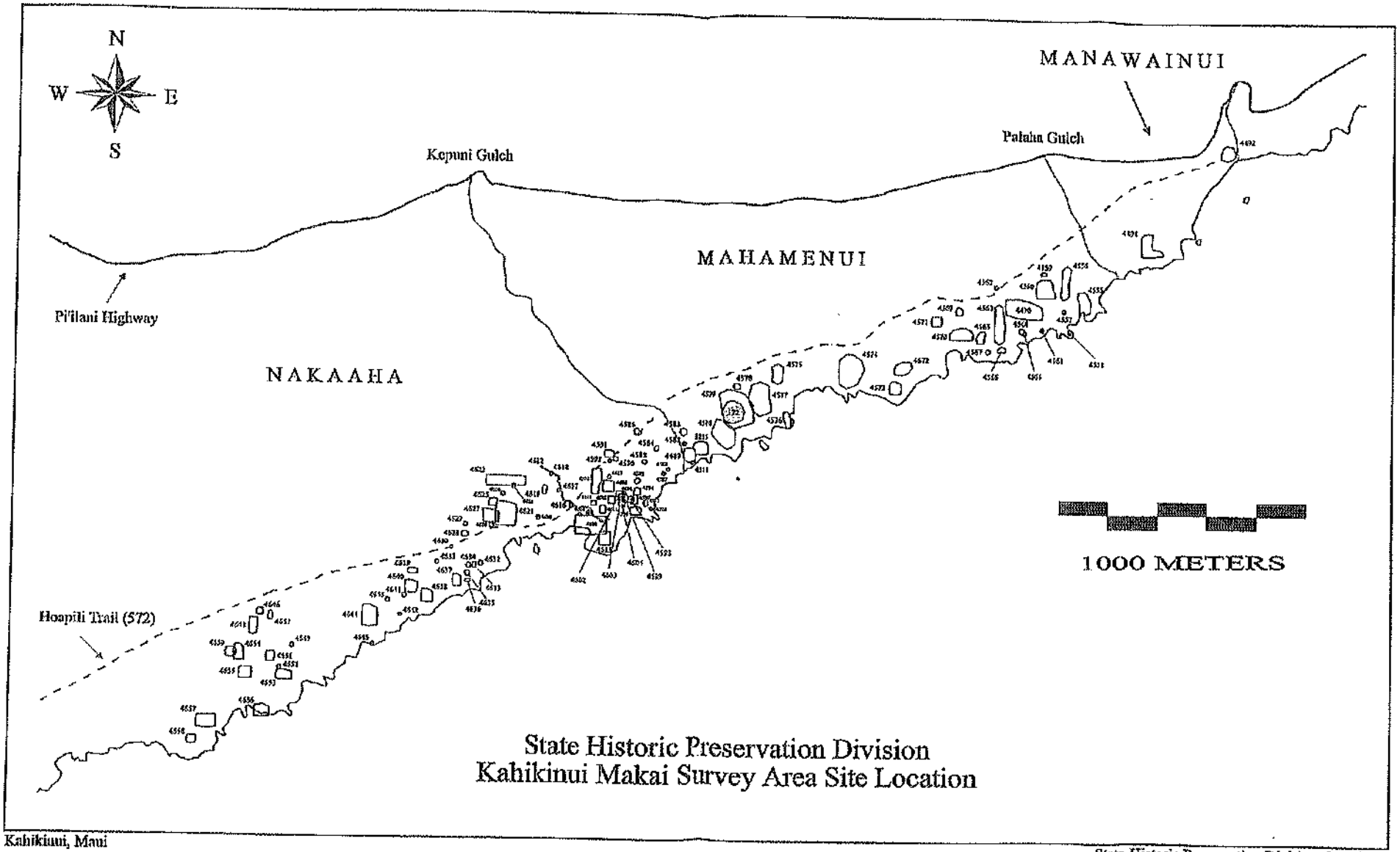
NATIVE HAWAIIANS ETHNOGRAPHIC SURVEY
HAWAII GEOTHERMAL PROJECT – EIS
CANDO 1994
Minerbi-Kelly
University of Hawaii, Manoa
Honolulu, HI 96822



Source: Matsuoka, Jon, Davianna Pomaika'i McGregor, Luciano Minerbi, Pualani Kanahele, Marion Kelly, Noenoe Barney-Campbell. May 1996. Native Hawaiian Ethnographic Study for the Hawai'i Geothermal Project Proposed for Puna and Southeast Maui. Oak Ridge, Tennessee: Oak Ridge National Laboratory.

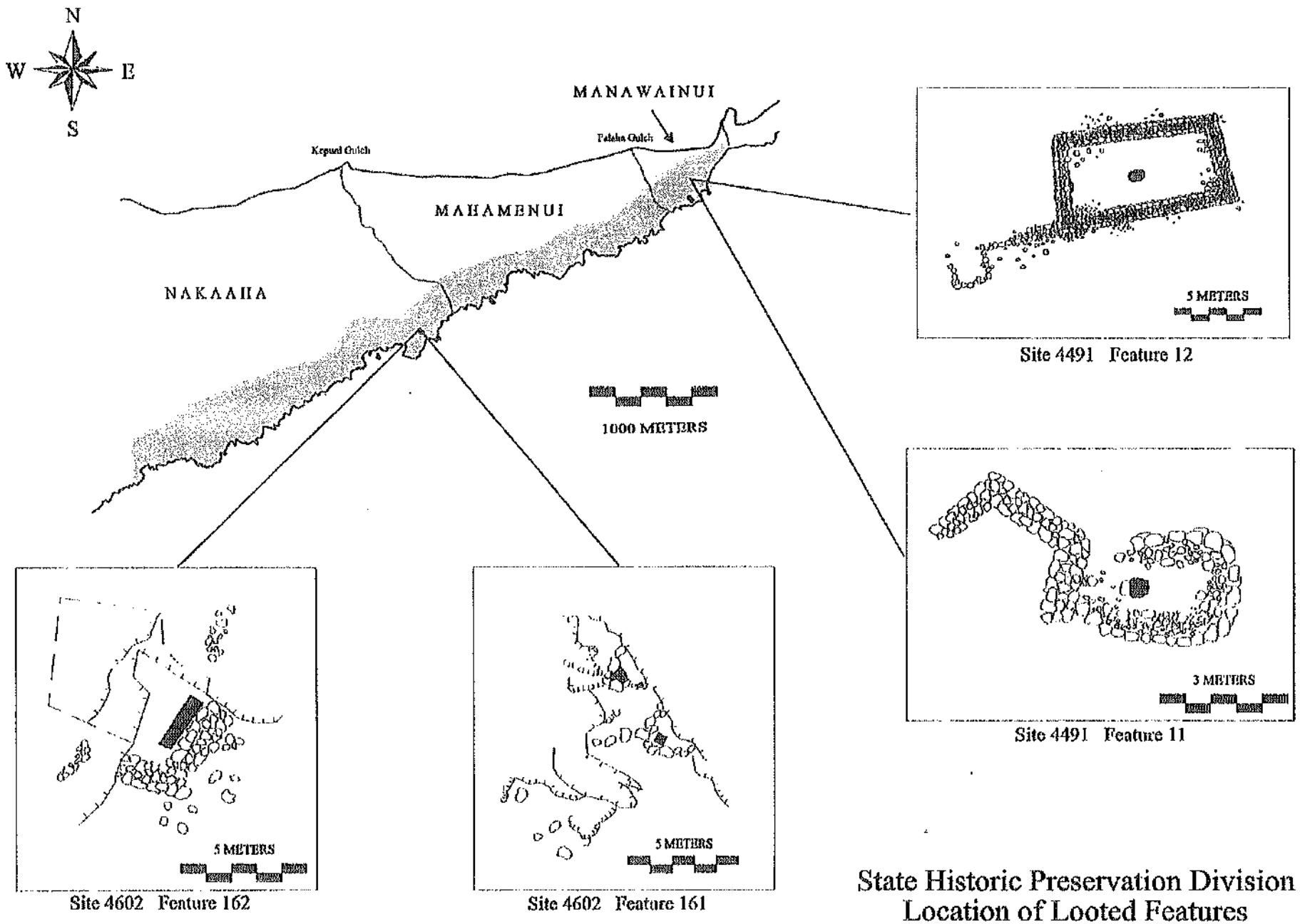


Large Scale Archaeological Projects within Kahikinui District

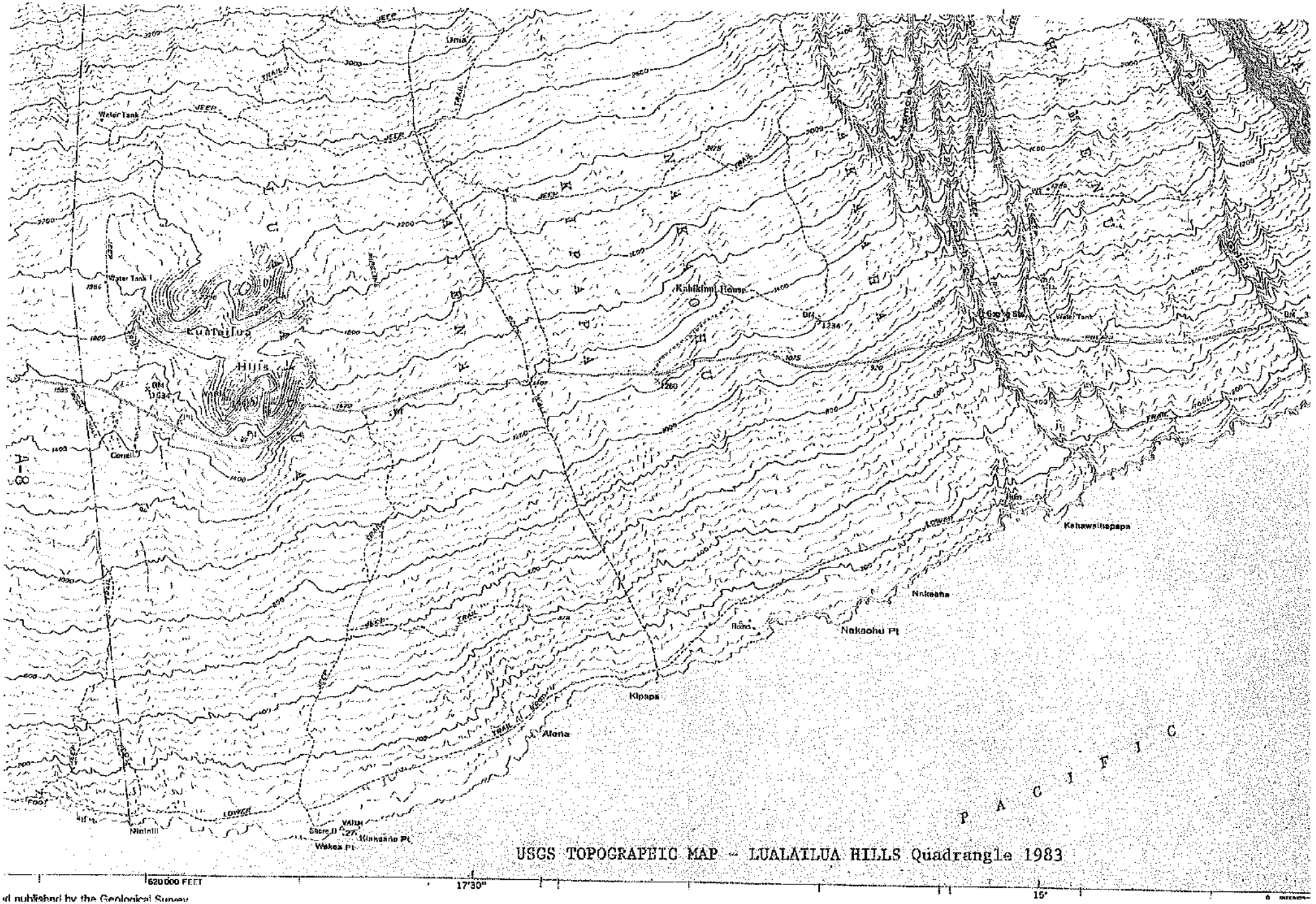


Kahikinui, Maui

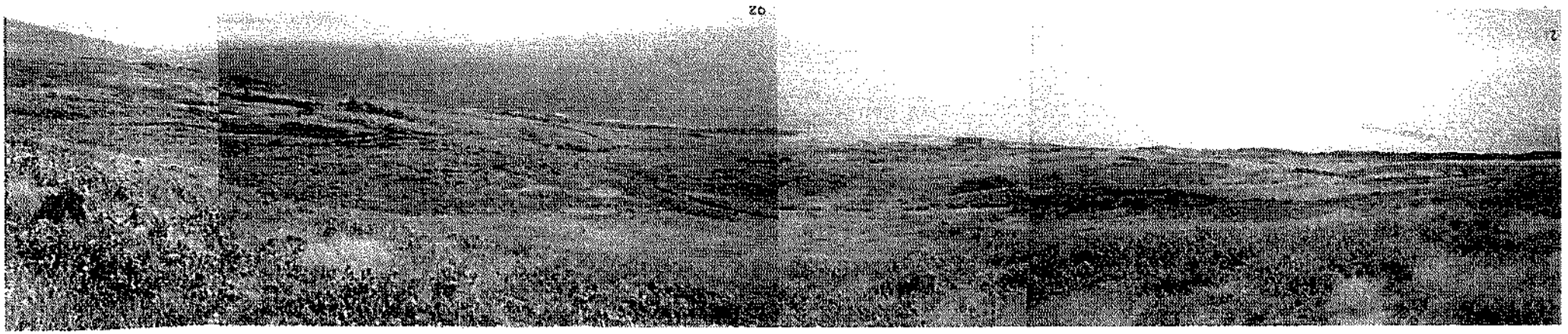
State Historic Preservation Division June 1999



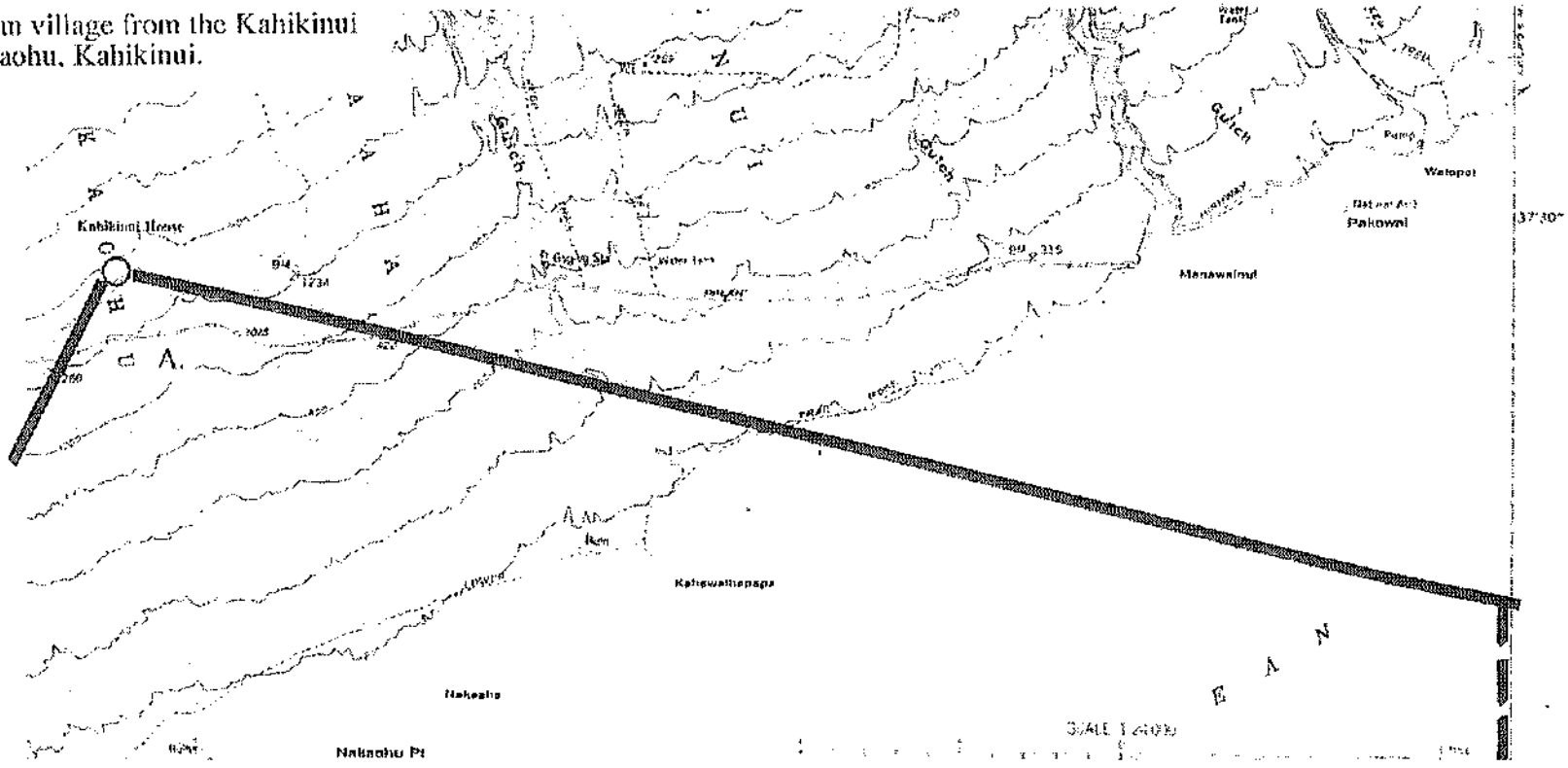
State Historic Preservation Division
Location of Looted Features
Kahikinui Makai Survey Area

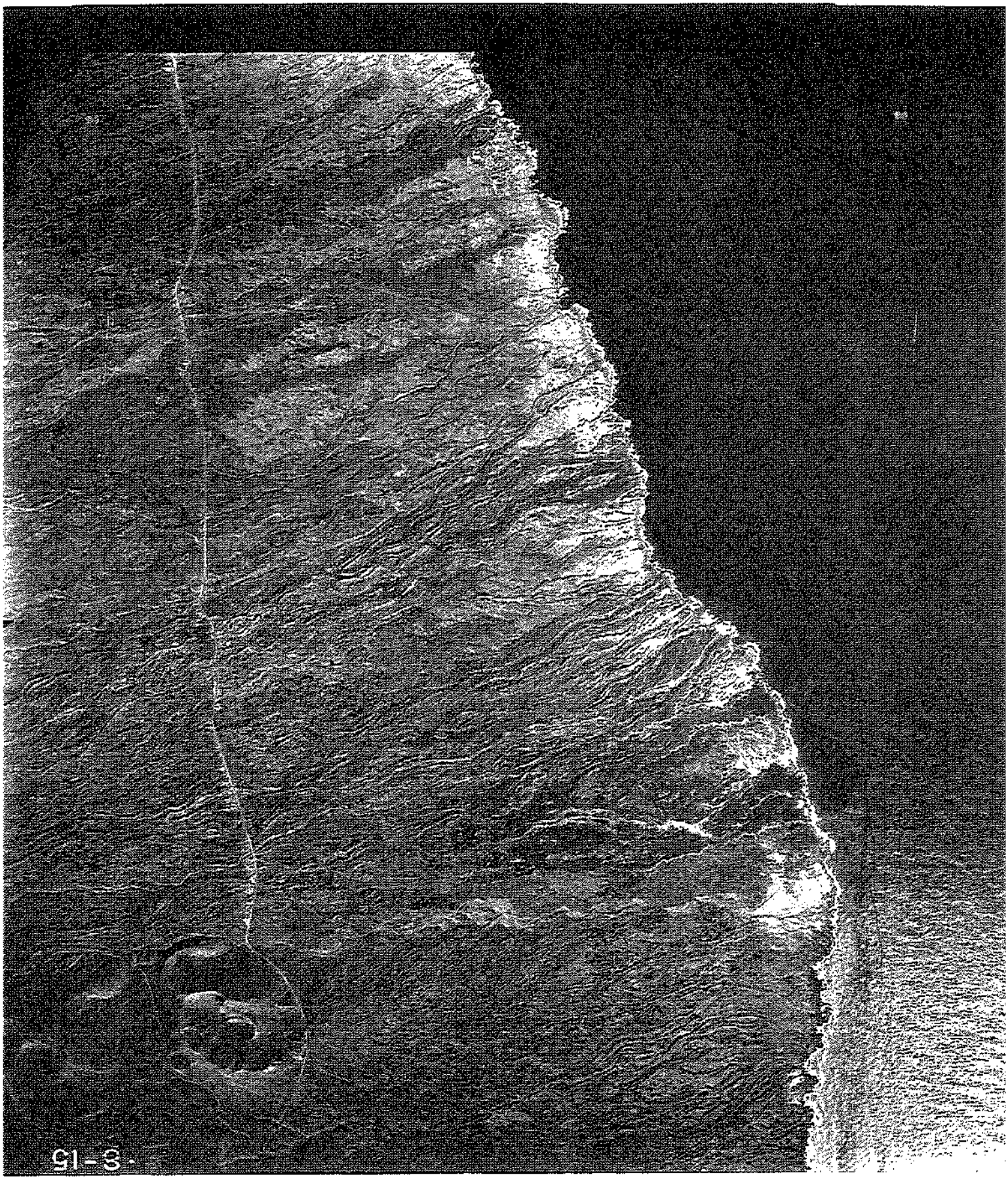


USGS TOPOGRAPHIC MAP - LUALAILUA HILLS Quadrangle 1983



A. Makai view of the Hawaiian village from the Kahikinui trail above St. Inez at Nakaohu, Kahikinui.




G1-S

Survey Format, Technique and Purpose

KA 'OHANA O KAHIKINUI SURVEY

Aloha 'Ohana,
The resettlement and restoration of Kahikinui offers many new and exciting opportunities. In order for Kahikinui to achieve its full potential, however, it will require the efforts of the whole Kahikinui community. Therefore, Ka 'Ohana O Kahikinui is conducting a survey to become more familiar with the people within the Kahikinui community. Please help us by filling out this survey. It should only take a few minutes. All of the results will be kept confidential. Mahalo.

Life at Kahikinui

1) Please indicate the reasons you chose to accept a lot at Kahikinui (check the top 3 reasons):
   a. ☐ I would like to live off the 'aina
   b. ☐ I would like to be somewhere where I can better practice my culture
   c. ☐ I was tired of waiting for a lease from DHHL
   d. ☐ I want a farm
   e. ☐ I want housing
   f. ☐ I wanted to get away from the high cost of living
   g. ☐ There is a lack of economic opportunities where I am currently living
   h. ☐ I want to get away from all of the problems associated with the urban lifestyle (crime, drugs, fast pace of living, etc.)
   i. ☐ I want to raise my children in a different environment
   j. ☐ Other (please indicate): _____

2) I expect to do the following subsistence activities (check all that apply):
   a. ☐ Farm
   b. ☐ Fish
   c. ☐ Hunt
   d. ☐ Gather from the 'aina
   e. ☐ Other _____
   f. ☐ I do not expect to do any subsistence activities
   g. ☐ Not sure

3) I would like to participate in the development of community-based economic opportunities in Kahikinui: ☐ Yes ☐ No

4) I am interested in organizing as a community to develop and construct my housing: ☐ Yes ☐ No

5) In order to ensure Kahikinui's natural resources are sustained, I am willing to undergo an educational session by an 'Ohana member: ☐ Yes ☐ No

6) I am willing to help build and maintain Kahikinui's infrastructure:
☐ Yes ☐ No

7) I would like to help manage and protect Kahikinui's mauka and makai areas:
☐ Yes ☐ No

8) What is the minimum yearly household income you estimate you will need once you settle at Kahikinui?

a. ☐ $0 - $5,000
b. ☐ $5,001 - $10,000
c. ☐ $10,001 - $15,000
d. ☐ $15,001 - $20,000
e. ☐ $20,001 - $25,000
f. ☐ $25,001 - $30,000
g. ☐ $30,001+

9) I will contribute to the following committees (check all that apply):

a. ☐ Roads
b. ☐ Building and design
c. ☐ Water management
d. ☐ Game management (KGLMO)
e. ☐ Makai management
e. ☐ Reforestation (LIFE)
f. ☐ Cultural site management and restoration
g. ☐ Others (specify): _____
h. ☐ I will not contribute

10) If you are not living at Kahikinui yet, please check the top 3 reasons why:

a. ☐ There is no water infrastructure
b. ☐ I am waiting for the road to my lot to be built
c. ☐ I am not prepared to live in Kahikinui's conditions yet
d. ☐ I cannot afford to build my house yet
e. ☐ I have no job opportunities on Maui yet
f. ☐ Other (Please explain):_____

_____

11) If you do not yet live at Kahikinui, in how many months or years do you plan to move to Kahikini? (Please indicate whether months or years):

_____

12) If you currently live in Kahikinui, how long have you been living here? (Please indicate whether months or years): _____

13) If you will be spending most of your time away from Kahikinui, what you will be doing?
   a. ☐I will be spending most of my time at Kahikinui
   b. ☐Working
   c. ☐Living at another residence
   d. ☐Other _____

14) How would you and all those who live in your household like to generate income once you move to Kahikinui (check all that apply)?
   a. ☐ Work full-time for income for Kahikinui community-owned business
   b. ☐ Work part-time for income for Kahikinui community-owned business
   c. ☐ Work full-time for income outside of Kahikinui
   d. ☐ Work part-time for income outside of Kahikinui
   e. ☐ Pension
   f. ☐ Self-employment
   g. ☐ Selling surplus subsistence goods
   h. ☐ I will live outside of the cash economy
   i. ☐ Other _____
   j. ☐ Not sure

Understanding of the Kahikinui Lifestyle:

15) I have read the Kahikinui lease agreement: ☐ Yes ☐ No

16) I understand the settlement requirements: ☐ Yes ☐ No

17) I am aware of the land conditions at Kahikinui: ☐ Yes ☐ No

18) I am aware that the settlement requirements as stated in the Kahikinui lease agreement must be complied with: ☐ Yes ☐ No

19) How many Kahikinui meetings and/or open houses have you attended?

   a. ☐ 0 b. ☐ 1-3 c. ☐ 4-7 d. ☐ 8-11 e. ☐ 12+

20) I will attend a Kahikinui meeting or open house by the end of the year 2000:

   ☐ Yes ☐ No

Demographic

21) Marital Status: Single_____ Married_____ Divorced _____ Widowed _____

22) Number of children: _____

23) What is your current income?

d. ☐ $0 - $5,000
e. ☐ $5,001 - $10,000
f. ☐ $10,001 - $15,000
d. ☐ $15,001 - $20,000
e. ☐ $20,001 - $25,000
f. ☐ $25,001 - $30,000
g. ☐ $30,001 - $35,000
h. ☐ $35,001 +

24) What is your major source of household income at the moment?

a. ☐ Full-time work
b. ☐ Part-time work
c. ☐ Self-employment
d. ☐ Public assistance
e. ☐ Pension
f. ☐ Other_____

25) Where do you live?

a. ☐ Kahikinui
b. ☐ Kaua'i
c. ☐ O'ahu
d. ☐ Moloka'i
e. ☐ Maui specify _____
f. ☐ Lana'i
g. ☐ Hawai'i
h. ☐ Out-of-state _____

26) Gender and age of each family member that will live with you at Kahikinui?

Yourself:	☐ Male	☐ Female	Age: _____
Spouse:	☐ Male	☐ Female	Age: _____
Family member 2:	☐ Male	☐ Female	Age: _____
Family member 3:	☐ Male	☐ Female	Age: _____
Family member 4:	☐ Male	☐ Female	Age: _____
Family member 5:	☐ Male	☐ Female	Age: _____
Family member 6:	☐ Male	☐ Female	Age: _____

Skills and Interest Inventory

27) What is your current occupation? _____

28) What are the current occupations of the other members who will live in your Kahikinui household? (list all that apply):

_____

_____

_____

_____

29) What other occupations have you and those who will live in your Kahikinui household held in the past? (List all that apply):

_____

_____

_____

_____

30) What kinds of specialized skills and/or knowledge (technical, cultural, environmental, educational, etc.) can you contribute to help resettle and restore Kahikinui? (List all that apply):

_____

_____

_____

_____

_____

31) What specific knowledge can you contribute to the restoration and management of archaeological sites and/or natural resources?

_____

_____

_____

_____

_____

32) Additional comments:

Contact Information (Optional)

Name: _____

Address: _____

_____

Phone: Home _____ Work _____

Fax: _____ E-mail: _____

Mahalo for your time and cooperation!

Purpose of the Survey

The Kahikinui community consists of many different individuals from divergent backgrounds. In order for the Kahikinui community to succeed, the community must be able to build upon commonalities found within. It must build upon its strengths, identify its challenges, and work to address community needs. The survey serves to collect the kinds of information that will help community leaders to understand the strengths, challenges, and needs of the community. It will give leaders an understanding of the lessees' motivations for moving to Kahikinui, the type of lifestyle they expect to lead, and the contributions they will be able to make to the community as a whole. Overall, it will give leaders the opportunity to learn more about the community that they are leading and help them to chart its future direction.

The survey will be conducted among present and future residents of Kahikinui. It will provide everyone with the opportunity to express their views, as well as provide the leadership with important information. It is hoped that the survey will also help to open up the dialog between active and inactive 'Ohana members.

Several components are addressed in the survey. It is divided into the following sections:

1) Life at Kahikinui
2) Understanding of the Kahikinui lifestyle
3) Demographic information
4) Skills and interest inventory
5) Contact information (optional)

Life at Kahikinui

This section helps to identify some of the needs, motivations, expectations and desires of present and future Kahikinui residents. Such an assessment can give leaders an idea about the interests of present and future Kahikinui community members. It also gives an indication of the types of activities that they are or will be willing to participate in, the number of community members who will contribute, and when they will actively contribute. It also will help community leaders to establish a time frame for when most of the community will be established.

Understanding of the Kahikinui lifestyle

The questions in this section will help community leaders to determine whether the lessees understand the obligations they agreed to when they signed the lease and if they are familiar with the Kahikinui way of life. It may also help to open up dialog about lease obligations.

Demographic information

Demographic information will help to determine familial, income, age, gender, income, and location characteristics of the community.

Skills and interest inventory

One of the important purposes of the survey is to collect information that will help Kahikinui in its process of development. Such information will be useful for project

development and implementation. In order to achieve objectives stated in the Covenants, it is important the members of the 'Ohana have an idea of the kinds of skills and knowledge that are available within the community. Such information will help the 'Ohana to identify projects and programs that make use of available human resources and will be enhanced by the talents and skills of its own members.

According to Kahikinui's covenants, one of the main goals of the 'Ohana is to build capacity "within the community to bring about intellectual, technical, commercial, and social self-sufficiency and less reliance on scientific, technical, business, academic and other institutional resources...." The ability "to make lasting contributions to the arts, humanities, sciences, and the perpetuation of the Hawaiian world view and lifestyle will be the key indicators of this community's prosperity" (Covenants, 30).

The Covenants also state that "The Ohana will become knowledgeable of its community's needs and capabilities. Community services programs may address the wide range of needs including health care, education, child and elderly care." The resource inventory will help the 'Ohana to match existing community skills and knowledge with projects and programs that will reduce dependency on outside resources; that will enable the community to be self-reliant; that will perpetuate the "Hawaiian world view"; that will address community needs, and that will make it possible for the 'Ohana to make lasting contributions. Overall, it will help the 'Ohana to prosper not only economically, but also spiritually, culturally, and intellectually.

The Covenants indicate that the 'Ohana will not only build programs around the resources that it already has, but it will also address other community demands. The 'Ohana proposes to build the community's capacity to address identified community needs by providing the necessary training and education. It will develop a future human resource base by giving the community's youth the skills that are necessary to do so. The community's prosperity depends upon such capacity building. Not only will it provide employment for residents, but it will also provide employers with qualified workers,

Capacity building within the community will be accomplished through "accredited education and career paths within the design of [the 'Ohana's] economic and community development plans and programs in the moku". Implementation of such a program will ensure future employment opportunities for the youth and establish a human resource base for the community's future. It will also enable Kahikinui to develop businesses that are diverse and increase the community's self-reliance.

Such information will help the 'Ohana to determine the types of projects that can and cannot be pursued at Kahikinui, depending upon the amount of manpower and the types of skills that are available within the community. It will also help them to determine when those projects can be implemented, depending upon when lessees actually move to Kahikinui.

Contact Information

If a community member expresses interest in participating in community activities and projects, it is important that community organizers can reach those who are willing to

help. The contact information, along with the information provided by the survey will enable community organizers to do so.

Survey Administration Techniques
The survey will be administered to all lessees. Although several different survey administration techniques are feasible for Kahikinui, each technique has its strengths and weaknesses. Methods that can be used to administer this survey include 1) the mail questionnaire, 2) the telephone schedule, and 3) the door-to-door schedule or questionnaire.

The Mail Questionnaire
The first technique, the mail questionnaire, is one of the simpler and cheaper ways to administer the survey. The necessary requirements for this type of survey administration include the addresses of the lessees; copies of the survey; labor to label the questionnaires with the addresses and mail them out; stamped envelopes to return the surveys; and postage fees.

This method has its drawbacks, however. One of the major drawbacks to using this method is that response rates are usually low. In the case of the Kahikinui survey, a mail questionnaire may not be the best method to use because the total number of lessees who will be surveyed is small. It would be helpful to get a response from as many lessees as possible in order to best serve the purpose of the survey.

The Telephone Interview
Telephone interviews usually have a higher response rate than the mail questionnaire. Unfortunately, it is also a more expensive and more time-consuming technique than the mail questionnaire. Telephone interviews usually elicit an immediate response. Therefore, information is collected at that moment. The necessary requirements for this type of survey administration include the phone numbers of the lessees; access to telephones; trained staff to administer the survey; and payment for telephone use fees.

In a telephone interview, a schedule is used. A schedule is a list of pre-determined questions that the interviewer is expected to ask. The schedule is basically a questionnaire that is administered verbally by the interviewer. Responses are recorded by the interviewer, as well. The interviewer has a copy of the questions, along with an accompanying set of responses for the respondent to choose from. The interviewer first asks the question and then presents a list of answers to the respondents. The respondent is then asked to choose a response from the list. The interviewer then records the response on the schedule, (Stoddard, 142-143).

The telephone interview offers several advantages over other methods of information collection. Because the survey population is so small, and because it is important that the 'Ohana gets information from as many lessees as possible, the telephone interview method may be a better collection technique in spite of the time requirements and cost.

In-Person Schedule and Door-to Door Questionnaire
The in-person schedule is administered by a person in direct contact with a respondent. In this method, the interviewer goes to the residence of the interviewee to administer the

schedule. The interviewer asks the respondent to answer survey questions and records the respondent's answers. The door-to-door questionnaire is very similar to the in-person schedule. In this method, the survey administrator goes to a particular residence of the and has him or her fill out a questionnaire.

When the survey administrator visits a residence, their name should be given to the respondent. A successful introduction will normally include 1) a concise statement about the purpose of the survey, 2) the name of the organization that the survey is being conducted for, 3) a reassurance of confidentiality, and 4) a brief description of how the respondent was selected. If the respondent does not want to cooperate, the interviewer should be prepared to give more detailed information about the survey. The administrator should also know the amount of time the interview will take and be prepared to schedule a time for another interview if the respondent is too busy, (Stoddard, 1982)

Survey Dissemination Strategies for Kahikinui

The survey can be administered as mail questionnaires, telephone interviews, in-person, schedules or door-to-door questionnaires. Because the lessees are scattered geographically, it is more effective to combine these techniques. Telephone interviews are convenient, but may not allow enough interaction. Door-to-door questionnaires and in-person schedules are often expensive and require a great deal of time. Even if travel costs are low, the amount of time consumed by an interview is considerable. The costs in time and money for printing, mailing and following-up questionnaires can be quite costly, but is much less than but are manageable at community meetings. Mail surveys are helpful but usually without high rate of responses, (Stoddard, 1982). A combination of these methods is necessary in order to get a high response rate.

The 'Ohana can first begin by administering a telephone survey. Those who cannot be reached will then be mailed a questionnaire, along with a stamped envelope. A stamped card labeled with the name of the lessee will also be sent along with the questionnaire. The respondent will be asked to return the questionnaire within two weeks. The card should be returned to the 'Ohana separately within the same period. The card will be used to indicate those lessees members who have not returned the questionnaire, (Stoddard, 1982).

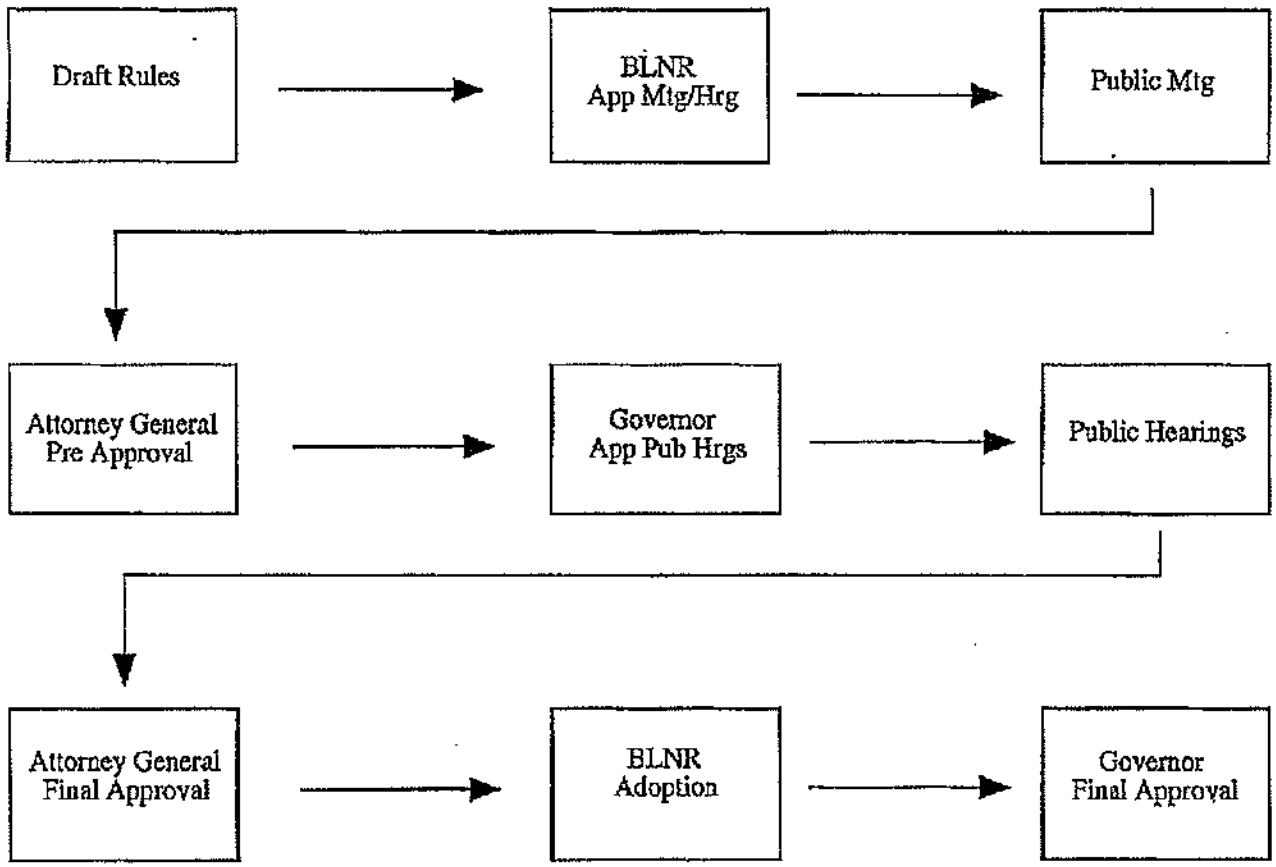
Those lessees who did not respond either by phone or by mail will be visited by an 'Ohana member. One or two 'Ohana members from each island will be asked to hand deliver the questionnaire to the lessees on their island and have them fill it out. They may also administer it as a schedule. Although this part of the process is time consuming, it will increase the number of responses.

Appendix C

Natural Resource Management
Supplementary Information

List of Contents

General Procedure to Adopt DLNR Administrative Rules



HAWAII ADMINISTRATIVE RULES

TITLE 13

DEPARTMENT OF LAND AND NATURAL RESOURCES

SUBTITLE 4 FISHERIES

PART II MARINE FISHERIES MANAGEMENT AREAS

CHAPTER 59

KAWAALOA-MOOMOMI BAYS SUBSISTENCE
FISHING PILOT DEMONSTRATION PROJECT, MOLOKAI

§13-59-1 Definitions. As used in this chapter unless otherwise provided:

"Kawaaloa-Moomomi Bays" means the bays situated offshore of Northwestern Molokai, County of Maui, Hawaii.

"Marine life" means any type or species of saltwater fish, shellfish, mollusks, crustaceans, coral, or other marine animals, including any part, product, egg, or offspring thereof; or seaweeds or other marine plants, including any part, product, seed, or root thereof.

"Native Hawaiian" means any descendant of the races inhabiting the Hawaiian islands prior to 1778.

"Pilot project area" means the Kawaaloa-Moomomi Bays subsistence fishing pilot demonstration project containing Zones 1 and 2 located in that portion of Northwestern Molokai bounded by a straight line drawn from Kaiehu Point to Naaukahiki Point, thence along the shoreline of Moomomi Bay and along the shoreline of Kawaaloa Bay back to Kaiehu Point as delineated in the "Map of Kawaaloa-Moomomi Bays subsistence fishing pilot demonstration project, Molokai, 10/05/94" located at the end of this chapter.

"Recreational fishing" means to fish for or take marine life for purposes other than producing income.

"Subsistence" means the customary and traditional native Hawaiian uses of renewable ocean resources for direct personal or family consumption or sharing.

"Zone 1" means the shoreward portions of Kawaaloa and Moomomi Bays enclosed by straight lines drawn between Points "A," "B," and "C."

"Zone 2" means the seaward portion of the Kawaaloa-Moomomi Bays Subsistence Fishing Pilot Demonstration Project, Molokai, seaward of Zone 1. [Eff JUN 19 1995] (Auth: HRS §§188-22.6, 188-53) (Imp: HRS §§188-22.6, 188-53)

§13-59-2 Prohibited activities. (a) No person shall engage in any fishing or use marine life within the pilot project area, except with a permit issued under section 13-59-3 providing for:

(1) Within Zone 1, a permittee may fish or take marine life only with hook-and-line, throwmets, scoop nets, and hand harvesting methods; and

(2) Within Zone 2, all of the fishing provisions in Zone 1 shall apply, and a permittee may use spears between the hours of 6:00 a.m. and 6:00 p.m.; and use nets specifically to take akule.

(b) All existing regulatory measures contained in title 12, Hawaii Revised Statutes (HRS) and title 13, Hawaii Administrative Rules (HAR), relating to fishing or marine life shall apply in the pilot project area.

(c) Nothing in this section shall be interpreted to prohibit any native Hawaiian traditional and customary rights to the extent allowed by law. [Eff JUN 19 1995] (Auth: HRS §§187A-5, 188-22.6, 188-53) (Imp: HRS §§187A-5, 188-22.6, 188-53)

§13-59-3 Permitted activities. (a) The department may issue a permit to fish in the pilot project area that is valid for not more than one-year in duration to the following:

(1) Native Hawaiians to engage in subsistence fishing;

(2) Commercial fishermen to continue existing commercial fishing; provided that the person has a valid state commercial marine license, has no standing violation or delinquency with the department, and has fished in the pilot project area (Statistical Area No. 312) during 1993 as recorded by monthly fish catch reports submitted to the department or has an exemption to reporting as a crew member of a vessel recorded fishing in the project area during 1993;

(3) Non-native Hawaiians to continue existing recreational fishing; and

(4) Others to collect or take marine life for other purposes pursuant to HRS and HAR.

(b) The department may limit the number of permits issued and specify terms and conditions to manage the fishing and marine life in the pilot project area. [Eff JUN 19 1995] (Auth: HRS §§187A-5, 187A-6, 188-22.6, 188-29, 188-31, 188-53) (Imp: HRS §§187A-5, 187A-6, 188-22.6, 188-29, 188-31, 188-53)

§13-59-4 Fishing permit. (a) All applications for the fishing permit to use the pilot project area and fishing activity reports shall be made on forms provided by the department and containing the following information:

(1) Name(s), signature(s), and address(s) and at least one telephone number to serve as a point of contact;

(2) Type of fishing gear, method, and marine life to be taken; and

(3) Commercial marine license number of each person applying for commercial fishing, and boat name, registration number and description.

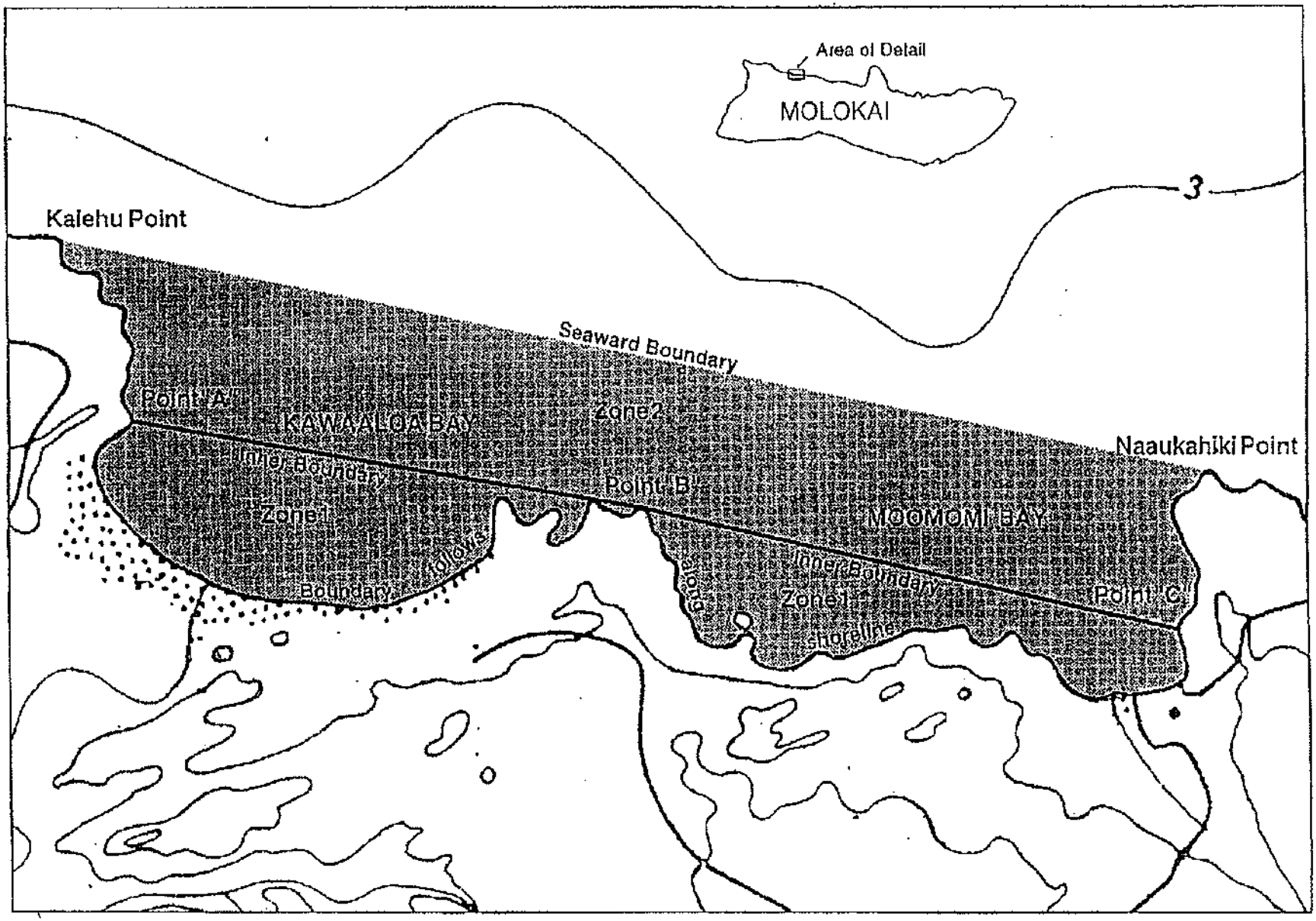
(b) The permit shall be free.

(c) Each permittee shall submit a signed monthly report of the date, hours of use or fishing, and number and amount of marine life taken in specific locations within 10-days after each month. [Eff JUN 19 1995] (Auth: HRS §§187A-5, 188-22.6, 188-29, 188-31, 188-53) (Imp: HRS §§187A-5, 188-22.6, 188-29, 188-31, 188-53)

§13-59-5 Revocation of permit. The Department may revoke any permit issued as provided by this rule for any infraction of the terms and conditions of the permit or violation of Statutes and Rules in the pilot project area, and a person whose permit has been revoked shall not be eligible to apply for another permit until the expiration of one year from the date of revocation. [Eff JUN 19 1995] (Auth: HRS §§187A-5, 187A-6, 188-22.6, 188-29, 188-31, 188-53) (Imp: HRS §§187A-5, 187A-6, 188-22.6, 188-29, 188-31, 188-53)

§13-59-6 Penalty. A person convicted of violating the provisions of this chapter or the terms and conditions of any permit issued as provided by this chapter, shall be guilty of a petty misdemeanor, and upon conviction thereof, shall be punished as provided by law. [Eff JUN 19 1995] (Auth: HRS §§187A-5, 187A-6, 188-22.6, 188-29, 188-31, 188-53) (Imp: HRS §188-70)

§13-59-7 Effective and termination dates. This rule shall take effect on July 1, 1995 and terminate on June 30, 1997. [Eff [illegible] 1995] (Auth: HRS §§187A-5, 188-22.6) (Imp: HRS §188-22.6)



Map of Kawaaloa-Moomomi Bays Subsistence Fishing Pilot Demonstration Project, Molokai, 10/05/94

Deep

Fish	Area Caught	Depth	Season or Month Caught	Method Used	Average Size	Average Number Caught	Changes in Appearance	Use/Preparation	Change in Catch Size
Ahi									
Aku									
Hage									
Kahala									
Kawakawa									
Mahimahi									
Au/Marlin									
Mu									
O'io									
Onaga									
Ono									
Opakapaka									
Rainbow Runner									
Other, specify:									

* Season: (a) January, (b) February, (c) March, (d) April, (e) May, (f) June, (g) July, (h) August, (i) September, (j) October, (k) November, (l) December.
** Method Used: (1) Dunking from shore, (2) Whippling from shore, (3) Trolling from boat, (4) Dunking from boat, (5) Spear diving, (6) Wire traps, (7) Throw net, (8) Set net, (9) Surround net, (10) Scoop net, (11) Hukilau, (12) Bullpen, (13) Pa'ipa'i, (14) Fish house, (15) Torching

**** Courtesy of Hawaiian Electric ****

Shallow Water

Fish	Area Caught	Depth	Season or Month Caught	Method Used	Average Size	Average Number Caught	Changes in Appearance	Use/Preparation	Change in Catch Size
Awa									
Mullet									
Tilapia									
Uouoa									
Other, specify:									

* Season: (a) January, (b) February, (c) March, (d) April, (e) May, (f) June, (g) July, (h) August, (i) September, (j) October, (k) November, (l) December.
** Method Used: (1) Dunking from shore, (2) Whippling from shore, (3) Trolling from boat, (4) Dunking from boat, (5) Spear diving, (6) Wire traps, (7) Throw net, (8) Set net, (9) Surround net, (10) Scoop net, (11) Hukilau, (12) Bullpen, (13) Pa'ipa'i, (14) Fish house, (15) Torching

Reef

Fish	Area Caught	Depth	Season or Month Caught	Method Used	Average Size	Average Number Caught	Changes in Appearance	Use/Preparation	Change in Catch Size
Aholehole									
Aweoweo									
Enenui									
Hinalea									

Midwater - Deep

Fish	Area Caught	Depth	Season or Month Caught	Method Used	Average Size	Average Number Caught	Changes in Appearance	Use/Preparation	Change in Catch Size
Akule									
Lai									
Moana									
Opelu									
Paplo/Ulua									
Uku									
Other, specify:									

* Season: (a) January, (b) February, (c) March, (d) April, (e) May, (f) June, (g) July, (h) August, (i) September, (j) October, (k) November, (l) December.

** Method Used: (1) Dunking from shore, (2) Whippling from shore, (3) Trolling from boat, (4) Dunking from boat, (5) Spear diving, (6) Wire traps, (7) Throw net, (8) Set net, (9) Surround net, (10) Scoop net, (11) Hukilau, (12) Bullpen, (13) Pa'ipa'i, (14) Fish house, (15) Torching

Fish	Area Caught	Depth	Season or Month Caught	Method Used	Average Size	Average Number Caught	Changes in Appearance	Use/Preparation	Change in Catch Size
Kala									
Kole									
Kupipi									
Mamo									
Manini									
Menpachi/U'u									
Moi									
Opunui									
Palani									
Ta'ape									
To'au									
Uhu									
Weke									
Other, specify:									

* Season: (a) January, (b) February, (c) March, (d) April, (e) May, (f) June, (g) July, (h) August, (i) September, (j) October, (k) November, (l) December.

** Method Used: (1) Dunking from shore, (2) Whippling from shore, (3) Trolling from boat, (4) Dunking from boat, (5) Spear diving, (6) Wire traps, (7) Throw net, (8) Set net, (9) Surround net, (10) Scoop net, (11) Hukilau, (12) Bullpen, (13) Pa'ipa'i, (14) Fish house, (15) Torching

Hawaiian Name	What They Eat	Subsistence Use	Other Information
Humuhumu 'ele'ele		Broiling in *ti* leaves is the favorite method of cooking and in modern times by frying. The flesh is *good*, said better than *manini*. Some say it's too bony to be considered a good fish. Japanese in Hawaii are fond of it, and it therefore brings a good price at the market. The ***humuhumu mane'one'o*** causes a puckery feeling in the throat – one of the marks of a poisonous fish. (Also see "Other Information.")	All ***humuhumu*** have a strong smell, like a pig, and must be skinned before eating. Some grunt like a pig when pulled out of the water.
Humuhumunukunuku apua'a		Hawaiians used this fish for fuel when they were caught in great abundance. A few cooked, eaten, then the bones, especially the head were used to keep the fire going for further cooking.	All ***humuhumu*** have a strong smell, like a pig, and must be skinned before eating. Some grunt like a pig when pulled out of the water.
Kahala (or ***amuka***)		Cooked whole in the *imu*, in steaks, salted, or wrapped in *ti* leaves and baked. In some localities, eaten raw, first skinning the fish, cutting it into cubes, then salting – a meaty fish.	***Kahala*** went straight to the mouth of the high chief.
Kala (less well-known are ***ume*** and ***mohaha***)		Few eat it raw. If cooked fresh the favorite method is broiling. The soft part makes good *palu*. It is often dried, the tough skin first stripped off, the flesh then cut off in 'ropes' and dried, or the meat cut away from the spine and dried, skin and all. If the skin is left on, the flesh is cut down to the skin, after removal from bones, so as to let the salt sink well into the flesh. Some say it is best broiled after it is about ¾ dried, that is not too stiff and hard.	This fish is so abundant that it is eaten considerably for that reason. It is easy to find and catch. The odor of the flesh is said to vary with the area where it is caught. To rid the flesh of odor, the fish was treated: lay the fish across the palms of the hands, head on the left palm, tail on the right. Breathe (inhale) over the fish, turning the head from left to right, and then expel the breath violently. Turn the fish over and repeat. In areas where *limu* are abundant, the fish takes on the fragrance of the *limu* it eats.

SUBSISTENCE USE OF FISH FOUND IN KAHIKINUI

Hawaiian Name	What They Eat	Subsistence Use	Other Information
A'awa		Eaten broiled or dried, can be used in other ways; flesh is white. Sometimes taken as *pūpū* (bit of food taken after drinking *'awa*, as an aftertaste).	A common fish of the coral reefs at all times of the year.
Akule		Eaten raw, broiled, cooked in ti-leaf bundles placed over the taro in the *imu*; good for *palu*; a favorite fish for drying.	
'Ala'ihi (or *'ale'ihi*)		Eaten raw, salted, broiled, both fresh and after drying; difficult to prepare because scales are tenacious.	Are said to have been a favorite fish of Kamehameha III.
Hināiea (or *āiea* for short)	They live on sea plants and remain healthy if confined in sea pools.	Usually eaten raw. Usually skinned, before or after cooking. Favorite way of cooking was broiling. It was also good for *l'a hoomelumelu*, in which case the entrails, head, tail and spine were removed, the flesh scraped off the scaly skin, and the condiments added.	One of the most popular, abundant and well-known small fish. Hawaiians often mention it in tales and traditions as a proper fish to eat as an aftertaste for 'awa.

Hawaiian Name	What They Eat	Subsistence Use	Other Information
Manini		Delicious. There are many references to its being eaten raw, and very fresh. Traditionally served with *limpoa* seaweed. It was never cleaned of its soft parts, except for removal of the gall bladder from the full-grown fish if it was to be cooked. If cooked, it should be broiled. Sometimes the skin was removed to be saved for *palu*. When eaten raw, it was usually salted first. Salting flattened down the dorsal fin, which becomes stiff and upright soon after the fish is taken from the water, making the fish hazardous to swallow. It was a popular fish for drying. (Also see "Other Info.")	Common in Ka'u. One of the most popular and sought for fishes. Liked by chiefs and commoners even though it is tough-skinned and bony. In Ka'u, every summer the natives used to catch the spawn by the million. Large, flat lava rocks were swept clean with brooms of coconut midribs. Then the *'ōhua*, about postage stamp size, were mixed with salt and scattered to dry in the hot sun. Later they were stored for the future, or taken inland for exchange with those who lived far from the shore.
Manō lālākea			Never known to attack human beings.
Moano	Hawaiians believed that this fish ate *lehua* blossoms, which are a deep red, and derived their color from the flowers. Sometimes this fish was referred to as *moano-nui-ka-lehua* (great *moano* of the *lehua*).	Eaten raw, or broiled in *ti* leaves. Reported as being one of the most delicious fishes when cooked in *ti* leaves.	A few lines of a chant mention this fish: *"Ono, ono wale mai la no ka hoi ka i'a o ke kai, A he moano kai lena, Onoi Onoi"* (Delicious, delicious is the fish of the sea, the *moano* of the yellowish sea, delicious, delicious!)

Hawaiian Name	What They Eat	Subsistence Use	Other Information
Kūmū		Eaten broiled, cooked in *ti* leaves, raw, or salted lightly for two to three days, then cooked in any manner.	The ***kūmū*** was used extensively as an offering to the gods when the priests demanded a red fish. It was an appropriate offering when a canoe was launched, sometimes in *hula* ceremonies, and sometimes for atonement of sin. It was offered by those who had been through a course of teaching and were now 'masters' of an art, for one meaning of the name is master. It was classed as one of the "sea pigs." It was forbidden to women for the red color suggested menstrual period, at which time women were set apart. The young, ***ahuluhulu***, were used in the rite called *pa'ina ho'oku'u* (remembrance of the *'aumakua*) when the priest had delivered an afflicted person from death.
Kūpīpī		Meat is white, delicious, good to eat raw, cooked in *ti* leaves, broiled, or dried. One says preferred raw after being salted two hours or more; or broiled after being exposed to the hot sun for a day.	Plentiful; easy to catch; perhaps eaten for that reason. One says that fishermen try to evade hooking and bringing it out of the water, let alone packing a load home.
Laula			Not data have been received from Hawaiians as to this fish. It may be the ***uhu laul.***
Loulu			This fish was used by *Kahuna* to cause death; it was referred to as ***"he i'a 'awa'awa"*** (a bitter fish).
Mamo		Good to eat raw or broiled. The chiefs were fond of this fish; for softness, ***ma'oma'o*** was the best, good to eat raw or broiled.	Common on Oahu.

Hawaiian Name	What They Eat	Subsistence Use	Other Information
Moi	It is a seaweed eater and has favorite feeding spots.	Some say it was always eaten raw, others say it was salted, dried, or cooked in *ti* leaves or in the *imu*. It's hard to catch, being a great fighter.	***Moi*** is a fish for chiefs and is much sought today as a delicious fish. Formerly, commoners were not allowed to eat it.
Mū	They eat invertebrates – crustaceans.	Excellent food fish, not eaten raw, usually broiled, sometimes cooked in *imu*, but the large ***mū*** too large to cook whole.	The strong resemblance in form of teeth and jaws to those of man caused Hawaiians to transfer the name ***mū*** to the man who was sent out to get persons to be buried alive beside the body of a dead chief.
Nenue	It feeds on *limu nanue* and *limu kala*.	Said to be delicious. Some say it is the best raw fish. If cooked, it is best when wrapped in *ti* leaves, then broiled. It is good for *palu*. When very fat, only the gall bladder was removed. The entrails were saved to make a relish. The head was chopped into small pieces and added to the entrails and salt, *kukui* nut, and chili pepper added, as usual. ***Nenue elele*** is tougher than others. ***Nenue pa'i'i*** and ***nenue paki'iki'i*** may be the same; they are said to be the most tender.	Said to be one of the most popular fishes with the Hawaiians, reserved for the chiefs in the old days. The odor is strong.

Hawaiian Name	What They Eat	Subsistence Use	Other Information
'O'opu	They are carnivorous.	Few of them are large enough to be of much food value. ***Hinana*** were especially popular as dainty food. ***Hinana*** were *I'a pi la* (fish stingily regarded). These ***'o'opu*** are highly prized as they have a very delicate flavor, from (it is supposed) having fed on the fallen flowers of the *Eugenias* (*lehua trees*), which always line the banks of mountain streams. ***Hinana*** and ***'o'opu*** were usually wrapped in *ti* leaf bundles, then cooked over the coals. In Kaual ginger leaves were sometimes favored for their delicate fragrance. *'O'opu* were also eaten raw or dried. Some ***'o'opu*** were used ceremonially.	How ***hinana*** were caught: one end of the net was tied or held fast on the bank of the stream. An *'Ili Ku'ula* took the other end and swam to meet her companion from the opposite side. When the nets met they were made fast and then the two dived down to the bottom of the nets to set them right. The men then came to lift the bottom of the net to the surface. The net resembled a huge hammock, weighted with millions of the choice ***hinana***. To prevent the net from tearing, the fish had to be scooped out. The *'ohana* came with calabashes, buckets, baskets, any containers, and all were filled. How ***'o'opu*** were caught: catch large numbers of fish at the beginning of the rainy season. A platform was built across a stream just under the surface where the ***'o'opu*** would be because the water would be clearer there.
'Opelu		***'Opelu kikā*** (young) are delicious when fat. Highly prized as food, eaten raw, dried, sometimes broiled after drying or broiled when fresh. Some say the dark meat is delicious and that there are not many bones. The ***'opelu*** is a tender fish that quickly spoils.	With the *aku*, this fish figures in one of the best known stories or traditions of Hawaii – the coming of *Pa'ao* to Hawaii from Kahiki, already related. In speaking of the *aku* and the ***'opelu***, during those months that one is permitted to be caught, the other is prohibited. In Ka'u, where there was a great deal of fishing for both these fish, there was a *heiau* devoted solely to offerings for the abundance of the ***'opelu***.
Paku'iku'i		Good to eat, always cooked, excellent broiled.	

Hawaiian Name	What They Eat	Subsistence Use	Other Information
Uhu (persistant in going ahead wilfully)	They clip off food from coral.	A favorite fish of Hawaiians, sometimes eaten dried or broiled, but usually eaten raw. The flesh is soft, white and a little mushy. It is preferred when combined with pieces of the fat liver. Some say it has the most *ono* liver. The meat is not as *ono* or as fat as the liver, and if the liver is very fat the combination of the two is the best. One says the spawn have a deliciousness all their own. The red are more choice for eating raw. The green are not so fine flavored, but attain a large size.	***Uhu 'a'a*** likes to fight other ***uhu***. ***Uhu maka'ika'i*** provides a descriptive habit of all ***uhu*** travelling along one after the other, in line. ***Uhu*** has a prominent place in legend i the tale of ***Punlakala.***

Hawaiian Name	What They Eat	Subsistence Use	Other Information
Palani		Well-liked in spite of the strong odor of skin and flesh; skin always removed; eaten raw, or broiled, or cooked in a calabash. For the method of getting rid of the odor of the *palani* see directions under the *kala* fish. Broiling was the best method of removing the remaining odor. If the odor has not been removed from the *palani*, it clings to the breath of those eating it as tenaciously as does the odor of onion.	There is a Hawaiian riddle: *"Ku'u i'a pa i ka lani"* (my fish whose odor reaches the heaven). The mythical origin of the odor of the *palani* is given in a tale of *Ke'emalu*. Another legendary account of the origin of the odor is given in a tale of *Punia*. Was said to be *kapu* to men but free to women.
Pao'o kaulia (a variety of *'o'opu*; the *'o'opu kai* sea-group).	*Kaulia* is a limu eater.	*Pao'o* are eaten dried or cooked in *ti* leaves, after being salted to taste. Fishermen often popped a live *pao'o* into the mouth when fishing but seldom ate them raw with *poi* for the flesh becomes slightly bitter after the fish dies. It was often used as bait.	The *pao'o* figures in the legend of *Hainakolo*. The *pao'o* fish was used by priests in sorcery practices, to rid a person of infatuation.
Po'opa'a (hard head)		Some say not much esteemed as food, though it is tasty and flesh is not bony. Some claim it is delicious, full of meat and with good keeping quality. Eaten raw, broiled, or salted and dried. Wen wanted after salting and drying, the salt is rinsed off, and the fish heated, a little water is added just before serving.	*Cirrhitus pinnulatus* is one of the largest and most important species of the family. Abundant.
Ta'ape (alien species)			
To'au (alien species)			

Hawaiian Name	What They Eat	Subsistence Use	Other Information
Ulua		*Ulua paopao* is best for eating raw; may be cooked. *Ulua* were eaten raw or cooked. If large, *ulua* were usually baked; if small, broiled. The eyes were well-liked, stuffed into the belly before the fish was placed in the *imu*. The savory liquid around the eyeball was a delicacy, the eyeball itself becoming hard and unpalatable when cooked.	*Ulua paopao* characteristic: as it dives for food, it leaves its tail waggling above the surface of the water. *Ulua kihikihi* is believed to be the young of a rather different looking fish of larger size.
Umauma lei			

Hawaiian Name	What They Eat	Subsistence Use	Other Information
Ūpāpalu (soft)		The meat is sweet, soft and tender. It is good raw, broiled, or wrapped in ti leaves, then broiled. Flesh is white, not many bones.	It is caught on moonlight nights, the first fish to bite. They come to the surface in great numbers.
'Ū'ū		This is a delicious fish, good to eat raw or broiled. Being very difficult to skin, it is easiest to broil and eat the flesh from the skin. For eating raw, the fish is cleaned of internal organs, and the dorsal and anal fins are pulled away and ripped out. The Japanese in Hawaii are fond of them; they take the place of carp. It's an expensive fish in market, not being plentiful along many reefs.	
Wahanui			

Hawaiian Name	What They Eat	Subsistence Use	Other Information
Weke		*M. auriflamma* are the best eating; the favorite preparation is being broiled in *ti* leaf wrappings. The flesh of the head of some ***weke***, like ***weke pahulu*** (U. *arge*), have a poisonous quality. Those who eat it have a restless sleep or nightmares in which the sensation is one of having lost balance, and especially one of feeling that the head is lower than the feet and it is impossible to get it back to level as one is lying down. Eating the head of this fish produces a sort of delirium. It is agreed that the poison lies in the brain. It is possible that the poison is derived from some food of the ***weke pahulu*** which is only present at certain times of the year. Some questions include: *Does this fish eat seaweed that other* ***weke*** *don't? Or does this* ***weke pahulu*** *have the special ability to segregate this substance in its brain? What value is it to the fish?* ***Weke*** caught off the islands of Lanai and Moloka'i are most apt to be poisonous. The ***weke*** are a popular fish as food. The ***oama*** are delicious eaten raw after being salted a few minutes, or dried. To remove the scales, the ***oama*** were put into a large container with pebbles and sand, stirred until the scales were loosened or rubbed-off, then rinsed in seawater. Large ***weke*** were scaled by scraping. Full-grown ***weke*** are sometimes eaten raw, but usually cooked, broiled in *ti* leaves over hot coals.	Most common are: ***weke 'ula, weke pueo, weke pahulu, weke a.*** Both red and light-colored ***weke*** were popular as offerings to the gods, chosen according to the demands of customs, red for certain occasions, white for others. The meaning of ***weke*** (to open) also gave value to this fish in sorcery, as a priest might offer it with a prayer to open or release something, such as evil thoughts. Preparatory to forgiveness, or a prayer to open the door of mystery so as to reveal the truth. The harmful substance in the head has a legendary explanation in the story of *Pahulu*, chief of the ghosts; and another version in the tale of *Kamiki*.

MANAGEMENT INFORMATION ON FISH FOUND IN KAHIKINUI

Hawaiian Name	Other Hawaiian Names	Sizes	Scientific Names	Common Names	Areas Normally Found	Habitat
A'awa	***A'awa leloa*** ***A'awa uleholu*** ***A'awa e'a*** ***A'awa hai e'a*** ***A'awa lelo***		*Lepidaplois bilunulatus* *Lepidaplois modestus*	Certain wrasse fishes.	A common fish of the coral reefs at all times of the year.	
Akule	Stages of growth: ***Pa'ā'ā*** (stripling) ***Halalū*** (or ***hahalalū***) ***Akule*** (adult)	Growth stages (sizes): 2" to 3" long 5" to 6" long 7" to 12" long (occasionally up to 20")	*Selar crumenophthalmus*	Big-eyed scad Goggle-eyed scad	Found most abundantly in the big bays of the islands, especially those of Kauai. Most abundant in Kane'ohe in April, May and June.	Goes from place to place, if a school of them makes a first appearance at Kahana, it will divide into two groups, one going toward Ko'olau, and the other toward Wai'anae. They often met at Kailua and many were caught.
'Ala'ihi (or ***'ale'ihi***)	***'Ala'ihi kalaloa*** ***'Ala'ihi kanaloa*** ***'Ala'ihi kakaloa*** ***'Ala'ihi maoli*** ***'Ala'ihi lakea*** ***'Ala'ihi mahū*** ***'Ala'ihi ako'ako'a*** ***'Ala'ihi piliko'a***	Generally, 2" to 2 ½ long (sometimes 6").	*Holocentrus species* *Holocentrus diadema* *Myripristis species (unidentified)* *H. xantherythrus* *Holocentrus diadema*	Hawaiian squirrel fish Long jaw squirrel fish Soldier fish squirrel fish White dorsal squirrel fish Long spike squirrel fish		Live in holes in the reef in shallow waters, are very common, usually caught at night. ***'Ala'ihi mahū***, ***'ala'ihi ako'ako'a***, and ***'ala'ihi piliko'a*** cling to the coral.
Hīnālea (or ***ālea*** for short)	***Hīnālea luahine*** ***Hīnālea lauwili*** ***Hīnālea 'akilolo***	Usually, 3" or 4" to 10" long. ***Hīnālea 'akilolo*** is 5" to 12" long.	*Thalassoma ballieui* *T. duperry* *Coris gaimardi*	Old woman crasse Wiliwili Leaf (very common)		Coral reefs and warm currents.

Hawaiian Name	Other Hawaiian Names	Sizes	Scientific Names	Common Names	Areas Normally Found	Habitat
Humuhumu 'ele'ele	***Humuhumu 'ele'ele***	6" to 18" long	*Melichthys niger*	Black triggerfish	Deep water	
Humuhumunukunuku apua'a	***Humuhumunukunuku apua'a***	6" to 18" long	*Rhinecanthus aculeatus* *R. rectangulus*	Picasso triggerfish		
Kahala (or ***amuka***)	<u>Stages of growth</u>: ***Puakahala*** ***Kahala opio*** ***Kahala*** <u>Other names</u>: ***Kahala molulei*** (or ***mokulela***) ***Kahala maoli*** (Indigenous)	<u>Growth Stages (sizes)</u>: young stage half grown adult (6' or more long)	*Caranx mate* *Seriola aurea-vittata* *S. dumerili* *Naucrates ductor*	Amber jacks	Deep sea fish. Many are caught off Niihau, sometimes 40 hooks being let down on one line.	
Kala (lees well-known are ***ume*** and ***mohaha***)	***Kala holo-ihu-loa*** ***Kala li'ili'i*** ***Kala pahikaua*** ***Kala lolo*** ***Kala moe*** ***Kala moku*** ***Kala awa pehu*** ***Kala ni'au*** ***Kala palaholo*** ***Kala liu*** ***Kala holo***	Generally 12" to 24" long.	*Acanthuridae species* *Naso lituratus* *N. unicornus* *N. brevirostris*	Surgeon fish Long-nosed Little Sword Imperfect Sleeping Cutting Swollen Spleen Spry Insignificant Swift		

Hawaiian Name	Other Hawaiian Names	Sizes	Scientific Names	Common Names	Areas Normally Found	Habitat
Manini	***Manini 'elekuhō*** Stages of growth: ***'Ōhua-liko*** ***'Ōhua-kani'o*** ***'Ōhua-pala-pohaku*** (or ***'ōhua-ha'eka'eka***) ***Kakala-manani*** ***Manini***	Generally, 3" to 5" Growth Stages (sizes): Transparent, size of a postage stamp. Stripes appear when the fish is a day old. They begin to nibble at fine *pala-pohaku* seaweed; and the skin begins to darken. Half-grown. Adult.	*Acanthurus triostegus*	Convict tang a surgeon fish		
Manō lālākea	***Manō lālākea***	4' to 6'	*Squlus suckleyi* (perhaps)	Whitetip reef shark White fin shark Hawaiian dog-fish	It sometimes follows fishermen about the reef waters, perhaps looking for discarded fish.	
Moano	***'Ahua*** (or ***'ohua***) ***Moāno auki*** (*ti* stem) ***Moāno kea*** (white) ***Moāno papa'a*** (burnt) ***Moāno ukali*** (following) ***Moāno ukali ulua*** (*ulua* following) ***Moāno ahulu*** (over cooked)	young	*Parupeneus multifasciatus* *P. filamentosus*	(Manybar) goatfish	Found in reef waters and deep waters just beyond the reef.	

Hawaiian Name	Other Hawaiian Names	Sizes	Scientific Names	Common Names	Areas Normally Found	Habitat
Kūmū	Stages of growth: ***Kolokolopao*** ***Kolokolopā*** ***Makolokolopao*** ***Ahuluhulu*** ***Kūmū-a'e*** ***Kūmū***	Growth Stages (sizes): the spawn stage the spawn stage the spawn stage second stage third stage adult; 5" to 16", but usually 9" to 12".	*Parupeneus porphyreus*	Whitesaddle goatfish	Deep water have deep color. Also in shallow water.	Was sometimes kept in pools to have on hand to eat after drinking 'awa.
Kūpīpī	*Aoao-nui*	young (size: palm of hand)	*Abudefduf sordidus*	Blackspot sergeon	A common fish in the coral reefs.	
Laula	*Laula*		*Callyodon laula*	Regal parrotfish		
Loulu	*Loulu*	*A. monoceros* reaches 360 mm and *A. scripta* reaches about 27" long.	*Alutera monoceros* *A. scripta*	Scribbled filefish		
Mamo	***Mamamo*** ***Mamano*** ***Ma'oma'o*** ***Mamo pohole***	Generally, about 3" to 4" sometimes larger.	*Abudefduf abdominalis*	Hawaiian sergeon		

Hawaiian Name	Other Hawaiian Names	Sizes	Scientific Names	Common Names	Areas Normally Found	Habitat
'O'opu	*Hinana* Three groupings: ***'O'opu kai*** *(sea* ***'o'opu)*** ***'O'opu wai*** (freshwater *'o'opu*) *'O'opu* of brackish waters	Spawn (varied somewhat according to locality and species). ***'O'opu*** is mostly of small sizes, averaging 7" to 8" but sometimes 1' or more.	*Eleotridae* species (five are Hawaiian) *Gobiidae* species (twelve are from Hawaii)		Were most plentiful in and at the mouth of the larger streams. ***Hinana*** were kept in ponds, along with other fish, and were and addition to the food supply.	The ***'o'opu*** breed or are hatched in salt water and the young fry ascend the streams to live and grow. The young are scarcely larger than maggots.
'Opelu	***'Opelu kakala-lei*** ***'Opelu kalamoho*** ***'Opelu kikā*** (young)	Generally about 12".	*Decapterus sanctae-helenae*	Mackerel Mackerel scad	***'Opelu kakala-lei*** are a small, deep water variety. ***'Opelu kalamoho*** are large and plentiful in some areas, notably Kona, HI. It is possible that this is another name for ***'opelu palahū.***	
Paku'iku'i	*Paku'iku'i*	Generally about 8" (6" maximum in Kaneohe Bay).	*Acanthurus achilles*	Achilles tang a surgeon fish	Abundant; one spot where they were noticed was in a little cave of an island off the windward side of Oahu where the fish remained in the foam of each breaking wave, swirling to face the next wave when the waters cleared a little.	

Hawaiian Name	Other Hawaiian Names	Sizes	Scientific Names	Common Names	Areas Normally Found	Habitat
Moi	Stages of growth: ***Moi-li'i*** (little) ***Palā-moi*** (growing into *moi*; a Kauai term) ***Mana-moi*** (a Hawaii term) ***Moi*** (adult)	Growth Stages (sizes): 2" to 3" 5" 5" Averaging 18" and as much as 3'.	*Poludactylus sexfilis*	Threadfin (thread-fish)	Little schools of ***moi-li'i*** are seen along the shore about mid-August to October. They often travel in large schools and were an omen of disasters to the chiefs when they appeared in large numbers.	It loves foamy, rough places in shallow water.
Mū	*Mū*	*Monotaxis grandoculis* reaches a length of 22". Averaging about 3' with a weight of 25 to 30 lbs.	*Monotaxis grandoculis* *Pagrosomus auratus* (probably)	Bigeye emperor Porgy (?) Australian snapper (?)		Very deep water, though the darker, smaller variety is sometimes found near the reef. They bite only at night.
Nenue	***Nenue pa'i'i'i*** ***Nenue paki'iki'i*** ***Nenue kea*** ***Nenue uli*** ***Nenue elele***	Generally 1' to 18" or even 3'.	*Kyphosus fuscus*	Brown chubs Rudder or pilot fish "Queen" nenue	***Nenue elele*** is difficult to catch because it leaps over nets.	It remains inside reef close to shore (in the flat reef area near the shore – some call it ***i'a papa***).

Hawaiian Name	Other Hawaiian Names	Sizes	Scientific Names	Common Names	Areas Normally Found	Habitat
Uhu (persistant in going ahead wilfully)	***Uhu 'ahu'ula*** (feather cape) ***Uhu ulilull*** (dark) ***Uhu palukaluka*** (slippery) ***Uhu 'a'a*** (daring) ***Uhu 'ele'ele*** (black) ***Uhu halahala*** (dissatisfied) ***Uhu la'ull*** (dark dorsal) ***Uhu maka'ika'i*** (traveling) ***Uhu ahi'uhi'u*** (timid) ***Uhu panoa*** (desert-like; a rare species; name meaning not numerous) ***Uhu 'ula*** (red, probably same as ***uhu 'ahu'ula***) ***Uhu kualakai*** (somersault in sea) <u>Stages of growth</u>: ***'Ōhua*** ***Ponuhunuhu*** (or ***panuhunuhu***) ***Uhu Male*** (or ***omamale***)	Up to 36". About 3'; 18 to 20 lbs would be large. Usually 7" to 12". 7" to 12". <u>Growth Stages (sizes)</u>: Spawn. Young.	*Scarus species* *Scarus ahula* *S. perspicillatus* *S. rubroviolaceus*	Yellowbar parrotfish Palenose parrotfish	Along shores, traveling in schools. There is always a leader.	

Hawaiian Name	Other Hawaiian Names	Sizes	Scientific Names	Common Names	Areas Normally Found	Habitat
Palani	*Malko* (or *malkolko*) – the name of the young (some say *malko* is a distant fish).	Usually about 6". Sometimes 6" to 12".	*Acanthurus dussumieri*	Eyestripe surgeon fish		
Pao'o kaulla (a variety of *'o'opu*; the *'o'opu kai* sea-group).	*Pao'o* – seems to be an inclusive name for several varieties, closely related: *Lehei* (leaping) *Kaulla* (*kaulla* wood – reddish black) *Puhi* (eel) *Maoli* (indigenous) *Moana* (ocean)	A small *'o'opu* of 4" to 5"; of the *'o'opu ohune* group.	*Chlamydes cotticeps* (one large-scaled *pao'o* has been identified as this species)	Short-bodied blenny	Along the shore, the fish may be seen actively swimming about along the bottom, exploring the underside of rocks and coral, in short, jerky movements. When frightened, they dash under the nearest rock for safety, and after a short stay, they usually dash on to another rock.	Exceedingly abundant in Hawaii along any shore where there are rocks or broken coral to form protection, sandy shores along the reef, also estuaries, but not above the tide line. Probably the most abundant of all the shore fishes. All *pao'o* love the rough sea and rocky coasts, and love to leap from pool to pool. *Kaulla* prefer to be near the shore.
Po'opa'a (hard head)	*Po'opa'a*	*Cirrhitus pinnulatus* is usually 4.4" to 9.75". *Merinthe macrocephala* is usually 4" to 5".	*Cirrhitus pinnulatus* *Merinthe macrocephala* *Sebastapistes asperella*	Stocky hawkfish		In the shallow waters.
Ta'ape (allen species)	*Ta'ape* (allen species)			Bluestripe snapper		
To'au (allen species)	*To'au* (allen species)			Blacktail snapper		

Hawaiian Name	Other Hawaiian Names	Sizes	Scientific Names	Common Names	Areas Normally Found	Habitat
Ūpāpalu (soft)	***Upapalu-maka-nui*** (big-eyed); the bigger of the species.	Usually about 6". Hand length when mature. *Apogon frenata* is usually 3" to 5 ½ (sometimes 6")	*Apogon frenata* *A. maculifera*	Cardinal fish Iridescent cardinal fish Bandfish	Common in Puna and Ka'u.	
'Ū'ū	*Ū'ū*	5" to 9" and occasionally longer.	*Myripristis seale* *M. murdjan* *M. chryseres* *M. argyromus* *M. praslinus*	Big-scale soldierfish Squirrel fishes		
Wahanui	***Wahanui***			Forktail snapper		
Weke	***Weke 'ula*** ***Weke moelua*** ***Weke nono*** ***Weke la'ō*** ***Weke pueo*** ***Weke pahulu*** (or ***ahulu***) *Oama* (young)	***Weke*** are generally 9" to 14" long. Usually 7". 8" to 12 ½ Usually 6".	*Mullidae species* *Mullidichthys auriflamma* *Upeneus arge*	Surmullets White goatfish (***weke'ā***) Yellowfin goatfish (***weke ula***)	***Weke*** are usually found inside the reefs, sometimes in the deep waters outside but near the reefs.	***Weke 'ula*** are usually taken inshore. ***Weke pueo*** are in the shallow waters, along quiet shores.

Hawaiian Name	Other Hawaiian Names	Sizes	Scientific Names	Common Names	Areas Normally Found	Habitat
Ulua	***Ulua aukea*** ***Ulua lauli*** ***Ulua 'ele'ele*** ***Ulua paopao*** (or ***ulua kani'o***) ***Ulua nukumoni*** ***Ulua kihikihi*** (or ***mahai hulipū***); as an adult known as the ***silver ulua.*** ***Ulua omilu*** ***Ulua kukaenalo*** ***Ulua kahauli*** ***Ulupō*** <u>Stages of growth</u>: ***Paplopio*** (or ***papio***) ***Pau u'u*** (or ***pau'u***) ***Ulua***	5'; 100 to 125 lbs. (the largest). 28"; averaging 60 to 97 lbs. Approximately 30", usually 3' (sometimes twice as large). Usually 20" and 18 to 20 lbs. Averaging 1' or 18" long. 5" to 6 ½ average; up to 15". Up to 13". Up to 13". *Caranx ignobilis, C. sexfasciatus,* and *C. stellatus* are usually about 2'.	*Carangidae species* *Carangidae ignobilis* *C. lugubris* *C. elacate*	Bluefin trevally Crevally White ***ulua***	In waters south of Hawaii, in such places as Washington Island (central Pacific) where a shallow lake fills the center of the island. The inhabitants stock the lake or lagoon with various young fish from the reef waters, among them ***ulua.*** ***Ulua nukumoni*** is most abundantly found in shore waters near Honolulu. ***Ulua lauli*** is found about isolated rocky islets.	After ***ulua*** have spent several weeks in the sandy-bottomed lake, the black and white ***ulua*** are indistinguishable. ***Ulua lauli*** are found near Molaka'i. They are great fighters when on the line. They frequent certain currents and are seldom caught elsewhere. ***Ulua aukea*** are in Kane'ohe Bay, where they stay inside the reef. They reach 200 lbs. and are common in the market. ***Ulua 'ele'ele*** are less commonly seen.
Umauma lei	***Umauma lei*** (similar but darker than the ***palani*** or ***pualu***)			Orangespine unicornfish		

Project Worksheets

The following Project Worksheets provide preliminary budgets for nine proposed projects in which Ka 'Ohana O Kahikinui have ranked in Appendix C:

D-1	Ke 'Alo O Kahikinui (Image of Kahikinui)
D-2	Recreational Access Management Program (RAMP)
D-3	Hoomalu a Mau Ia Ka Nahele (Trees for the Future)
D-4	Hooulu Kaiaulu O Kahikinui (Kahikinui Community Housing Project)
D-5	Nana I Ke Kumu/Nana I Ka 'Āina (Ecotours Project)
D-6	Community Kitchen Project
D-7	Hānai Ka Piko O Ka Mo'omeheu (The Village)
D-8	Hydroponic Production
D-9	Pili Pa'a I Pili Pono I Nā Lima Ho'ola (Community Pasture)

The worksheets describe these projects in terms of the following categories: "Project Activities", "Task Leaders", "Time Line", and "Budget". "Project Activities" break down each project into constituent parts; "Task Leaders" proposes a particular committee to undertake the project; "Timeline" estimates the time needed to undertake each activity; and "Budget" estimates the cost of each activity. A Sub-total is given for each project. The cost estimate is preliminary and subject to revision and verification when feasibility. Business plans are generated for each project. These budgets have been developed by considering the cost of similar enterprises which have been successful, such as the Moloka'i Rural Empowerment Zone Application report dated October 9, 1998, and other projects. However, these estimated costs are lower than other projects, because Kahikinui is a smaller community than those taken into account. Additional funding for the actual construction of self-help housing is presented in the text of this report. Ka 'Ohana will have to discuss and further refine these worksheets.

Projects Worksheet 1--- Ke ʻalo o Kahikinui (Image of Kahikinui)

Project Activities	Task Leaders	Time Line	Budget
1. Prepare a presentation portfolio	**Publicity Committee**	**3 M**	**2,000**
2. Produce a video documentary	"	**4 M**	**30,000**
3. Print post cards, posters, brochures, hand outs and replica	"	**2 M**	**20,000**
4. Work out a state-wide marketing strategy	"	**3 M**	**10,000**
5. Set up a web site	"	**2 M**	**3,000**
6. Site display of the produced items	"	**3 M**	**5,000**
		Sub-total	**70,000**

Projects Worksheet 2--- Malama Na Kumuwaiwai (Recreational Access Management Program RAMP)

Project Activities	Task Leaders	Time Line	Budget
1. To identify and demarcate strategic access control points	**Design Committee**	**2 M**	**1,000**
2. Visitor orientation and monitoring	**Tour Guides**	**---**	**0***
3. Construct a briefing area and print a brochure	**Publicity Committee**	**2 M**	**0**
4. Access management by assigned Ohana	**Roadway Management Committee**	**---**	**0****
5. Construct gates and fences	"	**6 M**	**10,000**
		Sub-total	**11,000**

* Covered by Eco-tours project.
** Covered by Image of Kahikinui Project.

Projects Worksheet 3--- Ho'omalu A mau 'Ia Ka Nahele (Trees For Future)

Project Activities	Task Leaders	Time Line	Budget
1. Report appropriate sites, species and plantation techniques	**Reforestation Committee**	**2 M**	**0**
2. Hire a plantation expert	"	**1 M**	**2,000**
3. Purchase saplings	"	**1 M**	**200,000**
4. Sites preparation and guarding the saplings	"	**6 M**	**45,000**
5. Build and operate a small nursery for transplanting	"	**6 M**	**100,000**
6. Provide appropriate training	"	**1 M**	**1,500**
7. Initiate a practice within the Ohana of planting seasonally	"	---	**0**
8. Periodically review the growth and get expert opinion	"	---	**2,000**
		Sub-total	**350,500**

Projects Worksheet 4--- Ho'oulu Kaiaulu 'o Kahikinui (Kahikinui Community Housing Project)

Project Activities	Task Leaders	Time Line	Budget
1. Generate consensus on the concept of labor reciprocity and develop a framework for labor banking within the community	**Design Committee**	**3 M**	**0**
2. Provide basic skills to interested Ohana members	"	**6 M**	**8,000**
3. Assess labor demands on various stages of construction	"	**2 M**	**2,000**
4. Adopt modular designs	"	---	**0**
5. Prepare a calendar of works	"	**2 M**	**2,000**
		Sub-total	**12,000**

Projects Worksheet 5--- Eco-Tours Project

Project Activities	Task Leaders	Time Line	Budget
1. Ohana decide on areas to be opened for tours	**Ohana**	**1 M**	**0**
2. Decide on the types and amount of visitors	"	**2 M**	**3,000**
3. Formulate a needs assessment plan	"	**2 M**	**5,000**
4. Equipment and facilities	"	**6 M**	**25,000**
5. Publicity, brochures and posters	**Publicity Committee**	**2 M**	**0***
6. Hire tour guides	**Ohana**	**12 M**	**30,000**
		Sub-total	**63,000**

* Covered by Image of Kahikinui Project.

Projects Worksheet 6--- Community Kitchen Project

Project Activities	Task Leaders	Time Line	Budget
1. Permission process	Kitchen Manager	2 M	0*
2. Legitimate	"	1 M	0*
3. Work out agreements with individual/household food producers	"	1 M	0*
4. Purchase and set up facilities	"	1 M	50,000
5. Maintenance and insurance	"	12 M	5,000
6. Management	"	12 M	30,000
		Sub-total	85,000

* Covered by the management cost.

Projects Worksheet 7--- Hanai Ka Piko o Ka mo'omeheu (The Village)

Projects and Activities	Task Leaders	Time Line	Budget
1. Location decision and site preparation	**Development Committee**	**1 M**	**0**
2. Access and basic utilities	**Roadway Management Committee**	**5 M**	**20,000**
3. Hire a design team, with an archeological historian, an architect and local Kupuna	**Design Committee**	**2 M**	**15, 000**
4. Construction (The Community Housing Program should be mobilized to construct the structures and, ultimately, management of the facility should also be taken up by that program.)	"	**12 M**	**150,000**
		Sub-total	**185,000**

Projects Worksheet 8--- Hydroponics Production

Project Activities	Task Leaders	Time Line	Budget
1. Location decision and site preparation	Agriculture Committee	1 M	1,000
2. Training	"	2 M	2,000
3. Construction	"	6 M	50,000
4. Equipment installation	"	6 M	50,000
5. Devise operation and management rules,	"	2 M	0
6. Installation and operation of solar powered energy system for the pump and the fan in the green house	"	3 M	20,000
7. Installation and operation of water supply system	"	12 M	50,000
8. Daily operation of the farm	"	12 M	1,000
9. Search appropriate markets within the community and out of it	"	2 M	2,000
		Sub-total	176,000

Projects Worksheet 9--- Pili Paa I Pili Pono I Na Lima Ho'ola

Projects and Activities	Task Leaders	Time Line	Budget
1. Community pastures	**Agriculture Committee**	**6 M**	**30,000**
2. infrastructure for crop and livestock raising	``	**3 M**	**50,000**
3. Identify alternative cultivation techniques	``	**2 M**	**10,000**
4. Provide technical assistance	``	**12 M**	**15,000**
5. Provide training seminars to interested parties	``	**2 M**	**2,000**
6. Purchase and transport resources in bulk.	``	**1 M**	**5,000**
7. Help to coordinate crop and livestock production	``	**---**	**3,000**
8. Hire a manager to conduct:		**12 M**	**10,000**
Offer members various services and benefits, such as access to low-interest loans and other funding opportunities.		**---**	**0**
Coordinate the sharing and exchange of food products/distribute products		**---**	**0**
Identify markets, both local and international		**2 M**	**0**

Funding Agencies

List of Granting/Funding Agencies

National Park Service through its Tribal Preservation Program

Initiated by the National Park Service in 1990, the Tribal Preservation Program is committed to assisting Indian Tribes, Alaska Native Tribes and Native Hawaiians in perpetuating their cultural traditions and historic properties. It's main goal is building capacity within these organizations to establish and maintain sustainable preservation programs. To achieve that goal, in addition to grants, the Tribal Preservation Program conducts training workshops within these communities to enable indigenous peoples to document their cultural traditions and manage their cultural properties.

In fiscal year 1999, the Tribal Preservation Program awarded $1,186,000 to Native Indian and Alaskan communities for various preservation activities. No Native Hawaiian organizations received an award (did any apply?). Refer to Appendix ** for a listing of fiscal year 1999 awardees and a listing of fiscal year 1997 awardees along with descriptions of their projects.

Tribal Preservation Program
Heritage Preservation Services, National Park Service
1849 C Street, NW, NC330
Washington D.C. 20240

Ron Emory: (202) 343 4280
Fax: (202) 343 3921
Email: hps-info@nps.gov

Cultural Resource Training Initiative
Heritage Preservation Services, National Park Service
1849 C Street, NW, NC330
Washington D.C. 20240

Michael Auer (202) 343 9594
Fax: (202) 343 3921
Email: hps-info@nps.gov

or visit http://www2.cr.nps.gov/tribal/

First Nation Development Institute – The Eagle Staff Fund

Established in 1980, First Nations Development Institute is a Native American economic development organization whose mission is to work with tribes and Native communities to help them create self-reliant, Native controlled economies. The focus is on assessing the ways that tribes and Native communities can control, create, leverage, and retain their assets. Assets are more than income; they include people, land water, material goods, knowledge, culture, environment, homes, schools, and spirituality. People and communities, which have control of their assets, are future oriented.

The Eagle Staff Fund is a unique program of the First Nations Development Institute that combines technical assistance and grants to tribes and reservation or rural Native non-profits engaged in community-driven, culturally based economic development. Grants range from $1,500-$300,000 and can be for new ideas or seed projects, start-up efforts, or working capital for tribal and Native nonprofit enterprises.

At the time of the grant award, a Technical Assistance Plan responsive to the need of the grantee is developed and implemented during the grant period. There are a variety of grants:

- Seed Grants are for emerging groups or existing programs to identify and develop creative approaches to economic development. Range up to $5,000.
- Start –up Grants are for project implementation, expansion or further examination into program feasibility or strategy. Applicants must exhibit evidence of initial research or activity into the project and illustrate plans for future implementation. Range up to $75,000.
- Working Capital Grants are for tribal or Native nonprofit enterprises and typically involve multi-year funding. Projects at this level must be involved in an enterprise that produces income and is leading toward economic self-sufficiency. Funding will be made only to organizations or tribes that have, and are following, a business plan. Range up to $100,000 per year, up to three years.

Applicants must complete an application; a budget; two letter of support (one if applying for a seed grant); and verification of nonprofit 501 (c) (3) status (if not a tribe). Review of proposals for multi-year funding will require a site visit from Fist Nations' Staff.

Fist Nations Development Institute
The Store Building
11917 Main Street
Fredericksburg, VA 22408
Telephone (540)-371-5615
Fax (540) 371-3505

National Park Service through its National Center for Preservation Technology and Training (NCPTT)

The NCPTT was created by the 1992 amendment to the National Historic Preservation Act of 1966. The NCPTT is dedicated to furthering "... the art, craft and science of historic preservation in the fields of archeology, historic architecture, historic landscapes, objects and materials conservation, and interpretation. " Preservation Technology and Training Grants (PTTG) are awarded to eight types of projects: 1) information management, 2) training and education, 3) applied/fundamental research, 4) environmental effects, 5) technology transfer, 6) analytical facility support, 7) conference support, and 8) publications support. PTTGrants focus on the technological aspects of preservation activities. In order to meet the goals of the National Park Service's Cultural Resources Strategic Plan, the NCPTT gives "... special consideration to project proposals that that address sustainable practices in treatments for historic structures and historic

landscapes." Proposal deadlines are in December for grant awards the following fiscal year.

National Center for Preservation Technology and Training
NSU Box 5682
Natchitoches, LA 71497

Telephone: (318) 357 6464
Fax: (318 357 6421
Email: ncptt@ncptt.nps.gov

or visit http://www.ncptt.nps.gov

Hawai'i Community Foundation

The Hawai'i Community Foundation is a statewide public community foundation. The primary vision of the Foundation is to improve and enrich Hawai'i and the lives of its people. The Foundation was established in 1916 to build community among the people of Hawai'i and to address the changing needs and concerns as the community continuously grows and evolves. The primary areas of interest of the Hawai'i Community Foundation are in the areas of culture, neighborhood and community development, education, health, and human services.

In 1998, the Hawai'i Community Foundation awarded over $7,937,000. The grantmaking by field is as follows: health and human services (29%), education (23%), culture and arts (18%), with the remainder going to projects in the areas of youth development, environment and species protection, geographically designated funds, and community and spiritual development.

Grants are made from two types of permanently invested funds: discretionary and non-discretionary. Discretionary grants are awarded, by a designated board on a competitive basis, to organizations determined to be tax-exempt, publicly supported, and charitable by the Internal Revenue Service (501(c)(3) status) or a unit of government. Exceptions are made regarding proposals to specially directed funds. The second type of grant awarded are non-discretionary funds. These grants are given annually to non-profit groups as directed by the donor at the time the fund was created. Funding ranges from few hundred dollars to more than $50,000.

The Hawai'i Community Foundation's commitment to the Hawaiian Community is illustrated by the numerous projects funded in a variety of program areas. In 1998, funding was awarded to several Native Hawaiian non-profit organizations that include but are not limited to: Edith Kanaka'ole Foundation ($7000), Friends of Moku'ula ($7450), Hawaiian Historical Society ($3,500), Hoa 'Āina o Makaha ($13,400), Maui Arts and Cultural Center ($20,000), and Hui Makua Punana Leo 'O Moloka'i ($11,000).

The Foundation also provides funding through several special initiative projects that address special needs and concerns of our island community. One of these programs is

the Natural Resource Conservation Grantmaking Program. This program is intended to enhance the quality of life for Hawai'i's communities by promoting, through traditional and modern concepts of land conservation and restoration, an awareness and respect for Hawai'i's native terrestrial and marine ecosystems.

The Foundation also has a Neighborhood Grants Program, Ho'olaulima No Hawai'i, that supports small community initiatives that include beautification efforts, youth and elderly activities, crime prevention, and cultural events. Funding is available through this initiative to neighborhood groups, of which at lest half of the group members physically live in the neighborhood. This is one of the few grants available to community organizations that do not have a 501 (c)(3) status.

One of the Foundations' strongest commitments to community development is in the area of culture and arts. The vision of the Special Initiative Investment is to increase youth's exposure to and involvement in the diverse cultural communities that uniquely co-exist in Hawai'i. Funding for projects are made from one to three years, with amounts generally ranging from $10,000 to $50,000. The Hawai'i Community Foundation aims to strengthen Hawai'i's cultural organizations in order to build a strong foundation that can foster and perpetuate the artistic and cultural work of that organization.

The Hawai'i Community Foundation also has contractual arrangements to provide family, corporate, and independent foundations an array of professional grants administration services that include: disseminating information to the potential grant-seekers, handling all primary inquiries, evaluating proposals, preparing dockets for board members' review and to provide staffing for meetings, maintaining records and assessing grant results, and assisting with the foundation's grant-making goals.

The Hawai'i Community Foundation
Pioneer Plaza
900 Fort Street Mall, Suite 1300
Honolulu, HI 96813

(808) 537-6333 (Voice)
(808)-521-6286 (Fax)
Toll-free for Neighbor Islands 1-888-731-3863

Atherton Family Foundation

The Atherton Family Foundation supports a variety of initiatives and programs that benefit the people in the State of Hawai'i. This generally means that organizations not affiliated with community-oriented projects within the State of Hawai'i are not funded. The Atherton Family Foundation has developed a strong commitment to provide funding in the areas of education, human services, youth development, arts, culture and humanities, health, religion, and environment and species protection.

Funding is only available to organizations determined to be tax-exempt, publicly supported, and charitable by the Internal Revenue Service (501(c)(3) status). Requests for funding must be based upon a general community need or opportunity, not solely for an

organizational need. The Foundation generally provides partial funding for a project, but has provided total support on special initiative projects. Funding is usually for a one-year period. The majority of grants made in 1998 where between the range of $5,000 - $15,000. There were a few grants made to organizations who have a long history of serving the residents of Hawai'i that received amounts of $200,000 and greater. For the fiscal year 1998 - 1999, the Atherton Family Foundation awarded $3,605,724 to programs benefiting the local communities of Hawai'i. The total capital breakdown is as follows: education (36%), culture and arts (28%), human services (25%), others (11%).

One of the Foundation's funding efforts in the Hawaiian community was its involvement with Hinamalailena, a summer education program based in Hāna, Maui. This activity-based program focuses on Hawaiian culture as a learning tool to provide enrichment and tutorial services to students at all academic levels. The program utilizes community-based teachers as well as kupuna to work with children during the summer months.

Atherton Family Foundation
900 Fort Street Mall, 13th Floor
Honolulu, HI 96813

(808) 537-6333 (Voice)
(808)-521-6286 (Fax)
Toll-free for Neighbor Islands 1-888-731-3863

Department of Hawaiian Home Lands (Community Development Program)

The Department of Hawaiian Home Lands (DHHL) provides grants and technical assistance to private non-profit organizations and public agencies for projects that benefit native Hawaiians. In 1995 DHHL re-instituted the grant program under the Community Development Program. An application kit contains all necessary instructions and forms.

To receive a grant an applicant must be registered as a non-profit organization and comply with the IRS requirement for tax-exemption when applicable. DHHL's grants funds can only be used for community activities that benefit native Hawaiians. All projects must be community based and designed to improve the community as a whole.

Grant funds are provided by the Native Hawaiian Rehabilitation Fund (NHRF). Since 1995 DHHL has awarded 50 grants. The average amount was $30,000. The largest was $80,000 and the smallest was $2,500. Currently (1999-2000), the highest priority is placed on projects that assist native Hawaiians to achieve homeownership, increase the use and value of Hawaiian Home Lands, or assist native Hawaiians and homestead areas to achieve economic self-sufficiency, and project in empowerment zones/enterprise communities on homestead land. Medium priority is for projects that provide or strengthen educational, social, and cultural or employment opportunities. Low priorities is for projects that add to the body of knowledge about native Hawaiians or Hawaiian culture.

Department of Hawaiian Home Lands
Community Development Program

P.O. Box 1879
Honolulu, Hi. 96805
Or
Ali'i Place
1099 Alakea St. 20th Floor
Honolulu, Hi. 96813
Telephone (808) 587-6424

Cooke Foundation, Limited

The Cooke Foundation, Ltd. Supports programs and projects benefiting the people of Hawai'i. The Foundation primarily funds projects in the areas of arts, culture and humanities, human services, youth development, environment and species protection, heath, community development, and education.

Funding is only available to organizations determined to be tax-exempt, publicly supported, and charitable by the Internal Revenue Service (501(c)(3) status). Funding is usually only available for a 1-year period, with a few exceptions depending on the scope and range of the project. The Foundation is primarily interested in helping organizations develop an expanded financial base or to test new ways of generating revenue. This commitment also includes funding special initiatives that would provide staff training and other activities to increase organizational performance and efficiency.

The Cooke Foundation, Ltd. awarded $1,019,850 in the fiscal year ending June 30, 1998. Over 50% of all moneys awarded were given to projects whose focus areas were the arts and culture, and the environment.

One of the major highlights of the Foundation was to provide funding to the Oceanic Institute. The Institute received a grant for the construction of a fish hatchery on the island of Moloka'i. The purpose of the hatchery was to 1) help revitalized traditional Hawaiian techniques of fishpond restoration; 2) be a learning tool for prospective farmers; 3) be an educational resource for schools and the community as a whole; and 4) provide economic development opportunities on the island of Moloka'i.

The Foundation also provided funding to the Edith Kanaka'ole Foundation for its efforts in hosting the 1999 World Indigenous People's Conference held this past August in Hilo, Hawai'i. The Foundation has also funded projects focusing on the protection of Native Hawaiian forests.

Cooke Foundation, Limited
900 Fort Street Mall, Suite 1300
Honolulu, HI 96813

(808) 537-6333 (Voice)
(808)-521-6286 (Fax)
Toll-free for Neighbor Islands 1-888-731-3863

Fred Baldwin Memorial Foundation

The Fred Baldwin Memorial Foundation is primarily interested in supporting projects and programs that benefit the people of Maui County. The Foundation's primary initiatives for grant making are in the program areas of health and human services for the people of Maui. However, under the auspices of the Fred Baldwin Memorial Foundation, there exists a special fund in memory of the late Margaret H. Cameron that supports projects in the areas of culture and the arts.

Funding is only available to organizations determined to be tax-exempt, publicly supported, and charitable by the Internal Revenue Service (501(c)(3) status). Funding must be applied for on a yearly basis and in general support does not exceed beyond 3 years. Projects that are funded usually address a documented community need rather than an organization's need. Provided moneys are usually awarded for partial funding of a project and can be utilized for both capital and program-related expenses.

In 1998, over $209,000 was awarded to a variety of projects addressing the needs and concerns of Maui County. The grant distribution for the fiscal year 1998 - 1999 is as follows: Health and Human Services (38%), Culture and Arts (23%), Education and Youth Development (23%), Environment Protection and Community Development (7%), and others (9%).

The Fred Baldwin Memorial Foundation was another key funding agent that provided support to the Oceanic Institute's fishery hatchery project. In 1998, the Foundation funded a variety of projects that also benefited the Hawaiian community in Maui. Over $5,000 was awarded to the Wailuku Oral History Research Project, a program whose focus was preserving oral knowledge of the Wailuku area. Another $3,000 was awarded for a project that focused on hula ki'i , a traditional Hawaiian art form that uses ancient puppetry. Other projects included the protection and preservation of native species of plants and animals in the forests of Haleakalā, as well as specific community initiatives that benefited the Hawaiian community in areas of youth development and health.

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Pioneer Plaza
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Honolulu, HI 96813

(808) 537-6333 (Voice)
(808)-521-6286 (Fax)
Toll-free for Neighbor Islands 1-888-731-3863

Office of Hawaiian Affairs (OHA)

The Office of Hawaiian Affairs awards grants to non-profit 501 (c)(3) organizations whose requests are for projects that will benefit Native Hawaiians. The primary areas of interest are education, culture and arts, health and social service. OHA accepts grant proposals semi-annually, in September and April.

For the first half of 1999, the Board of Trustees of OHA approved 11 community grants totaling $425,428. Grant proposals covered areas of providing basic school bus transportation for immersion school students to outreach and case management for AIDS patients. Of the $425,428, over $77,000 was awarded to projects benefiting the Native Hawaiian community on the island of Maui.

Honolulu:
Office of Hawaiian Affairs
711 Kapi'olani Blvd.
Honolulu, HI 96826
(808)-594-1986

Maui:
Cameron Center
95 Mahalani Street
Kahului, Maui
(808)-243-5219

Coastal Service Center for Cooperative Agreements

The Coastal Services Center supports projects aimed at developing creative science-based solutions to coastal management issues that will allow maintenance or improvement of natural resources while also allowing for economic growth.

Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service, Coastal Services Center
2234 South Hobson Ave.
Charleston, SC 29405-2413
(803) 974-6200
http://aspe.os.dhhs.gov/cfda/p11473.htm

Coastal Zone Management Administration/Implementation Awards

Funds are available to support programs in such areas as ...special area management planning; and demonstration projects with potential to improve coastal zone management.

Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Ocean Resources Conservation and Assessment
Chief, Coastal Programs Division
1305 East-West Highway, Silver Spring, MD 20910
(301)713-3155 x195
http://www.nos.noaa.gov/ocn/czm/

Financial Assistance for Ocean Resources Conservation and Assessment Program

This program supports efforts to determine the long-term consequences of human activities which affect the coastal and marine environment; to assess the consequences of these activities in terms of ecological, economic, and social impacts of human, physical and biotic and to define and evaluate alternatives which minimize adverse consequences of human use of the coastal marine environments and resources.

Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Ocean Resources Conservation and Assessment
1305 East-West Highway, Silver Spring, MD 20910
(301)713-2989
http:/aspe.os.dhhs.gov/cfda/p11426.htm

Environmental Education Grants Program (EEG)

The EEG provides financial support for projects that design, demonstrate, or disseminate environmental education practices, techniques, and methods.

U.S. Environmental Protection Agency
Office of Environmental Education (1707)
Environmental Education Specialist
410 M Street, SW, Washington, D.C. 20460
(202)260-8619
http://aspe.os.dhhs.gov/cfda/p66458.htm

Fish, Wildlife, and Parks Programs on Indian Lands

This program promotes the conservation, development, and utilization of fish, wildlife, and recreational resources for sustenance, cultural enrichment, economic support, and maximum benefit of Indians. Previously-funded projects include baseline inventories; harvest management; habitat protection; regulation of fishing, boating, camping, and related Tribal and public use activities.

Headquarters: Department of Interior, Bureau of Indian Affairs
Office of Trust Responsibilities
Division of Water and Land Resources
Branch of Fish, Wildlife, and Recreation
1849 C Street NW, MS-4513 MIB, Washington D.C. 20240
(202)208-4088
http://aspe.os.dhhs.gov/cfda/p15039.htm

Newspaper Clippings

Newspaper Articles (listed chronologically):

— THE MAUI NEWS

Hawaiian families could be settled in Kula by '97

By HARRY EAGAR
Staff Writer

KEOKEA — If the next two Legislatures can find $15 million to $18 million, then 376 Hawaiian families can start settling on homestead land in Kula by 1997, the House Committee on Water, Land Use and Hawaiian Affairs was told Wednesday.

Three members of the committee, Chairman David Hagino, Vice Chairman Jackie Young and Rep. David Morihara of Kula, toured the four parts of Maui where the Department of Hawaiian Home Lands holds property.

At Paukukalo, they saw 33 houses that should be completed by November for sale at prices from about $72,000 to $82,000, and a 40-lot subdivision at Waiehu Kou where building should start next year.

But DHHL has only 73 acres in the Waiehu area. Its priority area on Maui is the Keokea-Waiohuli area, where it has 6,000 acres. Some is leased for grazing, but the lease expires in 1993.

At Waiohuli, where 308 homestead and 68 pastoral lease applications already have been granted, settlement can begin as soon as infrastructure is available.

Design of a water system to link the homestead lands with the Lower Kula water system is under way, using $1.47 million provided by the Legislature. However, the committee was told another $1.2 million will be required. After that, a further $15 million to $18 million will be needed for roads and other services. The homes, which will cost nearly $30 million, can be financed through the Farmers Home Administration.

During a lunch break in the tour, the committee met with two dozen Maulans in the parish hall at St. John's Church. Much of the discussion concerned Kahikinui, where DHHL has about 22,000 acres.

In late October, the Hawaiian Homes Commission will meet on Maui to consider how to use the area.

Commission Chairwoman Hoaliku Drake said Wednesday that a general lease for grazing is not being considered.

A series of community meetings has produced strong sentiment for managing the upper 8,000 acres as a forest reserve, to preserve native plants and to increase the watershed. The lower 2,500 acres (the area below the road) will be kept as a cultural preserve because of its many ruins. However, that will also permit various traditional activities, such as fishing.

The big question is what to do with the midslope area — at least 12,000 acres.

Because Keokea-Waiohuli has priority for DHHL's limited money, there is little possibility of bringing infrastructure to Kahikinui soon. The committee was intrigued by the proposal of Mo Moeller of Ka Ohana O Ka Kahikinui (The Family of Kahikinui) to settle Hawaiians on either side of the highway to live traditional lifestyles.

In earlier discussions, these were called "subsistence" homesteads, but Gordean Bailey of Onipaa O Ka Aina, another group interested in Kahikinui, says Hawaiians want to get away from the idea that this area offers merely subsistence.

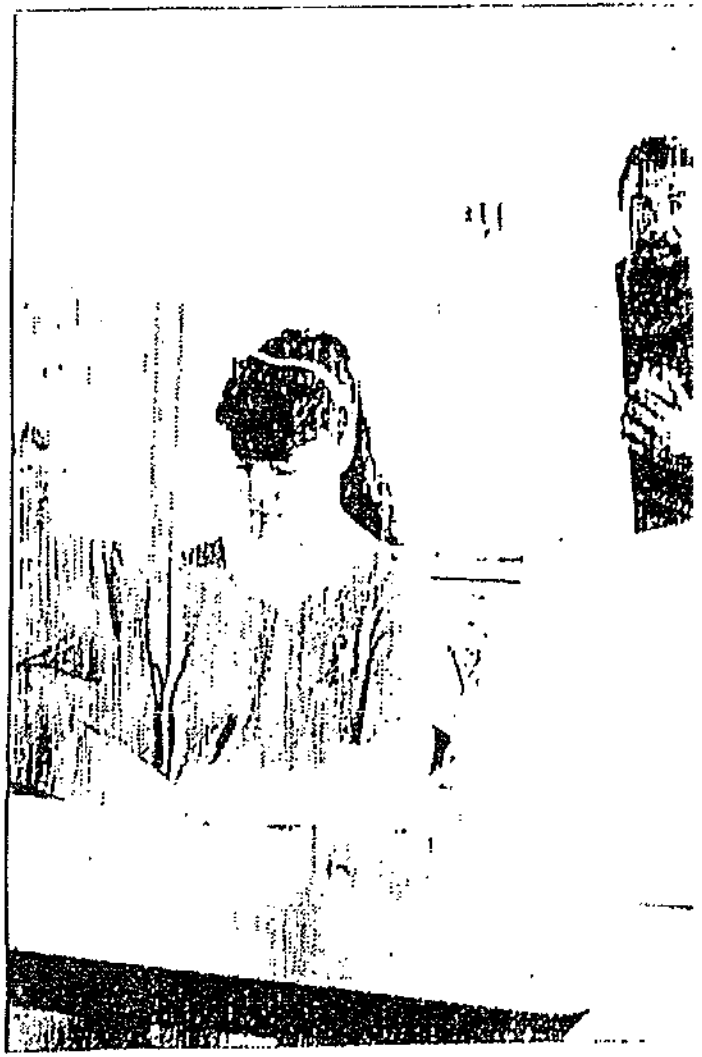
Moeller's conception would have a buffer zone of 100 to 200 yards along the highway, so that the unspoiled appearance of the remote area would be preserved for travelers.

Families would settle there, and it would be a unique place where masters of tradisional Hawaiian skills would teach students. Hawaiians would wear their ancient dress (like the malo), and "we would be responsible for our own life. We would work together, play together, sing together," Moeller said.

"All we need is the word, and the community would provide the logistics."

DHHL has some concerns about this proposal, because of liability, but the committee was intrigued by the fact that Moeller said the settlers themselves would provide the infrastructure — such as catchments for water.

Drake cautioned, "We need to look at the big picture."



The Maui News / HARRY E

Mo Moeller of Ka Ohana O Ka Kahikinui displays a concep
sion of the 22,000-acre tract at Kahikinui at St. John's C
Keokea. Moeller was lobbying the House committee that
Hawaiian affairs for a proposal to let Hawaiians move hume
the remote area.

Eagar, Harry. (1992, September 10). Hawaiian families could be settled in Kula by '97. The Maui News.

Mauians offer plan for settling Kahikin

DHHL urged to permit Ka Ohana to manage use of 22,000 acres

By HARRY EAGAR
Staff Writer

PAUKUKALO — In two short, busy months, the Maui people most interested in Hawaiian homelands at Kahikinui have come together, refined a plan and pressed the Department of Hawaiian Home Lands to take a chance on it.

The Hawaiian Homes Commission is due to discuss its options late this month, but aside from some vague proposals for general leases, only one proposal has emerged from DHHL community input meetings.

A major attraction, from DHHL's viewpoint, is that it would not require any department money. "I don't think you've ever heard that from any other community," Julie Cachola of Ka Ohana O Kahikinui (The Family of Kahikinui) said at a meeting Wednesday in the Paukukalo Community Center.

DHHL planner Ben Henderson pointed out that the department has other concerns besides money. One is liability. The other is the waiting list of Native Hawaiian beneficiaries of the Hawaiian Homes Commission. More than 140 Hawaiians have asked to be granted pastoral leases at Kahikinui, a 22,000-acre tract on Maui's south shore.

There may be a competing proposal when the commission meets, since DHHL retained PBR Hawaii consultants to study the area and make recommendations, but so far the community is pushing a plan wherein DHHL would license Ka Ohana O Kahikinui to manage, settle and develop the property until the time that DHHL could bring infrastructure up to county code.

Also under the plan, Ka Ohana would assume liability, manage the natural and cultural resources, install infrastructure and arbitrate disputes. Ka Ohana would be a membership organization, and members would have to agree to take part in community work (such as reforesting the mauka areas). Settlers who were already on DHHL's waiting list would have rights of first refusal when homestead leases would be granted.

The waiting list loomed Wednesday night as one of the most difficult obstacles to putting this plan into action. During the license period (expected to last a decade or more), Native Hawaiians would come onto Kahikinui in two classes: those already on the waiting list and those not.

Commissioner Andy Apana wondered how their competing interests would be sorted out once Ka Ohana's licensing arrangements were replaced with DHHL's standard homestead system.

Cachola, a planner in the Office of State Planning who has devoted her private time to Ka Ohana, said that could be worked out by drawing up careful understandings at first. Ka Ohana would not displace Native Hawaiians from the waiting list, she said.

Ka Ohana would divide Kahikinui into six use-zones: a forest reserve and watershed, two ocean access zones, a cultural land management zone (to become the only place in the state where Hawaiians could work in traditional style, called "the malo concept"), about 100 40-acre pastoral ranch- er number of self-sufficiency homesteads but supplying their and electricity) and a "communit

The community center would work of the settlers, provide se as security) and, perhaps, offer tourists to visit some of the anc the area (thus raising money fo ture).

Ka Ohana would use its ow and also tap money not availabl (such as Soil Conservation Servi make Kahikinui livable. Cachola design the level of infrastructu "as cheap as possible." Most r ample, would not be paved.

Engineer Laf Young assured based on his experience on the that "off-grid" electric systen made to pay for themselves ove about seven years and that "th of water" to make catchment sy cal.

After listening to Ka Ohana's derson said, "You put us on the

Eagar, Harry. (1992, October 1). Mauians offer plan for settling Kahikinui. The Maui News.

settling pioneers on Kahikinui land

By HARRY EAGAR
Staff Writer

WAILUKU — Andy Apana, the Maui representative on the Hawaiian Homes Commission, asked his fellow commissioners to listen thoughtfully, "to try to have an accepting mind" for a presentation by Ka Ohana O Kahikinui at Tuesday's commission meeting.

Apana, who attended most of the community meetings that led to the formation of Ka Ohana, knew the commission was going to hear an unusual proposal, one that, if accepted, would stand Department of Hawaiian Home Lands policy on its head.

By the end of the meeting at the State Office Building, Chairwoman Hoaliku Drake described the Ka Ohana pitch as "a beautiful presentation," and although the commissioners had some questions, they obviously were tempted.

DHHL has moved slowly in getting Native Hawaiians onto homelands in most parts of the state because of its policy of supplying infrastructure first, then allowing development. For lack of funds, not much infrastructure has been built.

Julie Cachola, a professional planner from Oahu who has been a leader in Ka Ohana, told the commission it could reverse the policy as an experiment. "The commission has the policy-making and rule-making authority," she said.

Ka Ohana wants a license to the 23,000-plus acres of Kahikinui. Its members would then move onto the land and supply their own infrastructure — "off grid." Instead of paved roads, county water and MECO power, the pioneers would rely on jeep fonds, catchment and generators or alternative power.

Kupuna Apolonia Day reminded the panel this was done before, by the old Hawaiians. "If they can survive in Kahikinui, so can we."

Furthermore, she said in presenting a ho'okumu (make a beginning) gift of foods that could be grown at Kahikinui — kalo (taro), breadfruit, sweet potato, kalua pig — unless they are settled on the land soon, the kanaka maoli (Native Hawaiians) will become extinct.

Ka Ohana, less than 2 months old, has been a dramatic example of community organizing.

Kahikinui has been ranched for a century, under general lease to non-Hawaiians for 25 years. That lease expired in April. DHHL called a series of community meetings in August to discuss the future of the land.

Some of the better-known Hawaiian organizations said they would make proposals for Kahikinui, but none did. Several small, Maui groups formed in response to the meetings. "It was apparent to many," said Mo Moler Tuesday, "that our ideas were very similar.

"The ohana began to take shape."

The groups made four overnight visits to the arid land on the south coast, studying the plants, archaeological remains, water resources, fishing, forest and other components of the ahupua'a.

An ahupua'a, a slice of land from shore to mountain peak, was the basic economic unit of old Hawaii, able to supply almost all the needs of its residents. Kahikinui is the only one that hasn't been broken up. "This is an opportunity to really manage this land as an ahupua'a," Cachola said.

But as the ohana developed its "dreams, requirements and visions," said Moler, it also became educated about the constraints facing DHHL.

Because it is so remote, Kahikinui doesn't even appear on priority lists for supplying water, roads and other infrastructure.

Therefore, Ka Ohana established four criteria. A plan would have to:

- Cost nothing for DHHL.
- Impose no significant addition to the work of DHHL's limited staff.
- Rehabilitate Native Hawaiians. (Persons of at least 50 percent Hawaiian ancestry are the legal beneficiaries of the 1921 Hawaiian Homes Act.)
- Rehabilitate the land, severely damaged by deforestation, overgrazing and erosion.

In order to get its ideas accepted by the commission, another criterion will have to be satisfied: the list.

DHHL has a number of reservation lists for land — homesteads or ranches — and sanctity of lists is a prime concern of beneficiaries. Robert McFarlane, an Oahu member of the commission, told Ka Ohana it will have to "keep 'em in order."

Ka Ohana has a plan to do that.

It proposes to manage Kahikinui under a license. The 144 Native Hawaiians already on the waiting list for pastoral leases on Maui would be eligible to join Ka Ohana, after agreeing to its requirements. These include laboring on community projects such as reforestation and cultural preservation.

In return, these pioneers would be allowed to start living on the land. Someday, when regular infrastructure reaches Kahikinui and DHHL writes standard leases, the pioneers would get first choice of signing up for the land they were already on.

The safeguard is that the Ka Ohana list would mirror the DHHL list.

"It sounds like a condominium association," said McFarlane, doubtfully. Commissioner Ann Nathaniel of the Big Island pointed out that something similar had been tried at King's Landing in Hawaii, but only seven of 27 families are still there, and they are struggling.

Cachola, who is familiar with King's Landing, said Ka Ohana would approach Kahikinui in phases. The first task would be to restore the forest, and bring the tree line lower, to enhance the watershed. Lack of fresh water is Kahikinui's most intractable problem.

Ka Ohana hopes it can negotiate water from Ulupalakua Ranch, which used to pipe water to Kahikinui.

Financing for Ka Ohana would come from sweat equity and various grants it hopes to obtain.

McFarlane said he "was really impressed," but all the commissioners said they needed to learn more.

F-3

Eager, Harry. (1992, October 28). Settling Pioneers on Kahikinui Land. The Maui News.

Maui News - Thursday - Oct 29, 1992

Skillful approach to decision-making

EDITORIAL

Ka Ohana O Kahikinui really has its act together, which is saying something for an organization that didn't exist until last month.

The fate of Kahikinui — 23,000 acres of beautiful but forbidding land on the south shore — is one of the most significant public policy questions facing Maui and Native Hawaiians. Native Hawaiians have the call, the land is part of their homelands, but the rest of Maui is pulling for them to make the best of this opportunity.

While the decision is yet to be made, the approach to making it couldn't have been better.

First, Department of Hawaiian Homelands went to its constituency and asked Native Hawaiians what they wanted. It also hired planning consultants, whose findings both provided basic information and gave the Hawaiians, most of them inexperienced in big-scale land administration, something to work off.

DHHL planning staffers proved flexible in helping their constituents (usually collectively called "beneficiaries" since they are the ones entitled to benefit from the Hawaiian Homes Act) work out their destiny.

The cooperation, imagination, hard work and breadth of vision of the beneficiaries was even more impressive.

Hawaiians have a reputation for factionalism, and with more than 50 competing sovereignty organizations, they deserve it. But the Maui ans, who approached the DHHL work sessions in small, independent groups, quickly amalgamated as Ka Ohana O Kahikinui (the family of Kahikinui) and no time was wasted on jockeying for position.

Once together, they made two fundamental decisions that were farsighted and wise. First, they decided against noisy confrontations and in favor of working with the system as presented to them. Second, they quickly learned that DHHL has limited resources and that their best chance of success would be to tailor their demands to that condition.

As a result, in less than three months they devised and refined a plan, startling but intriguing, for getting Hawaiians living at Kahikinui very soon. About time, too, since the homelands law was passed 71 years ago.

It's risky. Their proposal to let Hawaiians "be as Hawaiian as they want to be" at Kahikinui could result in a rural slum. Or it could prove to be a success, a unique cultural area contributing to the rehabilitation that all Hawaiians, not just the few hundred who will pioneer at Kahikinui, could take pride in.

The Hawaiian Homes Commission seems alive to both sides of this proposition — great benefits balanced against considerable risks. It wants to think about it.

Good idea. But Ka Ohana has made a powerful case and it should be given a chance to try. Good luck.

Skillful approach to decision–making [Editorial]. (1992, October 29). The Maui News.

Hawaiians plan to cut red tape for land

By Tino Ramirez
Star-Bulletin

A group of native Hawaiians, anxious to move onto Hawaiian Homestead land, has come up with a novel idea to speed up the process.

Instead of waiting for the cash-strapped Department of Hawaiian Home Lands to prepare the land, much of which has been damaged by years of ranching, the group says it will do the job itself at no cost to taxpayers.

Planner Julie Cachola said Ka Ohana O Kahikinui was formed last year after native Hawaiians waiting to get on Maui pastoral lots and other potential lessees decided to join forces instead of competing for the Hawaiian Homes land. Most of Kahikinui's 23,000 acres, on the dry southern slopes of Haleakala, have been leased to ranchers. The rest is a forest reserve.

"Assigning a general lease for pastoral use at Kahikinui is out," Cachola said. "Over a hundred years of cattle ranching have left no resources for homesteading or anything else. That's why our proposal has come in really strong on the restoration. We're saying we'll restore it and not tap the department for one cent of the cost."

As a nonprofit group, the ohana can get funds the state agency can't. So far, without having title to the land, the group has received $40,000 in donations and in-kind services, Cachola said.

The Army Corps of Engineers has offered to grade roads if DHHL gives its permission, fencing materials have been donated, and Alu Like has given the ohana office help and a coordinator for field operations.

Hoaliku Drake, DHHL chairman, said other groups are also interested in Kahikinui and the department could approve a combined use plan.

While the ohana's plan for Kahikinui is good, Drake said DHHL has been focusing on residential projects and it will balance those needs with the ohana's in making a final decision later this year.

To restore Kahikinui, Cachola said the group would plant native species, manage game animals, build fences and make the area's first comprehensive survey of natural and cultural resources.

One resource that needs to be measured is water. At one time, water was provided to Kahikinui by a ranch's pipeline, but that was cut off several years ago.

Cachola said the homesteaders could try to reserve some of the ranch's water through a state law, but they'll continue preliminary studies that have looked for sources of water on the parcel itself. The area is dry, but there is evidence of run-off and there are also springs and wells near the ocean.

Kahikinui's economic plan stresses land management that would support cottage industries like growing and harvesting native plants.

"If you keep on working the land without giving back in terms of management and restoration work, then you have not done anything to perpetuate the trust land," Cachola said.

"The people recognize the need to make money, but they want to ensure the land base exists, is fruitful and can sustain homesteading development for their grandchildren and their grandchildren's grandchildren."

Other parcels of Hawaiian Homes land are coming off general lease in the next few years and Cachola suggests that DHHL allow potential homesteaders to participate in planning their uses. Rather than have professional planners hold a few meetings to take input, the beneficiaries can organize themselves.

"You can't get community input in three meetings. It takes that long to get all the complaints on the table. You just get to the point where they feel like they can talk and then it's pau."

Cachola said Ka Ohana O Kahikinui met weekly and members visited the site many times. The ohana also learned exactly what DHHL can and cannot do for its beneficiaries.

"We helped them see their dreams and visions, but we also gave them tools and defined the area that's real. You can promise them the moon, the stars and the rose garden, but if you can't deliver, what's the use of leading them on?"

Kahikinui is model for water planning

By Tino Ramirez
Star-Bulletin

Like Kahikinui, most Hawaiian Homes land is arid and far from sources of water.

Alan Murakami, an attorney with Native Hawaiian Legal Corporation, believes the grass-roots Kahikinui planning project is not only a model for handling general lease-to-homestead conversions, but essential for planning water use in those areas.

Murakami said the Hawaiian Homestead Act of 1921 guarantees beneficiaries free access to surplus water owned by the government. But without water systems to carry the water to the land, much of the land has remained uninhabitable.

On Kauai, for example, Kekaha Sugar Co. has leased 28,000 acres from the state Department of Land and Natural Resources, half of which belongs to DHHL. Along with the lease, Kekaha Sugar received a license to use all the Waimea River water flowing through the Kokee and Kekaha ditch systems.

The 1921 act specifically says homesteaders are entitled to surplus water from the river, but when two beneficiaries tapped into Kekaha Sugar's irrigation system in 1977, the company filed suit and claimed there was no surplus.

Technically, the sugar company was right, Murakami said, but DHHL should have protected the homesteaders.

"In the '50s there were originally five homesteaders," Murakami said. "Three dropped out because there was no water and the other two consolidated the land. The department was very well-aware of the problems of homesteaders not getting enough irrigation water.

"Yet, within the next decade, the Department of Land and Natural Resources is leasing this land out and Hawaiian Homes is cooperating by allowing them to do it and they made no provisions for these beneficiaries."

To make sure Hawaiian homestead beneficiaries have access to water, a 1991 act requires state projects to reserve water for homesteaders. County development plans must also account for homesteaders' needs, but without accurate, long-term plans for homestead development, there's no way to know how much water will be needed.

"You need to get input from the community to be sure adequate reserves of water are available while this planning is going on, or even before it goes on," Murakami said. "A lot of these areas are still being general leased. We want to see that water is reserved wherever possible."

Ramirez, Tino. (1993, March 23). Hawaiians plan to cut red tape for land. The Honolulu Star-Bulletin.

Homesteaders take charge on Maui

Some will give up water and electricity to settle dry Kahikinui — with goals for a community as well as conservation

By Gary T. Kubota
Maui correspondent

KAHIKINUI, Maui — Some 75 Hawaiian homestead applicants are giving up the comforts of running water and electricity to live along the remote, dry slopes of south Maui.

The Hawaiians will pay the state $1 a year for 99 years for the pasture land, and have agreed to help bring back the native forest mauka of their settlement at Kahikinui.

"We are so thankful. It is an opportunity to live on undeveloped land, much like our ancestors," said homesteader Tetoa "Mo" Moler.

"The bottom line is we have an opportunity to live in our own lifestyle."

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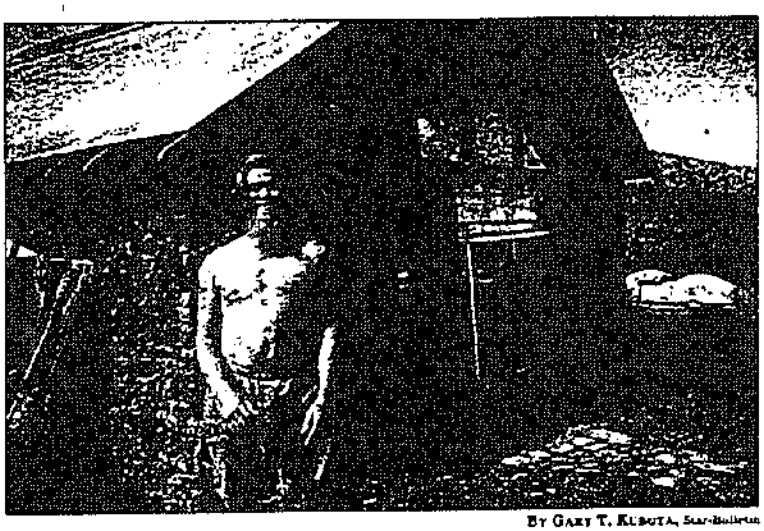
Under the Hawaiian Homes Commission Act of 1920, some 203,500 acres of land were set aside in the islands for settlement by people with 50 percent or more native Hawaiian blood.

The settlement at Kahikinui, where the commission owns 22,809 acres, represents a departure from state policies, which usually require that electrical, water and sewer services be provided on homestead land before leases are awarded.



By Gary T. Kubota, Star-Bulletin

With the help of friends, Tetoa Moler built a house in Kahikinui to show what the undeveloped land offers. The retired firefighter and other Hawaiians have pushed for the settlement, which lacks utilities.

Faced with a growing list of more than 18,200 homestead applicants and limited money for development, the state Hawaiian Homes Commission decided to offer the option of settlement on undeveloped land.

"It's a choice among an array of homesteading opportunities," said Arie Arakaki, a Hawaiian Homes program planner.

Moler first applied for homestead land in 1984.

He and other native Hawaiians on Maui have spent more than seven years persuading the commission to allow the settlement.

The group has developed a native forest management plan to replant some 7,000 acres of upper Kahikinui, and a plan for a 100-lot settlement on 1,344 acres.

The commission has approved both plans.

Moler, a retired county fire captain, said the group is developing a cultural resource plan for the land on the makai side of Piilani Highway.

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Under the plan, native Hawaiian settlers would be able to grow their own food and sell what they produce, including crafts.

Botanists once described the Kahikinui forest as so thick they had difficulty moving through it.

The forest has retreated dramatically since cattle ranching in the early 1900s. The lowlands have no trees, except for occasional clusters of wiliwili in gulches.

Sun-bleached cattle grass barely covers the rocky ground.

At upper elevations, near the 5,000-foot level, are stands of ohia and koa trees and 10 species of native birds.

Nene geese fly in V-formation on upwind drafts at higher elevations beside Haleakala, and a number of rare and endangered native plants grow in fern-covered gulches inaccessible to foraging animals.

On the land to be occupied by the homesteaders — about a half-mile from Piilani Highway — are heiau and the crumbling stone walls of houses once occupied by native Hawaiians.

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Moler said homesteaders who have jobs outside the community for the most part will be relying upon volunteers and their own skills to build their houses.

The community has a committee that reviews the design of the homes to make sure the structures are safe, and requires the drawings to be approved by an architect.

Moler and his friends have built a house at Kahikinui as a model of what can be constructed on the land, using lava rock and the natural contour of the area for walls.

More than once a month, Moler loads a tank of drinking water on his truck and takes it more than seven miles to the model house, where he uses a hose to empty it into storage tanks.

Solar panels charge the 12-volt batteries that power the house's lighting and other conveniences.

The refrigerator and stove are gas-powered.

To earn money for the community, Moler and other native Hawaiians rounded up wild cattle in Kahikinui and sold them for $6,000. The group returned branded cattle to nearby ranchers.

"We're not a welfare state," Moler said.

"We want to be self-sufficient."

Kubota, Gary T. (1999, May 31). Homesteaders take charge on Maui. The Honolulu Star–Bulletin.

AHEM – continued from previous page

Heritage Area designation and National Scenic Byway designation – and AHEM is looking at both.

Either designation would put planning for the future of the road into the hands of the community. Both of them focus on preservation and enhancement of resources, development of community identity and pride.

"Heritage areas" are distinctive regional landscapes in which people continue to live and work, and in which residents, businesses, and local governments join together voluntarily to conserve and celebrate their heritage.

There are fifteen National Heritage Areas in the United States. "Each National Heritage Area is a settled landscape that tells the story of its residents. Over time the land and the local environment have shaped the people who live there. The residents' use of the land has in turn created and sustained a landscape that reflects their culture." (National Parks Index 1997-1999.)

National Heritage Areas are designated by Congress with technical assistance typically coming from the National Park Service. National Heritage Areas have been awarded as much as $1 million per year for ten years. Conservation, interpretation, and other activities are managed by partnerships among federal, state, and local governments and private nonprofit organizations.

Like Heritage Areas, "Scenic Byways" open vistas and introduce travelers to unique places and features. National Scenic Byways are designated by the US Department of Transportation through an application process – which first requires state designation. The National Scenic Byway Program is funded through the Intermodal Transportation Efficiency Act. Some $25 million annually is committed to the program nationally.

There are no scenic byways in the state of Hawai'i because the State of Hawai'i only recently established its Scenic Byways program. In AHEM's eyes, the state and the county are both dragging their feet. As a result we're missing out on (potentially) millions of preservation and enhancement dollars.

What's the threat?

These are dynamic times in the small communities of East Maui. There are new programs that richly deserve the protection of a common voice.

Take, for example, a new nonprofit organization called Na Moku Aupuni O Ko'olau Hui, which has arisen in traditionally taro-rich Ke'anae-Wailua Nui Ahupua'a. Through working partnerships with the state, county, the Queen Lili'uokalani Children's Center, Office of Hawaiian Affairs, Alu Like, and the Queen Emma Foundation, Na Moku is bringing back ancient taro lo'i, restoring Wailua Nui Stream habitat, and undertaking agriculture and aquaculture ventures. At the same time, the group is finding meaningful work for at-risk youth.

And there's Kipahulu 'Ohana, which has entered into a cooperative agreement with Haleakala National Park for living history exhibits at 'Ohe'o Gulch.

The 'Ohana, made up entirely of families descended from the Kipahulu area, will offer cultural activities at a "living farm" where they're restoring taro lo'i and growing native crops. Soon the site, which will include hiking trails and camping, will be open to the public.

But it's Kahikinui, site of the November 14 meeting, that has the most startling project underway – nothing less than the resettlement of the district. At one time this region was well populated with Hawaiians, who grew sweet potatoes here in dryland forest conditions. Kahikinui leader Mo Moler says that 8,000 people once lived here on the 22,000 acres now owned by the Department of Hawaiian Homelands.

Ka 'Ohana O Kahikinui, a group of just over 100 Hawaiian families, is about to bring the land back to life. In January they'll be given 10 to 20-acre lots for homesteading. The federal government has granted them the freedom to develop their district independent of state and county codes and regulations.

This 'ohana is about to resurrect a community. They are cleaning and inventorying the shoreline; they're cutting roads to facilitate movement from the sea to the mountains. They're running a fence at the 4,000 foot mark to keep animals out of the ruined native forest, which they intend to replant.

They're installing a fog-drip water system. It's a twenty-foot-tall screen erected twenty feet into the air and stretching six hundred feet across the mountainside. It's going to collect water out of the low-hanging clouds – 4,000 gallons a day.

Photos by Cynthia Cerciello

We live in changing times.

If AHEM can continue to gather a consensus for rural East Maui, it will exert some pressure on the course of that change. If it can, then Kahikinui may not seem so far out after all. In an odd way, it may turn out to be the center of everything that makes us proud to live on Maui.

Hawaiians' initiative

NATIVE Hawaiians say they'd use their own money to fix up 23,000 acres of Hawaiian Home Lands for eventual homesteading. This is a testament to human initiative, but it's also another sign of how poorly the state Department of Hawaiian Home Lands is meeting its responsibility to native Hawaiians.

The Hawaiians, working together as Ka Ohana O Kahikikuni, hope to use the former ranch land for cottage industries such as growing and harvesting native plants. They got tired of waiting for the cash-strapped department to "prepare" the Maui land for homesteading.

So they decided to do the job themselves, using donations from private sources and some road-grading assistance from the U.S. Army Corps of Engineers.

The hitch? They need approval from the department and Chairwoman Hoaliku Drake has put them on hold. Other groups also are interested in the property, she says, and she may not be able to make a decision until later this year.

That sounds like a death knell to Ka Ohana O Kahikikuni.

Drake said other uses of the Maui land might include housing, but the department's record of providing housing to native Hawaiians is not encouraging: Fewer than 5,000 residential leases have been awarded since the program was started 70 years ago. At the same time, more than 12,000 families are on the waiting list. Some applicants have been waiting for decades; others have died waiting.

Will the members of Ka Ohana O Kahikikuni die waiting for action, too?

Hawaiians' initiative [Editorial]. (1993, March 26). The Honolulu Star–Bulletin.

Hawaiians clear Maui land without Home Lands OK

By Devi Sen Laskar
Star-Bulletin

Native Hawaiian activists say they are trying to preserve land at Kahikinui, Maui, for future generations, but the state Department of Hawaiian Home Lands wants them to stop.

Members of Ka Ohana O Kahikinui continue to clear the land, which years of ranching have damaged or destroyed. They are headquartered on the platform of a ruined church.

As of yesterday, the Hawaiian Homes Commission had not given them permission to be there or do the work.

Ohana field coordinator Mo Moler said the land belongs to the Hawaiian people.

"If we don't fight for this land the next generation will be lost," he said. "More than 8,000 people used to live there on that land, so why can't most of our 149 members live there now?"

Hoaliku Drake, head of the Hawaiian Homes Commission, has not made any decision on the request but said, "perhaps you should know that the department has received letters objecting to Ka Ohana O Kahikinui's proposal. One group in particular represents 40 individuals on the Maui island pastoral list," a larger number than the Kahikinui group.

Ohana members disputed that number, saying Drake's information was outdated.

Drake said the department has held five community meetings on the issue and "has received recommendations on the use of Kahikinui from beneficiaries other than" the ohana.

State Planner Julie Cachola said the group was formed last year after native Hawaiians waiting to get on Maui pastoral lots and other potential lessees decided to join forces instead of competing for the land.

Most of Kahikinui's 23,000 acres, on the dry southern slopes of Haleakala, have been leased to ranchers. The rest is a forest reserve.

In March, the Kahikinui group proposed to the cash-strapped department that group members would clear the land themselves at no cost to taxpayers.

Moler remains undaunted by the commission's pressure to postpone clearing the land until and unless the committee approves.

"No means yes, and wait means go," Moler said. "We're concerned with the (department's) motives. If they continue to delay, we're just going to stop asking them. For 72 years, no Hawaiians have lived on this land, and that's too long.

"We want to start taking care of our ancestral sites and temples, and get rid of the goats."

Laskar, Devi Sen. (1993, June 17). Hawaiians clear Maui land without Home Lands OK. The Honolulu Star–Bulletin.

Nine cattle die in Kahikinui

They're from same ranch being investigated for animal cruelty

By HARRY EAGAR
Staff Writer

KAHIKINUI — Nine more dead Perreira Ranch cattle were discovered by police and Maui Humane Society investigators Tuesday, this time at Kahikinui.

In the winter of 1991-92, the Humane Society reported on many dead animals found near the road, but carcasses found this week are well away from the public road. The area, called Kahikinui House, had never been visited by Humane Society inspectors before.

The complaint about dead animals was first reported by Earl "Mo" Moler, a member of Ka Ohana O Kahikinui, an association of Native Hawaiians that has been working to restore an old church below Kahikinui House.

Unlike cattle found dead this month at Perreira Ranch's other location, above Maalaea, the latest batch did not appear to have starved, according to Humane Society special investigator Aimee Anderson. Instead, the problem may have been lack of water.

Members of Ka Ohana said Perreira cattle had been coming to their work site seeking water, and Ka Ohana gave them some that they had trucked in.

No water was available at any other site that Anderson could find.

She estimated the nine cattle had been dead three to five days. She also saw skeletal remains of about 30 cattle that had died long before.

At Maalaea, where at least nine cows have died in the past two weeks, there also were skeletal remains scattered about, indicating the problem has existed a long time.

Earlier this year, Anderson discovered dozens of dead cattle at a Puunene feedlot, where they had been driven from Kahikinui. The county attempted to prosecute ranchers Annette Niles and her father, Stephen Perreira, for cruelty to animals, but a judge ruled there should have been a search warrant. Unable to present its evidence, the county dropped the prosecution.

At the Maalaea ranch on Sept. 18 and at Kahikinui Tuesday, county prosecutors accompanied police and Humane Society officers. The parties had search warrants and took photographs and videotapes.

The incidents may be connected by more than ownership. Maui Factors had a 25-year lease of about 16,000 acres at Kahikinui that expired March 31, 1992. The Department of Hawaiian Home Lands has not yet decided what to do with the land, but it ordered Perreira Ranch, which has operated the cattle business on an unrecorded sublease from Maui Factors, to remove its property.

That consisted primarily of several thousand head of cattle. Perreira has been told to clear the land of cattle by the end of this year.

The cattle found dead at Puunene had been driven there as part of the clearance. Anderson says that when Niles told her she intended to move some of the Kahikinui animals to the 4,800-acre Maalaea ranch, Anderson objected that the Maalaea pastures already were overgrazed and couldn't support any more cattle.

The dead cattle at Maalaea showed evidence of starvation. Veterinarians found no evidence of any contagious disease in the carcasses.

Certain causes of death were difficult to determine, because it takes several days to get at the bodies. When reports of dead animals are made, the Humane Society seeks a search warrant to enter the property. But within a couple of days, the bodies are so deteriorated that autopsies are impossible.

However, in at least one instance someone was present just as a cow died. The last animal found dead at Maalaea had been cut open. It had been pregnant, and its fetus was found lying beside the corpse.

Following complaints about the Maalaea corpses, the state Department of Health told the Department of Land and Natural Resources, which owns the Maalaea land, to see that the bodies, which were breeding maggots, were disposed of.

Sanitarian David Nakagawa visited the area Monday and found that the recently dead animals had been buried. Deputy Health Director Bruce Anderson, who is in charge of environmental health, says his department has adequate authority to act quickly in cases of a threat to public health or safety.

If the landowner does not respond within 72 hours, the department can use its police power.

Very seldom is that necessary, says Anderson. In the case of Maalaea, he says, the cattle were miles from any human habitation or business, and there probably was no immediate human health problem.

However, the possibility that runoff fouled by decaying animals could affect the ocean is a concern to the Health Department.

Eagar, Harry. (1993, September 29). Nine cattle die in Kahikinui. The Maui News.

Dead cattle found in Maui ranch probe

By Edwin Tanji
Advertiser Maui County Bureau

PUUNENE, Maui — A Maui Humane Society investigator reported yesterday she found eight recently dead cattle and at least 30 more skeletal remains in a paddock in Kahikinui over the weekend.

The animals were owned by a Kula rancher who is under investigation for cruelty to animals for the deaths of cattle at a dried-out pasture at Maalaea, Aimee Anderson said.

Anderson said she was told of the dead cattle at Kahikinui by a Hawaiian involved in reclaiming the Hawaiian Homes land from the rancher, Stephen Perreira and his daughter Annette Niles.

She acquired a search warrant, went to the area Saturday and found the animals, apparently dead of lack of water.

Tanji, Edwin. (1993, September 30). Dead cattle found in Maui ranch probe. The Honolulu Advertiser.

How many deaths before it's over?

EDITORIAL

In Florida, residents must shudder each time they pick up their daily newspaper or turn on their local television news. Heaven forbid that they should have to learn that another foreign tourist has been murdered.

On Maui, we're more fortunate. Tourists aren't being killed. But even here over the past several weeks we've grown wary of what we'll find in the news after a steady stream of reports about needless deaths of innocent victims. In this case, the corpses are cattle.

State land leased by the Perreira Ranch both at Kahikinui and near Maalaea could rightly be dubbed as killing fields, given the disgusting history of the ranch's record on animal rights. Earlier this year, dozens of dead cattle were discovered at a Puunene feedlot where they had been driven from Kahikinui. The county attempted to prosecute the ranch owners using evidence gathered by Humane Society officers, but the absence of a search warrant made the evidence inadmissible and forced the county to drop the case.

One could logically assume that such a narrow escape for the ranch owners would inspire them to clean up their act. So much for logical assumptions.

Over the past two weeks, at least nine dead cattle have been found on the Maalaea land. On Tuesday, another nine were discovered at Kahikinui, where the ranch has been ordered to remove all its property following the expiration in March of a lease with the Department of Hawaiian Home Lands.

At both Maalaea and Kahikinui, numerous skeletal remains also were sighted, indicating that mistreatment of the animals has persisted for a good while.

The suspected causes of death? At Maalaea, lack of food. At Kahikinui, lack of water.

While it's difficult to fathom why this carnage has been allowed to continue, this is some good news. This time, authorities have search warrants. They also have photographs and videotapes.

We hope what they have above all is a case, one they can make stick. A quick and successful prosecution of those responsible for these inhumane acts would be the best way to dry up the flood of newspaper stories about them.

How many deaths before it's over? [Editorial]. (1993, October 1). The Maui News.

West Maui foothills not green pastures

MAALAEA

Lois Janis

MAALAEA — The sight and sound of cows grazing in the West Maui foothills of Maalaea have no doubt brought romantic images of green pastures and the contentment of country living to many residents and visitors over the years. But recent findings have jolted us into troubled visions of dead and emaciated cows on a parched and overgrazed ranch in our neighborhood.

It was mid-September when a tourist riding a mountain bike reported seeing dead cows in the area, prompting investigations of animal cruelty by the Maui County Prosecuting Attorney and the Maui Humane Society. The land, under the jurisdiction of the Department of Land and Natural Resources, has been leased for ranching by Stephen Perreira. The ranch is operated by Perreira's daughter and son-in-law, Annette and Kimo Niles.

James Loux, executive director of the Maui Humane Society, told me that thirst and starvation were the only causes that could be determined for the deaths of several cows, and veterinarian Diane Shepherd said some cows she saw on the property seemed to be making crying sounds as they looked at her with eyes that asked, "Where's water? Where's food?"

Both Loux and Shepherd said it appears that food and perhaps water had been brought in since the investigation began, and some cows may have been moved.

I contacted Annette Niles, who said she will be happy to tell the other side of the story after the investigation is over.

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GOOD LUCK GECKOS: Maalaea's Pat Ferguson began creating 18-inch stuffed geckos more than 12 years ago at the request of her grandson Justin Greene. Though oversized and decked out in bright Hawaiian patterns, Pat's creations have an uncanny similarity to those dull-colored miniatures that scurry around our homes. She calls them Good-Luck Geckos.

Though to some people geckos are just a messy nuisance, depositing eggs and droppings all over the house, they are generally thought to bring good fortune. They elicit a type of devotion in some people.

An introduced species to Hawaii, geckos are known as mo'o, meaning lizard, reptile, dragon, serpent, or water spirit (according to the "Hawaiian Dictionary" of Mary Kawena Pukui and Samuel H. Elbert).

These house lizards are sometimes mistakenly revered as aumakua, according to Kealii Reichel, executive director of the Maui Historical Society. (Aumakua are family or personal gods, or deified ancestors of the Hawaiian people, that may assume the shapes of land or sea creatures, rocks, clouds or plants.) But the legendary mo'o aumakua are believed to have been ancient water creatures the size of dinosaurs, Reichel said.

One thing we know is that geckos are handy exterminators. Pat Ferguson recalls watching the one she used as a model many years ago devouring a very large cockroach that later could be seen bulging in its stomach. Pat and her grandson Justin, who was 6 years old at the time, liked to watch geckos catch their prey by a lighted window, and one evening Justin asked her to make one for him.

Creating a look-alike was no problem at all for Pat, who had a career in Seattle making look-alikes of designer dresses for major fashion shows. Reproducing geckos has brought contentment to Pat in her retirement.

"I never got bored," she told me. "Each one brings me happiness. It fulfills something within myself when I make one, and when somebody else notices the work, it gives me a good feeling."

The geckos have been sold in shops in Wailea and Kaanapali, but Pat enjoys meeting her customers while she stuffs her creations as she sunbathes on the beach.

"I have sold them to tourists from Switzerland, Germany and Japan," she said. "It is kind of fun, knowing they are all over."

Pat's geckos have been rivaled by her newest creations: muumuu-dressed dolls inspired by (guess who?) her granddaughters, Ashley and Chelsea Pope, ages 5 and 2½, who live in Southern California.

Pat moved to Maui from Seattle 14 years ago with her husband, Archie. They became full-timers at their condo in Maalaea six months ago, after Archie retired as resident manager at Pineapple Hill in Kapalua.

Janis, Lois. (1993, October 1). West Maui foothills not green pastures. The Maui News.

Applicants Invited to Join Community Development Activities at Kahikinui

NOTICE: All applicants on the Maui Islandwide Pastoral Waiting List, who are interested in the resettlement and restoration of the moku of Kahikinui and would like to be involved in planning or in programs for community development, are asked to call the number listed at the end of this article. You will be advised as to when meetings and other activities will take place on Maui and Oahu.

Kuleana Homestead Program Pilot Project

The *moku* of Kahikinui is being settled under the pilot Kuleana Homestead Program. Beneficiaries, who wish to live alternative, "off-grid" (no utility hook-ups) lifestyles, will be awarded raw lands. The department will provide limited funding to construct an unpaved roadway, survey, stake and award homestead lots.

The department initiated this program in response to a segment of the beneficiary community who do not want to wait for the infrastructure typically associated with residential subdivisions and are willing to accept a raw lot in a rural, unimproved subdivision.

Provided that certain health and safety requirements are followed, lessees will be able to build their homes in Kahikinui. Participants would not only be responsible for the construction of the home, but would also need to provide for their water, wastewater treatment and energy. The program is designed to meet the needs of those beneficiaries who are unable to qualify for home financing but are able and willing, as individuals or as a community, to build safe and affordable homes in an unimproved subdivision.

This program also provides beneficiaries with the opportunity to create new communities based on Hawaiian values such as *aloha aina* (love for the land), *lokahi* (unity), *laulima* (team work) and the *ahupua'a* concept of land use (assuring long-term availability of resources by regulation and by giving back to the land in exchange for the use of its resources).

Planning and community development decisions are consensus driven and community-based. The department works in partnership with the beneficiary community committed to settlement under the Kuleana Homestead Program.

Community improvements, road maintenance, and the enforcement of lease provisions will be handled by the community association organized at each Kuleana Homestead Program site.

Kahikinui Planning Update

Last December, a questionnaire was sent to all those on the Maui Pastoral Waiting List to gauge interest in the resettlement and restoration of Kahikinui. Three hundred survey forms were mailed, 100 responded. Seventy applicants indicated that they wish to settle on the land. Sixty indicated that they wish to settle as a community.

In addition to the survey, community development meetings were also held on Maui and Oahu in January. Mahalo to all who turned out for these meetings.

As a result of the survey and community building meetings, the Maui beneficiary community's Kahikinui Kuleana Ad Hoc Committee held its final meeting in February and shifted the advisory responsibility of community development from the committee to those who wish to settle the land.

Ka Ohana O Kahikinui, with DHHL's support, will spearhead the community development effort. Mahalo a nui to Hui Kako'o Aina Ho'opulapula, Keokea Hawaiian Homestead Farmers Assn., and Waiohuli Hawaiian Homesteaders, Inc. for your participation on the committee and to the Maui Office of Hawaiian Affairs for the use of their office for meetings. Mahalo also to the beneficiaries on Maui, especially the communities of Paukukalo, Kanaio, and in the Hana district for coming out to support this program.

Roadway Development

Despite the cutbacks, there are adequate funds for DHHL to survey and initiate construction of the 10 miles of roadway. More funds are needed, however, to complete the unpaved roadway. To address this need, the department has supported, in concept, Ka Ohana O Kahikinui to work within its Ohana and the construction community on Maui to come up with a plan to build the roadway under a self-help roadway construction project. There is a need for volunteers to assist in surveying the roadway in May.

Water and Archaeology

Since there are no known sources of water at Kahikinui, lessees will be required to haul their own water. However, a water study, jointly funded by DHHL and the U.S. Geological Survey, is currently underway. Preliminary indications show good potential for fog interception and catchment. Testing for subsurface water is being conducted.

While the Kuleana Homestead subdivision site was selected to avoid areas with heavy concentration of archaeological sites, archaeologists from the State Office of Historic Preservation are surveying the subdivision to identify the archaeological sites which may be in the area. Identification of these sites is essential before lots selection.

Ka Ohana O Kahikinui, as part of its community development pr

(Continued on pr

Applicants Invited to Join Community Development Activities at Kahikinui. (1996, March/April). Ka Nūhou.

Home Lands

Kahikinui project a right step

One of the most intriguing projects of the Hawaiian Home Lands program is happening on the slopes of Haleakala on Maui.

In 1921, Congress set up the Hawaiian Home Lands program, setting aside some 200,000 acres to provide Native Hawaiians with residential, agricultural and pastoral lots. But after 75 years, only a few thousand Hawaiians have gotten lots and more than 13,000 are on the waiting list.

Among the reasons: No money to develop the infrastructure — roads, waterlines, electricity, roads and sewers — to get the lots ready for use.

Now, as Advertiser Maui County Bureau chief Edwin Tanji explained in an article Sunday, a group of Maui Hawaiians isn't waiting for the Department of Hawaiian Home Lands.

They've taken the initiative and formed a group, Ka Ohana o Kahikinui, that's begun work on a 2,000-acre agricultural community, with 125 pastoral lots that will be leased to Native Hawaiians at a dollar a year to develop.

The organization also wants to restore and preserve the historic and cultural sites of the area where Native Hawaiians once flourished. Homesteaders who get lots will be required to maintain the sites.

This is the first project of its kind. And Hawaiian Home Lands officials say if it succeeds, there will be more.

It's still the Department's responsibility to get more lots ready for homesteads. But this effort is a fine example of community activism in trying to put more people on homestead lots while at the same time protecting our state's Native Hawaiian heritage.

Home Lands Kahikinui project a right step [Editorial]. (1996, August 13). The Honolulu Advertiser.

Kahikinui settlers explore independent living technologies

BY SCOTT CRAWFORD

In a single day you can start running your refrigerator on the power of sunlight. That's what Ka 'Ohana O Kahikinui learned on March 24 when the homesteaders of that barren East Maui district hosted a workshop on independent living.

The 'ohana brought in Michael Potts, a consultant from California, to lead the workshop. Potts was on Maui working on a revision of his book *The Independent Home*, which features several houses in Hawai'i. He spent two days with the 'ohana discussing challenges and solutions for creating a successful community where water is scarce and the electrical grid is far away.

"This is a very exciting opportunity – to work from scratch building a new community and to do it the right way from the start," said Potts. "It is important for all of us that you succeed."

Kahikinui once had flowing waterways that disappeared along with the native sandalwood forest in the 1800s. The settlers want to bring back the rain by restoring the forest ecosystem over the next several generations.

The first day of the workshop focused on water, including supply and use. One innovative water source planned at Kahikinui is a "fog-drip" system that captures water out of the passing low clouds. Three test sites monitored last year have demonstrated that the design works effectively.

Potts discussed other water-supply options, such as catchment and wells. He described how to use less water (with composting toilets) and how to use it more than once (with graywater systems).

On the second day of the workshop Potts and the 'ohana installed a photovoltaic system, which draws energy from sunlight. This one uses new "solar shingles," a first for Maui. They built the system on Mo Mohler's hale, a restored water tank which has been converted into a comfortable home using stones from the area and some new and used building materials.

Mohler is the caretaker of the area along with Aimoku and Lehua Pali. They're using the land as a temporary base-camp for the overall resettlement of the ahupua'a.

"We learn from our ancestors to use

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the materials from the land and work with the elements," said Mohler. "At the same time, we want to apply modern technologies to make a model blending the best of traditional and future ways."

The solar shingles, manufactured by UniSolar, Inc, were provided through a donation from the Department of Energy. Interstate Battery Systems gave a discount on the batteries, and Potts himself donated the inverters, voltage regulators, and other parts.

Robert Hale of Kaupo provided invaluable assistance. Hale, who does most of the off-grid energy installations in East Maui, has previously donated solar panels to the 'ohana.

Several soon-to-be settlers of Kahikinui helped out, getting hands-experience for their own hales in the n future.

The new photovoltaic system w serve as an educational demonstration all future Kahikinui settlers. This July Department of Hawaiian Homelands v probably award approximately 120 n Kahikinui parcels, ranging up to 15 ac in size.

Other energy resources, includi plentiful wind, were also discussed as p of the overall solution to the needs of community there.

Maui Tomorrow and Don Smith consultant who has been working with 'Ohana O Kahikinui for many years, co dinated the workshop.

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Agency falls short of funds needed for Hawaiian homesteads

By Pat Omandam
Star-Bulletin

The priority for the state Department of Hawaiian Home Lands has been to build homesteads, but it doesn't have enough money to develop lots for the 18,100 people on the waiting list, says the agency's new director.

"There are three times the number of people on the waiting list as (ones) settled," said interim Hawaiian Homes Chairman Raynard C. Soon.

Soon told the Senate Ways and Means Committee yesterday that at the end of 1998 there were 3,000 Hawaiian homestead lots under construction across the state worth about $125 million in construction. To date, the department has awarded 6,550 homestead leases.

Still, Soon said, the agency is only "scratching the surface" of its obligation to provide homesteads under the Hawaiian Homes Commission Act of 1920, which set aside 203,500 acres of public lands for the benefit of native Hawaiians with at least 50 percent Hawaiian blood.

> "*Something more needs to be done. Please keep searching.*"
>
> **Sen. Andrew Levin**
> *(D, Volcano)*

One problem is that it costs an average of $50,000 each to develop a homestead lot. At this rate, it would take the department a billion dollars just to build all the lots needed, he said.

Sen. Andrew Levin (D, Volcano) told Soon and Deputy Director Jobie M.K.M. Yamaguchi they need to be creative in raising revenue to build more lots. As it stands, people who sign up today on the waiting list have no hope of getting a homestead in their lifetime, he said.

"We just have to keep looking," Levin said. "Something more needs to be done. Please keep searching."

Levin did praise a Hawaiian Homes project in Kahikinui, Maui, where Hawaiians in the community convinced the department to award 75 undeveloped homesteads that have roads but no infrastructure, such as sewers or water.

Soon said these lots — located Upcountry along Haleakala — are too far from existing infrastructure to be connected. While this project looks to be a success, the department wants to see if this works before awarding more.

Soon said the department's second priority is to increase its income, with the goal of leveraging existing and future resources for development of homesteads.

Although the department's general fund budget has dropped from $3 million in 1990 to $1.4 million this year — a 54 percent cut — it is only asking for a $100,000 increase, specifically to maintain more than 900 acres of federal lands that are expected to be transferred to the department at the beginning of fiscal year 2000, Soon said.

Overall, the department's operating costs are $7.12 million, of which $1.4 million are general funds and the rest special funds.

Omandam, Pat. (1999, January 14). Agency falls short of funds needed for Hawaiian homesteads. The Honolulu Star–Bulletin.

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AHEM

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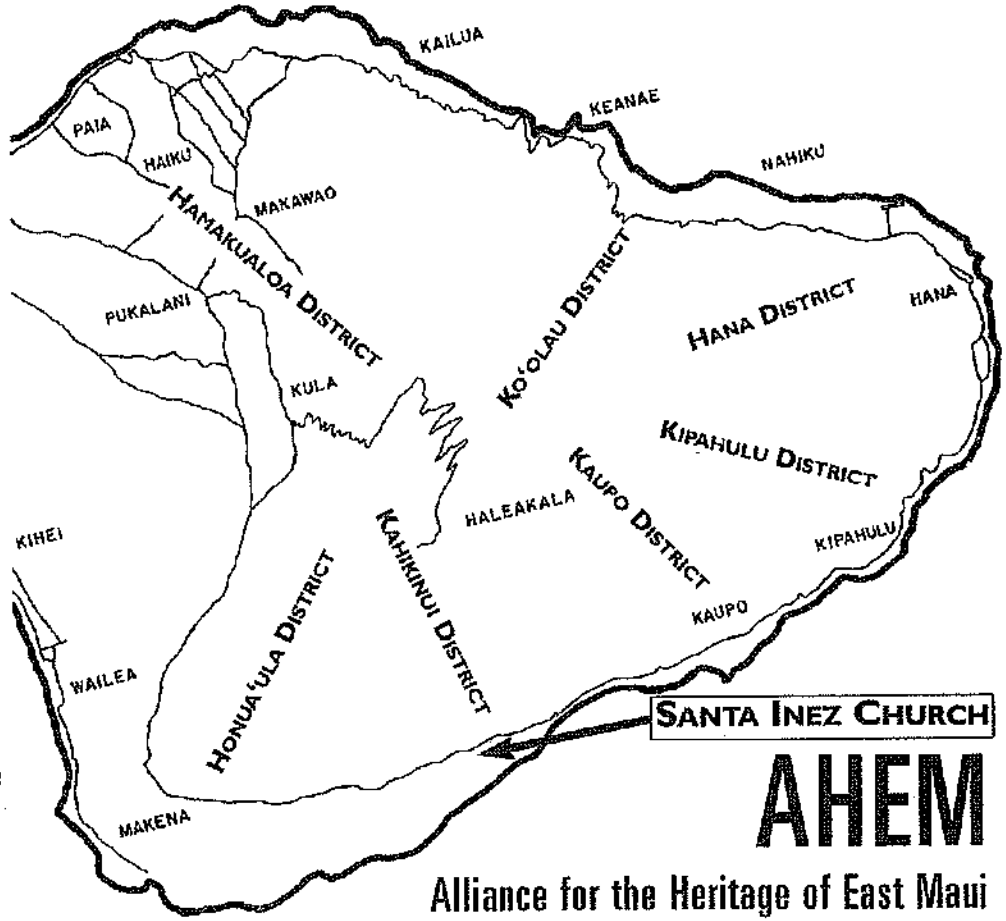
Hana Cultural Center
Mayor's Hana Advisory Committee
Hana Road Task Force
Hana Business Council
Kipahulu Community Association
Ka 'Ohana o Kahikinui
Kula Hospital
St. John's Church, Keokea
South Maui Heritage Corridor
Friends of Haleakala National Park
Audubon Society
Na Ala Hele
The Nature Conservancy
Maui Community College
Maui Planning Commission
Maui Cultural Resources Commission
Maui Planning Department



AHEM

Alliance for the Heritage of East Maui

BY ELIZABETH RUSSELL AND PAUL WOOD

A gathering in the wilderness

It's an unlikely place for a meeting. Santa Inez Church, a hollowed-out stone ruin that was abandoned in the 1860s, sits on the wind-blasted edge of the sea in a place that the uninformed would call nowhere – Kahikinui.

The guide books don't mention Kahikinui. This is the "back side" of HaleaKala, the district between Kaupo and Kanaio. Except for lava rock, tough grass, and the occasional stumpy bush, this area has plenty of what civilized people call "nothing." The broken church is just about the only shelter to be seen. Until recently cattle came right into the ruined enclosure to escape the steady winds.

But on Saturday November 14 it was people, not cattle, who gathered within the walls of Santa Inez. Sitting under a weather-worn plywood roof on picnic table benches, scattered rattan chairs and vinyl lounge chairs, they all had one thing in common – each of them, in some way, is working to safeguard the landscape and heritage of East Maui.

It was an all-star group of island activists, preservationists, and community leaders. People came from Ke'anae and Kipahulu, Hana and Kaupo.

Helen Felsing was there from the South Maui Heritage Corridor, Mary Evanson from Friends of

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Haleakala National Park. Hana leader Carl Lindquist had recently attended a national conference on scenic byways; he gave a report.

John Blumer-Buell, also of Hana, described his pending lawsuit against the County of Maui – he's hoping to stop the demolition of an antique bridge near his home.

County, state, and federal figures also came to the meeting, including Will Spence of the Maui Planning Department, Barbara Long of the Planning Commission, and Dorothy Pyle and Dee Fredericksen of the County Cultural Resources Commission. Don Reeser, head of Haleakala National Park, sat calmly in the center of the lively crowd, just as his domain rises above literally all of the geographical areas represented.

This was a meeting of AHEM – a loose-knit organization of community stewards gathering under the name Alliance for the Heritage of East Maui.

These people have been meeting regularly since the formation of AHEM in June of this year. That was when Dorothy Pyle and Barbara Long put out a call for participation from a wide sweep of community groups, area landowners, and government agencies. The pressures for change in East Maui are growing, they said. To make sure that the changes are beneficial, it's time for comprehensive planning, and then for cooperative action.

A landscape divided

Rural East Maui, as AHEM defines it, forms a big backwards crescent that encompasses nearly every ecosystem on Earth. Take a map of Maui and your right hand. Put your thumb on Haleakala Crater and point your little finger at the junction of Kaupakalua Road in Ha'iku and the Hana Highway – mile marker 0 on the road to Hana. Now pivot your hand clockwise around your thumb till the little finger touches Keokea, which is the raggedy far side of Kula. This is the area of AHEM's mission.

It includes desert and rain forest, alpine crags and rough sea shore.

People live in villages, pockets of isolated identity separated by distances that no bald tires should attempt to traverse.

Each community has its own plan and its own issues. In the Ko'olau District, people are re-opening ancient taro ponds and clamoring for water rights; across the mountain, they're lucky to find water at all. Each community is a little David struggling against a Goliath of forces for change. It's not the kind of landscape that makes cooperation easy.

But the region has one common thread – the road. The Hana Road links communities with one another and the wider world, and it gives visiting motorists a glimpse of the multi-faceted marvel that is East Maui. With its hairpin turns and one-lane bridges, it sets the pace of this place.

To AHEM, changes to the road mean changes to life in the region.

Change is something AHEM members would like to have some say about. They are alarmed by county bridge replacements and proposals to re-align and widen of Hana Road. They're concerned that traffic will be moving at higher speeds through their neighborhoods, and that modern upgrades will bring modern styles of living.

Fighting for the road

While state engineers and the Maui County Public Works Department are getting ready to remodel the Hana Road, AHEM is searching for ways to get them to preserve it. The federal government offers two such devices –

AHEM – continued on next page

Appendix G

Translation of Chants and Glossary of Hawaiian Terms

Translation of Chants (*'Oli*)

Mai ke 'one o Kakuhuihewa
A hiki i ke kua o Lualaʻilua
'O Waiakeakua ka hale a Kāne me Kanaloa
He aloha nō au iā Niniali'i
Ke aliʻi 'o Piʻilani a Maui a Kama
Ka makani ka Moaʻe e hiki mai he hoa aloha
He hoa kanaka kākou e ola
Eō mai ka 'ohana o Kahikinui
E ala e
(1999)

From the sands of Kakuhihewa, royal chief of Oʻahu
Until the arrival at the backbone of Lualaʻilua hills
Waikeakua, the residing place of the primordial gods, Kane and Kaneloa
I possess indeed a true love for Niniali'i
The royal chiefs of Maui, Piʻilani and Kamalalawalu
The Moaʻe wind of Kahikinui comes to me like an old friend
Our friendships continue to live
To the family of Kahikinui, hear my call
Arise

❖ ❖ ❖

'O Wākea noho iā Papahānaumoku
Hānau o Hawai'i, he moku
Hānau o Maui, he moku
Hoʻi hou 'o Wākea noho iā Hoʻohōkūkalani
Hānau o Molokaʻi, he moku
Hānau o Lānaʻikaula, he moku
Liliopu punaluaʻo Papa iā Hoʻohōkūlani
Hoʻi hou 'o Papa, noho iā Wākea
Hānau o Oʻahu, he moku
Hānau o Kauaʻi, he moku
Hānau o Niʻihau, he moku
He ula a o Kahoʻolawe
(Edith Kanakaole Foundation, 1996)

Wakea joins in union with Papahanamoku
Born is Hawai'i, an island
Born is Maui, an island
Wakea returns to join in union with Ho'ohokukalani
Born is Moloka'i, an island
Born is Lana'ikaula, an island
Papa possesses a jealous rage towards Ho'okukalani
Papa then returns to Wakea
Born is O'ahu, an island

Born is Kaua'i, an island
Born is Ni'ihau, an island
The red of Kaho'olawe

❖ ❖ ❖

Nā 'aumakua mai ka lā hiki a ka lā kau
Mai ka ho'okui a ka halawai
Nā 'aumakua iā ka hina kua iā ka hina 'alo
Iā ka'a 'ākau i ka lani
'O kīhā i ka lani
'Owē i ka lani
Nunulu i ka lani
Kāholo i ka lani
Eia ka pulapula a 'oukou, o nā 'ōiwi o Hawai'i nei
E mālama 'oukou iā mākou
E ulu i ka lani
E ulu i ka honua
E ulu i ka pae'āina o Hawai'i
E hōmai ka 'ike
E hōmai ka ikaika
E hōmai ka akamai
E hōmai ka maopopo pono
E hōmai ka'ike pāpālua
E hōmai ka mana
(Edith Kanakaole Foundation, 1996)

Calling forth the ancestral spirits that dwell from the rising to the setting of the sun
From the zenith in the heavens to the horizon upon the earth
The encompassing of the ancestral spirits from the beginning of time to the end
There in the rolling of the heavens
The trembling resound in the heavens
The piercing cry of the heavens
The thunderous growl in the heavens
The powerful movement in the heavens
Here is your offspring, the native descendents of Hawai'i
We ask you to nurture and care for us
In the growth of the heavens
In the growth of the earth
In the growth of the archipelago of Hawai'i
Grant unto us the knowledge
Grant unto the strength
Grant unto us the wisdom
Grant unto us the proper understanding
Grant unto us the foresight
Grant unto us the power

Glossary of Hawaiian Terms

ʻaʻā	Lava, stony bedrock.
ʻāina	Land, earth.
ahupuaʻa	Land division, usually extending from *mauka* (mountain/inland) to *makai* (the sea).
akua	God, goddess, spirit, ghost, devil, image, idol, corpse, divine, supernatural, godly.
aliʻi	Chief, cheiftess, officer, ruler, monarch, headman, noble, aristcrat, kingly.
aliʻi nui	Ruling chief; "big chief."
aloha	Love, affection, compassion, mercy, sympathy, empathy, kindness, sentiment, grace, charity.
aloha ʻāina	Love of the land.
ʻaumakua	Family or personal god or protector.
ʻawa	*Kawa.* Shrub used for cultural, religious and medicinal purposes.
haʻahaʻa	Internal sovereignty.
hale waʻa	Canoe house
hānai	To feed, nourish or raise. Also, to raise and nourish a foster or adopted child.
hānai ka piko o ka moʻomeheu	Loosely translated: "To raise or nourish the the center/conective life-force of culture." This is the name given to the CBED project "The Village." The name suggests that the purpose of the village—cultural center will serve to raise people's awareness of Hawaiian cultural and life at Kahikinui.
heiau	Place of worship or shrine.

hō'a na na'auao o Kahikinui	Loosely translated, "to ignite enlightenment of Kahikinui." This is the name given to the "Training Package" CBED project. The name suggests the bringing of knowledge to *Ka 'Ohana o Kahikinui* through training of skills, etc.
ho'okupu	To sprout or make grow. It is a ceremony of gift-giving usually done at the beginning of a relationship or commencement of ceremony activities.
ho'omalu	To protect.
ho'omalu a mau 'ia ka nahele	Loosely translated, "to contiously protect forest resources." It is the name given to the CBED project "Trees for the Future."
ho'oulu kaiaulu o Kahikinui	Loosely translated, "the dry wind that travels upland; to completely embellish the village or community of Kahikihnui." It is the name given to the CBED project, "The Kahikinui Community Housing Project." The name suggests the manner in which the housing project will grow upwards toward *mauka* (the mountains).
ho'upu'upu	Influence of external thought; to remind or to recall someone else.
ho'oponopono	To correct, to make right.
'imi I ke 'alo o Kahikinui	Loosely translated, "to search for the essence/face/image of Kahikinui." This is the name given to the CBED project, "The Image of Kahikinui." The name suggests projecting the image of Kahikinui through culturally-appropriate methods (through education and community-agreed upon marketing strategies).
ka	Definite singular article; the
kahuna	Priest, sorcerer, magician, minister, expert in any profession (whether male or female).
kanaka maoli	human being, Hawaiian people.

kapa	*Tapa.* Cloth fashioned out of the bark of *wauke* trees.
kauoha	Command, order.
keiki	Child.
kino	Living body.
kinolau	Many forms taken by a supernatural body.
kō	Sugar cane
kōkala	Thorn; porcupine fish.
ko'a	Coral or coral head.
kuahu	Alter.
kua'ana	Older sibling.
kupuna/kūpuna	*Kupuna*-singular; *kūpuna*-plural. Grandparent(s) or ancestor(s), relative or of the extended *'ohana* (family).
kū'ula	Stone god that attracts fish; heiau near the sea for the worship of fish gods.
laulima	Cooperation.
leho'ula	Red cowry.
limu kala	Common long, brown seaweed.
lo'i	Taro patch.
loko i'a	Fishpond.
lūhe'e	To fish for octopus with lien and cowry lure.
mai'a	Banana.
makai	Ocean or sea-side.
maka'āinana	Common man, subject of the monarch, or people who attend the land.

mālama	To nurture, take care of, preserve, maintain, serve. To keep or observe as *kapu* (taboo).
mālama nā kumuwaiwai	Loosely translated, "to care for and protect the rich sources of our heritage." This is the name given to the "Recreational Access Management Program," or "RAMP." The name suggests continued care and protection of Kahikinui, especially its most culturally and archaeologically sensitive areas from over-access and destruction.
mālama pono	Be careful, watch out.
mauka	Mountain-side or inland.
moku	Land district comprising of *ahupua'a.*
mo'okū'auhau	Genealogical lineage.
mo'olelo	Story, myth, tradition.
na	By, for, belonging to; plural form of some words.
nānā i ka 'āina	"Look to the land." This is the name given to the biodiversity CBED eco-cultural tour project. The name suggests that one must consider the significance and proper utilization of the of the land and life (plants, animals, natural features) within in.
nānā i ke kumu	"Look to the source." This is the name given to the heritage CBED eco-cultural tour project. The name suggests that one must consider the heritage of the people of the past and the significance of such for the *kanaka maoli* of today.
'ohana	Family and extended family; kin or group.
pae	Cluster, row or group.
pāhoehoe	Smooth lava.

papa'i	To slap, tie or mix.
pa'akai	Sea salt.
pili pa'a I pili I nā lima hō'ola	Loosely translated, "the hands that are capable of bringing together/ of producing life from the the land." This is the name given to the "Agricultural Cooperative and Community Pasture" CBED project. It suggests that the community will cooperatively raise livestock (etc.) for subsistence and income.
pilo	A native shrub.
pōpolo	Black nightshade. A type of weed.
po'e	People.
pua'a	Pig.
pu'uhonua	Place of refuge.
ua lawa	Loosely translated, "enough is enough." Wise.
ulua	Certain species of crevalle fish.
wahi pana	Noted or celebrated sacred place.
wao akua	A distant mountain region inhabited only by spirits.
wauke	Paper mulberry.
wiliwili	A Hawaiian leguminous tree.